

5-2010

Full Issue: vol. 64, issue 2

Follow this and additional works at: <http://jdc.jefferson.edu/scitechnews>

 Part of the [Physical Sciences and Mathematics Commons](#)

[Let us know how access to this document benefits you](#)

Recommended Citation

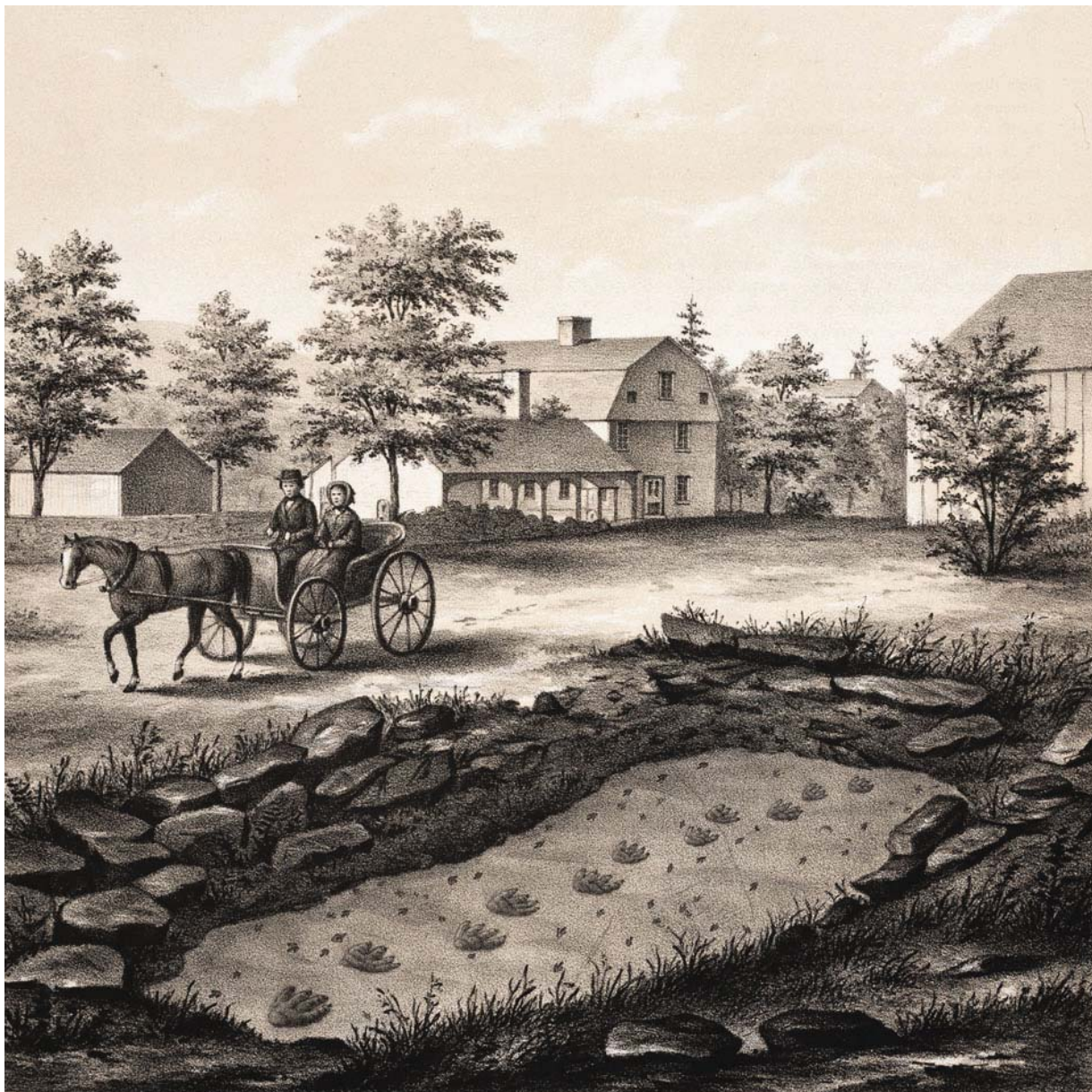
(2010) "Full Issue: vol. 64, issue 2," *Sci-Tech News*: Vol. 64: Iss. 2, Article 19.

Available at: <http://jdc.jefferson.edu/scitechnews/vol64/iss2/19>

This Article is brought to you for free and open access by the Jefferson Digital Commons. The Jefferson Digital Commons is a service of Thomas Jefferson University's [Center for Teaching and Learning \(CTL\)](#). The Commons is a showcase for Jefferson books and journals, peer-reviewed scholarly publications, unique historical collections from the University archives, and teaching tools. The Jefferson Digital Commons allows researchers and interested readers anywhere in the world to learn about and keep up to date with Jefferson scholarship. This article has been accepted for inclusion in *Sci-Tech News* by an authorized administrator of the Jefferson Digital Commons. For more information, please contact: JeffersonDigitalCommons@jefferson.edu.

SciTech News

The Official Bulletin for the Chemistry, Engineering, and Science-Technology Divisions and the Aerospace Section of the Engineering Division and the Materials Research and Manufacturing Section of the Chemistry Division of the Special Libraries Association



Volume 64, Number 2 (2010)
ISSN 0036-8059

SciTech News

Ellis Mount, Editor Emeritus



On the Cover



Edward Hitchcock, an American geologist teaching at Amherst College in Massachusetts, discovered the first dinosaur footprints in the Connecticut River valley in 1836. As dinosaurs were poorly understood creatures at that time, he thought they were the tracks of large birds, and he collected quite a few slabs for his museum at Amherst. This view shows the Moody Footmark Quarry in South Hadley, as it appeared in a lithograph in his book, *Ichnology of New England* (Boston, 1858; photo and caption courtesy of the Linda Hall Library of Science, Engineering & Technology.)

Articles

History of the Sen. Claiborne deB. Pell Marine Science Library.....	5
ResearchRaven: Its Value to Librarians.....	10
Sci-Tech Division Sponsors for 2010.....	12
<i>SciTech News</i> Call for Articles.....	19
Twitter for Special Libraries.....	33

News from the Sponsoring Divisions

Chemistry Division.....	13
Materials Research and Manufacturing Section of the Chemistry Division.....	18
Engineering Division.....	20
Science-Technology Division.....	22
Aerospace Section of the Engineering Division.....	35

Departments

From the Editor.....	3
Web Reviews.....	38
Beyond the Chemistry Web.....	42
Science Today in Verse.....	43
Sci-Tech Book News Reviews.....	45

Index of Advertisers

ACS.....	67
Annual Reviews.....	17
Cuadra Associates.....	13
Global Translations.....	44
McGraw-Hill.....	34
Nature Publishing Group.....	37
Powell's Technical Books.....	65
Smithers-Rapra.....	32
SPIE.....	4
World Scientific.....	41

Copy Deadline

Issue Number 1.....	Feb 1
Issue Number 2.....	April 1
Issue Number 3.....	Aug 1
Issue Number 4.....	Nov 1

SciTech News

Volume 64, Number 2 (2010)

ISSN 0036-8059

Editor Emeritus

Ellis Mount

Editor

James Manasco
Head, Collection Development
University of Louisville
LL38 Ekstrom Library
2301 S. Third Street
Louisville, KY 40292
(502) 852-8731
Fax: (502) 852-8714
james.manasco@louisville.edu

Chair of the Review Board

Bonnie Osif
Pennsylvania State University
325 Hammond Building
University Park, PA 16802-1403
(814) 865-3697
bao2@psu.edu

Assistant Editors

Abby Thorne
132 Hemingway Place
Georgetown, KY 40324
(859) 539-5810
abby.thorne@gmail.com

Ann Koopman
Academic & Instructional Support &
Resources

Thomas Jefferson University
1020 Walnut Street, Room M110
Philadelphia, PA 19107
(215) 503-0441
Fax: (215) 923-3203
ann.koopman@jefferson.edu

Business Manager

Cheryl Hansen
Engineering Systems, Inc., Library
3851 Exchange Avenue
Aurora, IL 60504-7900
(630) 851-4566
Fax: (630) 851-4870
cahansen@esa-il.com

Advertising Manager

Carol Lucke
US Naval Research Laboratory
Research Library
Washington, DC 20375
(202) 767-2348
Fax: (202) 767-3352
carol.lucke@nrl.navy.mil
Mailing address:
6917 Asbury Drive
Springfield, VA 22152

Department Editors

Sci-Tech Book News Reviews
Selector: Susan Fingerman
susan.fingerman@jhuapl.edu

Web Reviews
Lisa R. Johnston
ljohnsto@umn.edu

Beyond the Chemistry Web
Bob Buchanan
buchara@auburn.edu

SCITECH NEWS (ISSN 0036-8059) is published quarterly (March, May, September, December) by the Chemistry, Engineering, and the Science-Technology Divisions, the Aerospace Section of the Engineering Division, and the Materials Research and Manufacturing Section of the Chemistry Division of the Special Libraries Association, University of Louisville, LL38 Ekstrom Library, 2301 S. Third Street, Louisville, KY 40292, (502) 852-8731.

Publication Policy: *SciTech News* is the official bulletin of the Chemistry, Engineering, Science-Technology Divisions, the Aerospace Section of the Engineering Division, and the Materials Research and Manufacturing Section of the Chemistry Division of the Special Libraries Association. The contents of articles and editorials are not to be construed as being or representing the official position of the sponsoring divisions.

Disclaimer: Special Libraries Association assumes no responsibility for the statements and opinions advanced by the contributors to the Association's publications. Editorial views do not necessarily represent the official position of the Special Libraries Association. Acceptance of an advertisement does not imply endorsement of the product by the Special Libraries Association.

Manuscripts: The Editor solicits papers of interest to the community of science and technology-oriented special libraries. Manuscripts of articles should be sent via E-mail (Microsoft Word or Plain Text format) to james.manasco@louisville.edu or sent by FAX to: (502)852-8714.

Subscriptions: Special Libraries Association members in the Chemistry, Engineering, Science-Technology Divisions, the Aerospace Section of the Engineering Division and the Materials Research and Manufacturing Section of the Chemistry Division automatically receive subscriptions to *SciTech News*. Their annual subscription fee of \$3.50 is paid from their annual dues to the Special Libraries Association.

Offices: *SciTech News*, c/o Editor, James Manasco, Head, Collection Development, University of Louisville, LL38 Ekstrom Library, 2301 S. Third Street, Louisville, KY 40292, (502) 852-8731, james.manasco@louisville.edu. Business Manager, Cheryl Hansen, Engineering Systems Inc., 3851 Exchange Ave., Aurora, IL 60504, (630) 851-4566 x238, cahansen@esi-il.com, Advertising: Carol Lucke.

From the Editor

James Manasco



Greetings and salutations and many returns of the day!

Welcome to the second issue of *SciTech News* for 2010. I hope you find this issue interesting and enjoyable. In this issue, in addition to the information from our participating divisions, you will also find an article submitted by a student member of SLA from the University of Rhode Island. I hope you will enjoy reading Mr. Alexander Burnett's report on the Pell Marine Sciences Library.

Also, beginning with this issue, we have a submission from the lighter side. *Science Today in Verse*, courtesy of Hope Leman, will hopefully make you think and extend your more creative horizons. Also, Ms. Leman provided a report on *ResearchRaven*, which I'm sure you'll find very interesting as well.

I'm sure everyone has the Annual Conference on their minds at this point. We're just a month away from congregating in the Crescent City and enjoying good librarianish fellowship/networking and professional development. I know I can't wait to see James Carville and Mary Matalin on the stage. I just finished reading their book, *All's Fair*, and I have to say it was a most enjoyable read. Also, Nick Carr will undoubtedly give us much to think about concerning the future of

technology.

As I've done before, I would like to put out a call for columns and article for this, your bulletin. If you have a report about an interesting project or service, send it in! If you think your paper deserves publication in a refereed journal, we can handle that, too! Bonnie Osif would love to see your manuscripts for consideration for our refereed section. I'm always interested in hearing about your ideas for columns and reports. My contact information is below and I'm standing by.

And, thinking about New Orleans, I want to leave you with some words of wisdom I learned from observing a colleague of mine on a past trip to New Orleans: when heading back to the hotel from Pat O'Brien's at 4:30am, it's generally considered a bad idea to visit an ATM on a dark city street to get cab fare for the ride to the airport later in the morning. Thankfully, the hotels usually have such devices safely within their lobbies for your banking convenience. ❖

James E. Manasco
james.manasco@louisville.edu

502-852-8731 phone
502-852-8714 fax



“As a not-for-profit educational society, SPIE strives to meet its responsibility to consider the economic challenges facing the educational and research community.”

–Eugene Arthurs, SPIE CEO

Providing the Catalyst

You’re skilled at putting research in the hands of your patrons. You provide them with the tools they need to learn and innovate—to bring positive change to the world.

We know how knowledge happens. **Thank You.**

–SPIE Digital Library Team



History of the Sen. Claiborne deB. Pell Marine Science Library

Alexander Burnett

The Pell Marine Sciences Library is located on the Narragansett Bay Campus of the University of Rhode Island in Narragansett, RI. The Narragansett Bay Campus is the home of the Graduate School of Oceanography (GSO), and the origins of the Pell Library are strongly connected to the history of the Narragansett Marine Lab, which is now the Narragansett Bay Campus.

Husband and wife, Charles and Marie Fish founded the Narragansett Marine Lab at the current location of the Bay Campus in 1937. At the time, the lab consisted of a single building where the researchers were based. In the early days of the lab, because there was not a large amount of research material available, there was not really a designated library. Any research materials were probably stored by the individual researchers, or may have been stored in a collective area in one of the labs. The Narragansett Marine Lab was not affiliated with the University of Rhode Island at the time, and remained a fairly small operation (Smith, 1950).

During the period of World War II, the area acted as Fort Kearney, a Navy fort. The multiple concrete bunkers still visible around the campus and surrounding areas are evidence of this brief period.

It is unclear when a dedicated library began, but probably starting in the 1940's and lasting until 1959, there was at least a library area located in what used to be a house on campus. This building included both a major laboratory and the library itself. The library housed all of the lab's research materials along with researchers' publications and other related material. On January 6, 1959, however, on a brutally cold night, a massive fire broke out in the building. The fire was most likely due to an electrical malfunction from faulty wiring, and because of the frigid weather, the firefighters were unable to save the building. The library burned to the ground along with all of the valuable ship logs and research records in it (Geissler, 1959; "Priceless marine data," 1959; "Fire destroys," 1959; Davis, 1959; "Clocks stopped," 1959; "Lab fire laid to wiring," 1959).

While there were a few materials that were

saved because they were not in the library at the time of the fire, including some of Dr. Fish's documents, basically the entire collection was lost. There was an estimated \$100,000 worth of damage, however this figure did not include the many valuable and irreplaceable library materials that were lost ("Priceless marine data," 1959; "Some marine documents," 1959). While it is difficult to estimate this value, librarians certainly understand the immensity of this loss, as these materials might be part of the Pell Library collection today.

After the devastating fire, the laboratory headquarters moved to the former Washington County Jail, near the Kingston URI campus ("Some marine documents, 1959; Davis, 1959). This temporary location was less than ideal as researchers worked out of cells and around iron bars. What was left of the collection was eventually moved into the Fish Building on the Narragansett Bay Campus. This office building, named after Dr. Fish, served as another temporary location for the campus library until a permanent location could be found. This surely proved to be a more accessible location than the jail. (This piece of information is largely absent from sources about the Pell Library and was provided by Judy Barnett, who used to work full-time as the Pell Library Cataloger).

In 1961, The University of Rhode Island hired John Knauss, who was a professor in the Scripps Institute of Oceanography at the University of California-San Diego, to become the first Dean of the Graduate School of Oceanography (Leinen, 2001). This would officially connect what is now the Narragansett Bay Campus to the University of Rhode Island. Dean Knauss is often credited for starting the GSO because he was the school's first Dean.

Dean Knauss sailed his research vessel, The Trident, with his car on deck, all the way from San Diego to Narragansett in order to start the GSO (Burbank, 1961; Leinen, 2001). The Trident would serve as the GSO's first research vessel, and would later be replaced by The Endeavor, which is still in operation (Ventrone & Hanson, 1962; "URI research vessel," 1962). In the proceeding years, the campus would begin to be built up to resemble the layout of today's campus ("URI expansion," 1969). A birds-eye

view is shown below, with the old Pell Library circled:



(<http://www.gso.uri.edu/about-gso/about-gso>)

This layout would include a new designated library building that would serve the GSO and URI in general. Work on the new two-story building began in 1966 (Frederiksen, 1968). This library was named the Sen. Claiborne deB. Pell Marine Science Library, after the long time U.S. Senator, Claiborne Pell, from Rhode Island. The new library building was finished and dedicated in October of 1968 (Frederiksen, 1968; "Library to be named," 1968). It became a leading marine sciences library in the United States and served a vital function supporting the growing GSO.

In 1971, URI became a National Sea Grant College, one of only four in the entire country at the time, including Texas A&M University, Oregon State University and Washington University ("Three other schools," 1971). This designation, much like the National Land Grant designation that URI also holds, ensures long term funding of the GSO from the government. Claiborne Pell, who was the author of the Sea Grant legislation that led to the Sea Grant Program, pushed for URI to be a part of the program ("Three other schools," 1971). There are now thirty colleges associated with the Sea Grant program. Because URI was the only Sea Grant college in the Eastern United States, the Pell Library served not only a vital role to the GSO, but to the entire region, and continues to do so today (<http://nsgl.gso.uri.edu/>).

After this designation, the National Sea Grant Library became housed in the newly opened Pell Library building. From 1971 to 2009, the Pell Library, the Sea Grant Library and the GSO computer center were housed in this building. Pell Library continued to build its collection and

services in parallel with the growing GSO during this period. The Sea Grant Library and the Pell Library continue to share space in their new location.

In early 2009, the old Pell Library was torn down to make way for the new Ocean Science & Exploration Center, which would house the new Pell Marine Sciences Library along with several other facilities. This new building is located just next to the old Pell Library location. It is shown below:



(<http://isc.gso.uri.edu/about/facility>)

The New Pell Library and Services:

The new Pell Library is located on the second floor of the new Ocean Science & Exploration Center. This center is a 40,000 square foot building that also houses the Inner Space Center that "enables researchers and students to monitor, track and disseminate information from oceanographic expeditions and remotely operated vehicles in real time" (<http://www.gso.uri.edu/about-gso/about-gso>). It shares the second floor with the National Sea Grant Library. The National Sea Grant Library, however, is not part of the Pell Library, and their collections and catalogs are separate. The new library facility allows the library to best serve these different patron groups along with being able to adapt to the rapid changes in technologies and in libraries in general.

The Pell Marine Sciences Library is a leading marine sciences library in the United States and the world. It serves the research and instructional needs of the faculty, marine research scientists, and graduate students in the GSO along with faculty. While focusing specifically on serving the GSO, the library also

serves the staff and students at the Kingston and Providence campuses. It also serves the neighboring Environmental Protection Agency Laboratory and the Northeast National Marine Fisheries Service Laboratory. Pell is also open year-round and is open to the public.

The library is an open and welcoming 10,000 square foot area with the main room with many large windows. This allows for a breathtaking view of the Narragansett Bay and Pell Newport Bridge. This main area overlooking the bay has many tables and chairs to relax in while enjoying the scenic view. A photo of this room is shown below:



(Photo taken by Alexander Burnett 11/12/09)

The collection consists of over 66,000 total volumes that include books, journals, theses, maps, atlases, CD ROMs, VHS and DVDs. Pell Library subscribes to 228 journal titles along with 179 journals available electronically. This number is shifting towards an increasing amount of electronic journals like many libraries these days. The maps and atlases consist of United States coastal and bathymetric charts, historical charts of Narragansett Bay, and other worldwide atlases.

The library strives to have a collection that encompasses all oceanographic disciplines, including, but not limited to: biological, chemical, geological and physical oceanography, marine biology, fisheries, marine and atmospheric chemistry, marine geology, coastal habitats, geosciences, and the newest discipline, archaeological oceanography.

There is also a unique special collection room that includes many diverse, rare and old sources. This Special Collection includes the Challenger Collection, which contains many rare books and key oceanographic and polar expeditions dating

from the early 1800s. The Special Collection also includes the Narragansett Bay Collection, which includes over 1000 titles pertaining to the Narragansett Bay specifically, and also the GSO Archives, which is a collection or reprints published by GSO faculty, scientists and students dating from the 1950s. The Special Collections room is shown below:



(Photo taken by Alexander Burnett 11/12/09)

The Pell Library has access to several research databases along with full access to all of URI's databases. Some of these include:

ASFA (Aquatic Sciences & Fisheries Abstracts): This is provided by ProQuest and is a leading database aquatic resources reference.

MGA (Meteorological and Geostrophysical Abstracts): Provided by ProQuest, this is a premier database focusing on meteorological, geostrophysical and related sources.

GeoRef: Provided by ProQuest, GeoRef focuses on geosciences literature from all over the world and includes journals, books, reports, maps, theses and conference papers.

Web of Science (ISI Web of Knowledge): Published by Thomson Reuters, this is a great database for tracking scientific topics and finding cited papers and papers that have cited those papers.

National Sea Grant Library Database: Pell Library provides access to this free Sea Grant Database. Sharing a building with the National Sea Grant Library also allows the Pell Library easy access to the Sea Grant collection.

EI Village (Engineering Village): This is another

online database specializing in the applied sciences and engineering fields.

Other Online Databases through URI include:

Environmental Abstracts: This is a database with journals related to the environmental studies

Oceanic Abstracts: An international database of literature related to marine environments.

This wide array of databases covers the majority of the research that happens at the GSO. This shows that the Pell Library is able to provide its patrons with the best research sources available. Further, like most databases these days, these databases are online, and many can be accessed remotely allowing for the easiest use possible. This also shows that while the Pell Library may appear quiet, many of the library's users do not need to actually set foot in the library.

The Pell Library is also a part of the Rhode Island Higher Education Library Information Network (HELIN) that includes universities and colleges around Rhode Island and New England. The Pell Library catalog is accessible through the HELIN Online Catalog along with the catalogs of the other libraries in the consortium. Belonging to this consortium allows the Pell Library access to the resources of the other libraries through interlibrary loan. This helps to keep costs down while continuing to provide the best service possible to the GSO community.

Despite tough economic circumstances where the staff has been cut from three full-time staff to one, the Pell Library continues to be a vital part of the GSO. It will continue to be a leading marine sciences library for a long time. Continuing to be a leading library will help ensure the prosperity of not only the library itself, but also the GSO and URI in general. Further, because URI is so important to the state of Rhode Island, this has implications for positive effects in the state in general.

Acknowledgements:

I would like to first of all thank Joyce Downey, Joyce Winn and Judy Barnett for their help in researching and recollecting the scattered history of the Pell Library. They provided me with many pieces of information that I would not have otherwise found. I would also like to thank Professor Alexander Caracuzzo for his constructive comments and support of this paper.

Bibliography

Burbank, C. M. (1961, July 6). Dean of URI School of Oceanography: oceans and their contents his domain. *The Providence Evening Bulletin*

(1959, February 4). Clocks stopped at 12:07: faulty cable blamed for lab fire. *Providence Journal*

Davis, P. D. (1959, January 8). Irreplaceable data destroyed in Marine Laboratory fire. *Providence Evening Bulletin*, p. 10

(1959, January 6). Fire destroys URI's Marine Lab, records. *Providence Evening Bulletin*

Frederiksen, R. C. (1968, October 20). Sea study buildings dedicated. *Providence Journal-Bulletin*

Geissler, E. C. (1959, January 11). South Ferry: its last marker gone. *Providence Sunday Journal*

<http://www.gso.uri.edu/> Retrieved 12/4/09

<http://nsgl.gso.uri.edu/> Retrieved 12/7/09

(1959, February 4). Lab fire laid to wiring. *Providence Bulletin*

Leinen, M. (2001). John Knauss: 50 years of service to oceanography. *Oceanography*, 14(2), 5-10

(1968, October). Library to be named in Sen. Pell's honor. *Providence Journal Bulletin*.

(1959, February). Priceless marine data lost in \$100,000 lab fire. *Maine Coast Fisherman*

Smith, H. H. (1950, September 10). Probing sea mysteries at the Narragansett Marine Lab. *Providence Sunday Journal*, p. 3

(1959, January 7). Some Marine Lab documents spared. *The Providence Evening Bulletin*, p. 14

(1971, September 8). Three other schools named: URI 'Sea Grant' college. *Providence Journal Bulletin*

<https://www.uri.edu> Retrieved 12/4/09

(1969, September 15). URI expansion a healthy sign. *Providence Journal Bulletin*, p. 16

(1962, July 26). URI research vessel named Trident. *The Providence Evening Bulletin*, p. 9

Ventrone, R. A., & Hanson, E. C. (1962). There's a new ship in Narragansett Bay. *The Providence Journal Bulletin* ❖

ResearchRaven: Its Value to Librarians

Hope Leman, Research Information Technologist
Center for Health Research and Quality, Samaritan Health Services

This article has two aims. The first is simply to alert you to the launch of ResearchRaven <http://www.researchraven.com/>, a free online service of the Samaritan Health Services Center for Health Research and Quality. The purpose of ResearchRaven is to enable users to efficiently find current information about professional conferences, calls for papers for publications and for papers for presentations at professional meetings, and other research-related materials in the health sciences.

The second aim of this article is to suggest ways that librarians can utilize ResearchRaven to assist patrons and to leverage the listings on it to provide newsmastering services to your patrons and thereby increase the visibility of your library on their radar screens.

Here is a bit of background on the origins of ResearchRaven. At the Center for Health Research and Quality, one of our tasks is to help researchers find the information they need in order to find the necessary funding to support their research. We wanted to assist them with the often burdensome and time-consuming task of locating grants and fellowships to fund their research projects. We also wanted to assist those at Samaritan Health Services who wanted to further their educations in the health sciences but who needed to track down scholarship funding. To assist these various groups, we created ScanGrants <http://www.scangrants.com/>, which lists funding opportunities in the health sciences as well as scholarships for patients to attend gatherings of disease advocacy organizations, scholarships for those with certain disabilities or conditions, prizes for achievement in science and medicine and so on. Basically, we want to help those who want to learn about a disease or contribute to its study.

Once we created and launched ScanGrants we decided to release it for free use by anyone in the world and have been gratified to see it adopted by various libraries and offices of research administration as one of their standard electronic resources.

As we worked on ScanGrants, we came to note that many of the calls for abstracts that carried with them the monetary amounts we listed on

ScanGrants were associated with meetings and that many of the abstracts would eventually be published in books of conference proceedings. We also noted that those researchers who used ScanGrants to learn about essay awards or abstract awards were almost certainly engaged in research projects that they would want to give presentations about at conferences or publish papers about in scholarly journals. While there are blog and wiki postings here and there about calls for papers and though professional societies and commercial sponsors of meetings would feature notices on their own Web there didn't seem to be an overall aggregator of such calls for papers for meetings and publications and notices of meetings in the health sciences that would attempt to be as comprehensive as possible, encompassing not only the medical sciences and hard sciences but also fields such as Health IT and health-related social science. ResearchRaven is our attempt to fill that gap.

It is early days yet, so we are still creating categories. But we are confident we can create a robust (and free!) tool that everyone from novice student nurse researchers to established investigators in pharmaceutical science will find helpful.

As with ScanGrants, users of ResearchRaven can subscribe for free via RSS or email to either all the listings entered that day in whatever category was updated that day (find conferences, call for papers/conferences, calls for papers/publications) or they can choose to subscribe to only those categories that most interest them (public health, nursing research, psychiatry, drug development, etc.). The ability to subscribe by area of interest is one of the most powerful features of both ScanGrants and ResearchRaven and will make it quite easy for librarians, for instance, to alert researchers interested in certain fields about publishing opportunities. And each listing on ResearchRaven can be downloaded as a PDF for easy transmission to your patrons. And, again, this is all free--no Doline or other interlibrary loan fees.

Now, what does all this mean for you as a medical or science librarian? Well, as already noted, by subscribing to some of the feeds/email alerts offered free in ResearchRaven

you can enable researchers to keep abreast of publishing opportunities and of meetings they would not otherwise have heard of and might wish to simply attend or to present papers at. It never hurts to help researchers save time and to alert them to ways to get ahead and learn of potential audiences for their work. And as you alert patrons to publishing opportunities feel free to add, "And if you need help with a literature search or any other assistance with your paper, the library offers..." ResearchRaven is a library marketing tool and a research resource all in one!

And if you work with undergraduates, graduate students, nursing students or novice researchers (say a diabetes educator or public health nurse who believes strongly in a method she has developed), ResearchRaven can serve as a teaching tool to illustrate to new investigators the ins and outs of how to get published or present at professional gatherings. And again, a librarian can be a huge help to those putting together powerpoints and scholarly papers and who can help newbies (and busy researchers) with the intricacies of citation styles and copyright matters better than a librarian? ResearchRaven can help even the smallest hospitals ramp up research programs.

Another way that librarians can benefit from ResearchRaven is by using it to keep on trends in library and information science. As the worlds of Open Science and Science 2.0, E-science and E-Health impact more the world of medical librarianship it behooves us to follow developments in those realms. Therefore, on ResearchRaven we list items of interest to those in the information sciences and librarianship about calls for papers and notices of meetings about data sharing and collaboration, scientific communication, E-Learning, big data, biomedical informatics and so on.

And not only do we offer serious listings of such matters, ResearchRaven also includes Leman's Lexicon, a tongue-in-cheek guide to the latest buzzwords in science and medicine.

Please give ResearchRaven a try and if you are editing special issues of library journals on health or science-related topics or organizing a conference on them, please feel free to submit the announcement to ResearchRaven for possible listing on it. I am always looking for material to tell everybody about. ResearchRaven is here to advance science and medical research and who does that better than librarians? Thanks, group! ❖

Sci-Tech Division Vendor Sponsors for 2010

Carol Lucke, Vendor Relations Chair, Sci-Tech Division

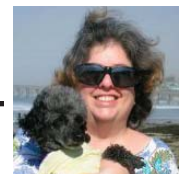
The Sci-Tech Division would like to recognize our generous sponsor vendors for their financial assistance and support for the 2010 SLA Conference. Without them the Sci-Tech Division would not be able to offer the relevant, educational and interesting programs and networking opportunities our members count on and expect. This year our vendor supporters include, in alphabetical order:

ACS
Annual Reviews
ASTM
CrossRef
Elsevier
IEEE
IET/Inspection
Morgan Claypool Publishers
Springer
Thomson Reuters
HW Wilson
World Scientific

Please be sure to visit our sponsors at the Exhibitors Center and thank them for their support!

Chemistry Division

Teri Vogel, Chair



The Chemistry Division is concerned with chemistry and chemical technology, and the economics, educational advances, and information handling of developments in the field of chemistry and related subjects.

As I write this, we're less than two and a half months away from the 2010 SLA Conference. Of course there's still a lot to do, but we'll get there. Between now and the conference, be on the lookout for calls going out on the DCHE Mailing List for conference reporters (to report on sessions for the next *Sci Tech News* issue), as well as some new committees. Also as of this writing, our webmaster Linda Maddux is putting up the conference schedule on our website, but the programs are in the conference online planner at the SLA website so you can begin organizing your personal schedule.

In this issue we're experimenting with a new Membership column, starting with a brief profile of two of our new members. If you are new to the Chemistry Division and would like to introduce yourself, please contact Dana Roth.


I'd also like to take this opportunity to thank

our conference sponsors (as of April 1) whose generous support allows us to offer quality educational, networking and professional development sessions and opportunities at the SLA Conference.

- American Chemical Society Publications
- Chemical Abstracts Service
- Elsevier
- GLTaC
- Knovel
- Nature Publishing Group
- Royal Society of Chemistry
- Springer
- SRI Consulting
- Wiley

I look forward to seeing everyone in New Orleans. Let the good times roll. ❖

Teri Vogel
tmvogel@ucsd.edu



HELP | EXIT | OPAC

**Knowledge Center[®]
for Libraries**

Cataloging Serials Acquisitions Circulation Requests Management

Designed to...

- *help you manage both digital and traditional materials*
- *make your collection more visible and more accessible, with...*
 - *RSS*
 - *librarian-specified "Hot Topics"*

And its 21st-century, feature-rich OPAC will become your users' favorite research tool.

Call Cuadra Associates at 800/366-1390 or visit www.cuadra.com/skcl

Chemistry Division Membership Column

Dana L. Roth, Chemistry Division Membership Committee, California Institute of Technology

Two of our new Chemistry Division members:

Khue Duong

Science Librarian
Cal State University
Long Beach, CA
khuenoway@gmail.com

Khue Duong is excited to be a member of the SLA Chemistry Division. Studying Chemistry and English at UCLA as an undergrad ages ago, he is re-learning many concepts, filling in long-forgotten details.

Khue's graduate studies included both theoretical linguistics at UC Santa Cruz and library education/training at University of Washington.

Hope Leman

Research Information Technologist
Center for Health Research and Quality
Samaritan Health Services
Corvallis, OR
hleman@samhealth.org

Hope Leman is a 2009 graduate of the MLIS

program at the University of Pittsburgh. She did her undergraduate work at Oregon State and the junior high she attended in Corvallis was later renamed the Linus Pauling Middle School.

She is the Web administrator of a grants and scholarship listing service, ScanGrants (<http://www.scangrants.com>), and is working on ResearchRaven for papers, abstracts and notices of professional meetings. Hope also has a blog about Science 2.0 that includes medicine and health at <http://significantscience.com/>.

She is also a member of MLA and ALA and focuses on keeping up on developments in research methods in the health sciences. She greatly appreciates the friendliness shown by DCHEM members of the SLA in welcoming her into the fold.

She also loves to pass along Dr. Pauling's quote: "I feel sorry for people who don't like chemistry."

If you would like to be included in the next DCHE Membership Column, please email Dana Roth (dzrplib@library.caltech.edu).

Conference Report: American Chemical Society Meeting

Teri Vogel, Chair, Chemistry Division

In March, I was in San Francisco for the 239th ACS Meeting, as always a good opportunity to talk with vendors and catch up with colleagues and friends. It was also one of the most rewarding ACS Meetings I have attended, with a very strong lineup of programs from the Division of Chemical Information (CINF). Here are some of the highlights from the symposia I attended (<http://tinyurl.com/ydk85e6>).

At the "Sustainable Chemical Information Education through Faculty and Librarian Partnerships" Symposium, librarians discussed how they are integrating chemical information into courses at their institutions. Sue Cardinal shared her early experience with students using Reaxys to identify doable synthetic methods for an organic chemistry laboratory course, while Eric Snajdr discussed a six-module series of chemical information assignments to prepare students for their synthetic lab experiment.

Though many of us know Judith Currano for her work with graduate instruction, she presented instead on some key themes and exercises she employs in an undergraduate advanced lab course: truncating words and molecules, a brainstorming exercise to identify and group types of chemical information resources, and sending students to look for a property that cannot be found in the literature—so they can discuss the reasons why. Marion Peters talked about the resources and learning objectives she integrates into her department's three-quarter organic chemistry lab sequence, which includes meeting with every lab section. And while most of the presenters focused on work with specific courses, Norah Xiao spoke more about her department-wide outreach and information literacy efforts.

This symposium was followed by "What Happened to My Library?: Managing Organizational and Space-Related Challenges," a particularly timely topic since least half the attendees had faced or were facing these changes to their library (myself included). Susanne Redalje lead off with her recent experience of dealing with the 2009 closing of her chemistry library—one of several branch closures—at her university, and the lessons learned. Meghan Lafferty focused on the changing role of the liaison by highlighting the ten (yes, ten) roles expected of each liaison,

including traditional ones like reference and teaching, as well as newer roles like scholarly communication, e-science and even exhibit/event planning. Leah Solla concluded the presentations by sharing her success story when the collection was moved out of her physical science library so the space could be repurposed. They got heavy input from users, were able to minimize some of the impact through acquiring more databases and e-journal backfiles, and even found a way to distribute the chemistry collection to three other libraries. Her "take-aways," though logical (make it strategic, take ownership of the changes, communicate and collaborate), can sometimes get lost in the planning and execution of these organizational/space changes.

CINF's centerpiece for this meeting was a two and a half day program, "The Future of Scholarly Communication." The first symposium I attended was "Towards Web 2.0," which was introduced by Robert Schwarzwald, who laid the groundwork of the past, present and future of publishing. He also threw out a new word: *infomediation*, an alternative to "information access." The book "The Fourth Paradigm: Data-Intensive Scientific Discovery" (<http://research.microsoft.com/en-us/collaboration/fourthparadigm/>) came up several times over the two days, including Carl Lagoze's presentation about the oreChem Project, which focuses on data integration, capture and recovery, and storage and manipulation. He highlighted the differences among the various scientific communities about sharing scientific information/data; why it has been generally more successful among physicists than chemists. Kent Anderson showed us some of the social networking endeavors at the *New England Journal of Medicine*, while identifying key reasons why these projects often fail (lack of top-level commitment, dependency on busy and over-extended staff, lack of leadership). And from survey data presented by Bill Town, we were reminded that chemists still use books heavily; that they use Web 2.0 tools more in teaching than research; that Wikipedia and Google Scholar fall into their "top 10" heavily used resources along with SciFinder and e-journals; and that for storing research the use of repositories comes in a distant third behind "their own computer" and keeping things in print. We also heard presentations from publishers,

including early work by Thieme to publish and make accessible the primary data for *Synthesis* and *Synlett* articles. In the next symposium, "Application of Emerging Technologies," Jason Wild reported about a new project from NPG to improve the uptake and linking of chemical structures in their journals. Richard Kidd (Royal Society of Chemistry) stressed the need for publishers to be flexible and willing to try out publishing models, approaches, and technologies. But he also asked the question of how many apps and widgets out there actually solve research problems and save time or money (which may depend on how you define widgets and apps), and he reminded us that there is a reason that "lowest common denominator" formats like DOC, JPG and PDF are so successful.

In the final symposium I attended, "Authoring and Discovery Tools," we heard from several speakers at Microsoft Research. Alex Wade talked about Researcher Desktop and the need for an articles-equivalent of "iTunes" for scientists to search, grab, organize, annotate, share and store their articles. Joe Townsend presented the new Chemistry Add-In for Word (aka Chem4Word) as a way to support semantic chemical information, including IUPAC names and print-quality 2D structures, in Word documents. Peter Murray-Rust gave a spirited talk about the need for open data in chemical publications, going from "the hamburger back to the cow." And RSC's Antony Williams delivered the final

presentation for that symposium, a review of ChemSpider, which is now up to 25 million unique compounds from 300 data sources. We got a progress report on recent developments like the federated searching into RSC content, PubMed and Google Books/Scholar, along with plans for upcoming improvements.

Product highlights at the conference included:

- CAS gave us a report on the next batch of improvements to SciFinder, including copy/paste compatibility with ChemDraw, more drawing shortcuts in the structure editor, the addition of another 300,000 experimental spectra to the CAS Registry, an .RIS output for exporting references, a new "additional reactions" feature in CASREACT that will connect to preparations in CPlus, and the ability to identify preferred and less-preferred suppliers in CHEMCATS.
- From Microsoft Research: the just-released Chemistry Add-in for Word. (<http://www.educationlabs.com/projects/ChemistryAdd-in/Pages/default.aspx>).
- ACS Publications introduced their new mobile app for the iPhone/iPod Touch. You can select your favorite journals and track the ASAPs, email the links or share via Facebook or Twitter, save the ASAPs, and browse C&EN. (<http://pubs.acs.org/page/tools/acsmobile/index.html>) ❖

ANNUAL REVIEWS DELIVERS THE BEST OF THE BEST TO ONE PLACE: YOUR LIBRARY.

Annual Reviews intelligently synthesizes critical literature in the Biomedical, Life, Physical, and Social Sciences, including Economics. Your patrons can rely on Annual Reviews to assess the available research and deliver the ideas that matter, to cut out the noise, and to meet their research needs efficiently and in a timely manner.

NEW JOURNALS AVAILABLE IN 2010:

Annual Review of Food Science and Technology
Annual Review of Chemical and Biomolecular Engineering
Annual Review of Condensed Matter Physics

SECURE A SITE LICENSE FOR YOUR PATRONS TODAY

online: www.annualreviews.org

email: sitelicense@annualreviews.org



ANNUAL REVIEWS • A Nonprofit Scientific Publisher • 40 Journals • Since 1932
TEL: 650.493.4400 • TEL: 800.523.8635 (US/CAN) • FAX: 650.424.0910

Materials Research & Manufacturing Section Jack Bashian, Chair

Members of the Materials Research and Manufacturing Section of the Chemistry Division share information concerning all phases of materials procurement, production, applications, and handling by means of educational activities, cooperative programs, publications, and Section-sponsored events at annual conferences.

The Materials Research & Manufacturing Section of the Chemistry Division Welcomes Its New Members

Mr. Marc Iacono-Harris

Springer
Corporate Licensing
233 Spring St
5th Floor
New York, NY 10013

Dr. Ye Li

University of Michigan
Shapiro Science Library
3162 Shapiro Library Building
919 South University Avenue
Ann Arbor, MI 48109-1185

***SciTech News* Call for Articles!**

SciTech News is looking for a few good authors!

If you have a research project, a new service in your library, a new instructional method, or other information you'd like to share with your colleagues, please consider writing for *SciTech News*. In addition to the regular articles, we now have a refereed section. Colleagues will review your article and provide feedback. Accepted articles will be published in the new electronic *SciTech News*. This is an excellent venue to get your research and ideas out to a group of interested readers and get that important refereed article for your dossier or annual review.

For additional information, contact Editor James Manasco (james.manasco@louisville.edu) or Review Board Chair Bonnie Osif (bao2@psu.edu). Articles for the refereed section may be submitted to the Review Board Chair at bao2@psu.edu.

Engineering Division

Laurie C. Allen, Chair



The objectives of the Engineering Division are to provide an association for those having an interest in library and information science as they apply to engineering and the physical sciences and to promote the use of materials and knowledge for the benefit of libraries and other educational organizations.

Hi Everybody!

The Board members have been working on two items. The first is the annual conference sessions and the second is updating our Recommended Practices.

The draft version of the Recommended Practices is up on the website. We plan to have all the edits finished by the first of May. This document describes how we as a division operate. It is a fluid document in that we make revisions as they are needed. However, it has been a couple of years since a major revision was undertaken. Duareen Nesdill, Sara Davis, and Mary Frances Panettiere have done the majority of the work slogging through the document countless times to catch all the little idiosyncratic things that creep into documents like this.

The annual conference sessions are in good shape – although we have had a few hiccups here and there. I guess that is what planning a conference is all about. Sara Davis' committee has been fantastic in their fundraising efforts. I must thank all our sponsors for helping put on these sessions. Without them, we could not have the breadth of sessions we are able to offer. Below is a list of the sessions DENG and AERO are sponsoring:

Info Literacy in the Workplace Parts 1 & 2 (Monday afternoon); Social Technologies for Collaboration (Tuesday afternoon); The Impact of Storms on Coastal Cities (Wednesday morning); Science and Engineering Resources 101 (focusing this year on National Security Resources and GIS/Remote Sensing, Monday morning); Standards Update (Monday afternoon); Contributed Papers: Future of Science Librarianship (Monday afternoon); All Sciences Poster Session and Reception (Tuesday evening); and Resources for Polymer Information (Wednesday morning). Our

speakers are professors, librarians, authors, and vendors. This should be an exciting conference.

In my last column, I mentioned that DENG was going to offer you a chance to participate in SLA's efforts to help New Orleans. Instead of working with our hands, I'm asking you to work with your wallets. Here's the deal. Buy a small bag or box of candy that is well known in your city or area. Bring it to the DENG luncheon on Tuesday (11:30 am - 1:30 pm). We'll put all contributions in baskets and raffle them off. We'll be selling 6 tickets for only \$5.00 at the door. If everyone participates, we should be able to raise \$300 and every dollar we raise will be given to Manna, the local food bank.

We have an open position on the Advisory Board for a Continuing Education Chair. This person helps to plan the course we normally sponsor at the annual conference and provides notices of upcoming relevant educational opportunities to the members via the discussion list. Please contact me if you are interested in this position.

Andrea Davis, an MLIS student at Simmons College in Boston, MA, has won the Inspec Travel Stipend. Susan Braun of the Aerospace Corporation in Los Angeles has won the Elsevier Engineering Librarian of the Year Award. Further information about both winners is elsewhere in this issue. Please join me in congratulating Andrea and Susan.

I look forward to seeing many of you in New Orleans in a couple months. I've never been to New Orleans and am truly excited to be visiting this great city! ❖

Laurie Allen
lallen@teledyne.com

**SLA Engineering Division Announces
Elsevier Engineering Librarian of the Year
Award Winner:
Susan Braun**

The Engineering Division of SLA is pleased to announce that Susan Braun of the Aerospace Corporation, LA has been selected Engineering Librarian of the Year.

Quoted from her nomination statement: "Susan, who has enjoyed a distinguished career as a technical librarian first at Hughes Aircraft and now at Aerospace Corporation, has been a pioneer and trendsetter in many ways. She was one of the first technical librarians to implement online services and has been a champion of innovative services throughout her career."

Susan will be honored at the Engineering Division Business Meeting and Luncheon on Tuesday, June 15th, 2010 during the SLA Annual Conference in New Orleans.

The \$1500 Engineering Librarian of the Year Award is sponsored by Elsevier and the SLA Engineering Division to highlight the accomplishments and contributions of members to the engineering librarian profession.

**SLA Engineering Division Announces
Inspec Travel Stipend Award Winner:
Andrea Davis**

The Engineering Division of SLA is pleased to announce that Andrea Davis has been selected winner of the 2010 Inspec Travel Stipend Award. Ms. Davis is a MLIS student at the School of Library & Information Science at the Simmons College, Boston MA.

The topic of the 2010 winning essay is "Describe and propose the use of a web 2.0 technology to connect users with information in an engineering library."

Ms. Davis will be honored at the Engineering Division Annual Business Meeting and Luncheon on June 15th, 2010 during the SLA Annual Conference in New Orleans.

The \$1200 Inspec Travel Award assists library school students toward payment of expenses incurred while attending the Special Libraries Association Annual Conference.

Science-Technology Division

Hilary Davis, Chair



The objectives of the Science-Technology Division shall be to draw together those members of the Special Libraries Association having an interest in the role of library and information science as applied to the recording, retrieval and dissemination of knowledge and information in all areas of science and technology, and to promote and improve the communication, dissemination and use of such knowledge for the benefit of libraries and their users.'

First and foremost, I want to extend a thank you to all of those who have volunteered this year for committees and liaison roles and who have helped guide me in my role as Chair. I'm honored to be a part of such great energy and enthusiasm! Our goals for this year (outlined in the last issue of the *SciTech News*) are in the works—look for changes to our website later in the year, coupled with creative showcasing of our members, new ways to leverage the listserv and communication channels within the division (see Joe Kraus' survey at <http://www.nothingbut.net/2010/03/discussion-sessions-for-dst-members.html>), and potentially revised branding to align with SLA Headquarters' goal to have a "uniform visual identity."

The Professional Development Committee is ramping up for a webinar on May 12, free to Sci-Tech Division members! The topic is "Twitter for Special Libraries" featuring Joe Murphy (Yale University and 2009 *Library Journal* Mover and Shaker). By the time this issue hits the web, you will have already seen the invitation to register. Please sign up!

The SLA Annual Conference in New Orleans is just around the corner! This year, the Sci-Tech Division Conference Planning Committee has designed an exciting array of programs and events including the Future of Science Librarianship Contributed Papers session featuring both in-person and virtual presenters; the Computer Science Round Table focusing on Kindle/e-reader loan programs, digital image metadata, and augmented reality (with complimentary boxed lunches while supplies last); a new session on Collection Intelligence (assessment tools and strategies to demonstrate

use/value of library collections); a session on Grants Librarianship (with complimentary coffee and donuts, while supplies last); the IT/Sci-Tech Open House, and many more. As always, we will announce award winners at the Sci-Tech Business Meeting and Awards Breakfast. This year, we are again hosting a Newcomers' Lunch during the Annual Conference (Sunday, June 13). Invitations to new members will be forthcoming. This is an opportunity for new members to meet and start building new professional networks over a free lunch.

Please consider serving as reporters for our sessions. The *SciTech News* will need session reporters to write about the programs they attend for the September issue. Please let James Manasco (james.manasco@louisville.edu) know if you are interested in being a reporter.

The complete list of Sci-Tech conference sessions can be found online at <http://units.sla.org/division/dst/Annual%20Conference/conference.html> and in this issue of *SciTech News*.

We are truly grateful to our vendor sponsors who have come through once again to support us and our programs at the Annual Conference. Many thanks to our sponsors! A list of this year's sponsors can be found at: <http://units.sla.org/division/dst/Sponsorship/sponsors.html>

As always, if you have comments, questions or suggestions, feel free to contact me. ❖

Hilary Davis
hilarymdavis@gmail.com or
hilary_davis@ncsu.edu

Special Libraries Association Unit: Science Technology Division Section:

Property Report

For Year Ending 12/31/ 09

If the unit owns any property which falls within the definitions given on the Property Guidelines, please report the following:

<u>Item</u>	<u>Date</u> <u>Acquired</u>	<u>Cost</u>	<u>Location</u>	<u>Person</u> <u>Responsible</u>
-------------	--------------------------------	-------------	-----------------	-------------------------------------

Unit does not own any property as defined by the Property Guidelines

++++
++++

Auditor's Certification: I hereby certify that I have examined the accounts and records of the Science - Technology Division (insert unit's name). In my opinion, they have been carefully maintained and the attached statements have been prepared correctly therefrom.

Auditor's Signature: Sara Davis Date: 1/30/10

Auditor's Name: SARA DAVIS

Address 1: 1617 Fountainview #99

Address 2: Houston, TX 77057

++++
++++

Treasurer's Signature: Cheryl A. Hansen Date: 2/1/10

Science Technology Division Balance Sheet - As of 12/31/2009:3
 As of 12/31/2009

1/24/2010

Page 1

Account	12/31/2008 Balance	12/31/2009 Balance
ASSETS		
Cash and Bank Accounts		
DST Operating Current	14,971.65	14,274.78
DST Pooled Fund	42,332.44	44,023.85
STN Operating Current	5,363.96	9,629.82
STN Pooled Fund	24,243.57	25,212.22
TOTAL Cash and Bank Accounts	86,911.62	93,140.67
TOTAL ASSETS	86,911.62	93,140.67
LIABILITIES		
	0.00	0.00
OVERALL TOTAL	86,911.62	93,140.67

Science Technology Division Year-End Financial 2009 - 2009

1/1/2009 through 12/31/2009

1/24/2010

Page 1

Category Description	1/1/2009- 12/31/2009
INCOME	
Bulletin Adv Inc	
62-3	550.00
62-3 & 4	500.00
62-4	1,450.00
63	6,100.00
63 #1 & 2	500.00
63 #1 & 2 & 3	1,500.00
63 #1-4	1,000.00
63 #2	500.00
63 #2-4	750.00
Bulletin Adv 63 #1	233.00
Bulletin Adv 63 #3	466.00
TOTAL Bulletin Adv Inc	13,549.00
Bulletin Subs Inc	
Division Subs, Vol. 63	4,186.00
External Subs, Vol. 56	22.50
External Subs, Vol. 57	122.50
External Subs, Vol. 63	185.00
TOTAL Bulletin Subs Inc	4,516.00
Interest Income	2,662.66
Meeting Income	
Annual Conf 09	4,535.46
Annual Conf 10	3,960.00
TOTAL Meeting Income	8,495.46
Miscellaneous Income- CE Webinar	280.00
Sponsorships	
Annual Conf 09	12,230.62
Other Sponsorships	1,500.00
TOTAL Sponsorships	13,730.62
TOTAL INCOME	43,233.74
EXPENSES	
Bulletin-Adv	
62-4	17.00
63	425.28
63-1 & 63-2	560.17
63-2	471.59
63-3	553.94
63-4	25.50
TOTAL Bulletin-Adv	2,053.48
Bulletin-Adv V.64	29.75
Bulletin-Non Adv	
62-4	83.00
63	2,076.32
63 #1	83.00
63 #1 & #2	493.85
63 #3	2,868.75
63-1 & 63-2	2,241.08
63-2	2,302.43

Science Technology Division Year-End Financial 2009 - 2009
1/1/2009 through 12/31/2009

1/24/2010

Page 2

Category Description	1/1/2009- 12/31/2009
63-3	1,222.37
63-4	124.50
Other Bulletin-Non Adv	145.25
TOTAL Bulletin-Non Adv	11,640.55
Meeting Expense	
Annual Conf 08	487.62
Annual Conf 09	12,982.68
Winter Meeting 10	426.20
TOTAL Meeting Expense	13,896.50
Membership Committee Expense	70.00
Miscellaneous Expense	
Awards	4,118.11
Board & Committee Expenses	88.11
Board Travel	2,975.32
Gifts&Plaques	100.00
STN Support	1,900.50
Other Miscellaneous Expense	90.57
TOTAL Miscellaneous Expense	9,272.61
Postage & Supply	
Other Postage & Supply	41.80
TOTAL Postage & Supply	41.80
TOTAL EXPENSES	37,004.69
OVERALL TOTAL	6,229.05

Statement of liabilities

As of 12/31/ 09

1. Unpaid Bills as of 12/31/ <u>09</u>	<u>1,600.00</u>
2. Subscription income received in advance	<u>—</u>
3. Meeting income received in advance	<u>7,560.00</u>
4. Other income received in advance	<u>—</u>
5. Outstanding loans from	<u>—</u>
6. Other liabilities:	<u>1253.25</u>
<hr/>	
7. Total Liabilities as of 12/31/ <u>09</u> (add rows 1 - 6)	<u>9813.25</u>

Sci-Tech 2010 Conference Sessions – Sessions led by and co-sponsored by the Sci-Tech Division

Submitted by Hilary Davis, Chair, Sci-Tech Division

Sunday, June 13, 2010

11:30 am - 1:00 pm

Science-Technology Division Newcomers Lunch

Location: To be determined; see invitation for details.

The Science-Technology Division welcomes new members over lunch to learn about how to get involved in the division, network and get psyched for a great conference experience. This event is invitation-only.

Speaking: Thea Allen, US EPA Headquarters and Chemical Libraries; Sarah Oelker, Mount Holyoke College

Sponsored by: IEEE

1:30 pm - 3:00 pm

Science-Technology Division Board of Directors Meeting

Location: New Orleans Marriott, Napoleon Room (41st floor)

Speaking: Hilary Davis, North Carolina State University Libraries

Monday, June 14, 2010

8:00 am - 9:30 am

Science & Engineering Resources 101

Location: Convention Center, Room 222

This year in 101, get an overview of resources for National Security and GIS/Remote sensing. See how they fit into the life of an engineer or scientist. Our experts then introduce the best resources that help in discovering, obtaining, and working with these types of resources.

Moderated by: Thea Allen, US EPA Headquarters and Chemical Libraries

Speaking: Mary Frances Lembo, Pacific Northwest National Laboratory; James E. Manasco, University of Louisville

Presented by: Science-Technology Division; Engineering Division

Sponsored by: IEEE

10:00 am - 11:30 am

Collection Intelligence

Location: Convention Center, Room 223

Join us as we explore assessment tools and strategies to demonstrate use/value of library collections via best practices for collection metrics.

Moderated by: Susan Fingerma, Johns Hopkins University Applied Physics Lab

Speaking: Hilary Davis, North Carolina State University Libraries; Mary Lane, Lorillard Tobacco Company; Mathew Willmott, Massachusetts Institute of Technology

Presented by: Science-Technology Division; Chemistry Division; Physics-Astronomy-Mathematics Division

Sponsored by: IET Inspec; Springer

2:00 pm - 3:30 pm

Academic Roundtable

Location: Convention Center, Room R09

The Academic, Education and Science & Technology Divisions are hosting a roundtable. Join us for a lively discussion of the most current topics and hottest trends in academic librarianship. In this exciting "unconference" format, attendees will form small groups led by moderators, and will discuss a specific problem, challenge, or new trend that academic librarians face. At the end of the session, the groups will come together for a general discussion. This is a great opportunity for learning, networking, and sharing your ideas about academic librarianship!

Presented by: Academic Division, Education Division; Science-Technology Division
Sponsored by: ASTM International; H. W. Wilson

4:00 pm - 5:30 pm

Future of Science Librarianship: Contributed Papers (with virtual component)

Location: Convention Center, Room 222
Topics focus on the future of science librarianship (captured in video, hosted on the Sci-Tech Division site, published in *SciTech News*):

- "The Future of Librarianship in Science and Technology Libraries" by Dana Roth, CalTech
- "Using Drupal to Create the Pandemic Influenza Digital Archive for the National Institutes of Health" by James King, National Institutes of Health Library
- "Promoting Public Access Policies - A New Role for Librarians" by Leila Fernandez, York University; Rajiv Nariani, York University;

Marcia Salmon, York University

- "Defining Future Roles from One Publisher's Perspective" by Karen Hunter, Elsevier
- "From Both Sides, Now: Librarians Team Up with Computer Scientists to Deliver Virtual Computer-Information Literacy Instruction" by Beth Bloom, Seton Hall University
- "Science Librarianship Is an Essential Player in a Global Learning Company" by Sharon Mehl, Applied Materials

Moderated by: Lisa Johnston, University of Minnesota-Twin Cities

Presented by: Science-Technology Division; Engineering Division; Environment & Resource Management Division; Food, Agriculture & Nutrition Division; Physics-Astronomy-Mathematics Division
Sponsored by: OSA - The Optical Society; World Scientific Publishing Company

9:00 pm – 12:00 am

Information Technology and Science-Technology Divisions Open House

Location: Sheraton Hotel, Armstrong Ballroom
Sponsored by: Elsevier

Tuesday, June 15, 2010

8:00 am - 9:30 am

Science-Technology Division Business and Awards Breakfast

Location: Convention Center, Room 345

Ticketed Event #555

Price: \$10 member / \$5 student member / \$15 non-member

Join the Science-Technology Division members for breakfast while we congratulate the winners of our 2010 awards and find out what the division is planning for 2010 and beyond.

Moderated by: Hilary Davis, North Carolina State University Libraries

Sponsored by: ACS Publications; H. W. Wilson

8:00 am - 9:30 am

Diversity Leadership Development Breakfast: White Privilege 101

Location: Convention Center, Room 206

Ticketed Event #543

Price: \$25 member / \$15 student member / \$35 non-member

Meet the recipient of the 2010 Diversity Leadership Development Award and make sure you are there to hear Art Munin speak on "White

Privilege 101." This is a presentation that is sure to make you stop and reflect on your beliefs about what you thought you believed to be true. This must see presentation will uncover how White Privilege has evolved, how it is perpetuated today, and what we can do in our roles to unhinge its power. Everyone is encouraged to attend this presentation: seating will be available for those who do not wish to purchase breakfast. Everyone is encouraged to attend!

Speaking: Art Munin, Art Munin Consulting

Presented by: SLA Diversity Leadership Development Program Committee; Business and Finance Division; Environment & Resource Management Division Forestry Section; Food, Agriculture & Nutrition Division; Leadership and Management Division; Legal Division; Physics-Astronomy-Mathematics Division; Science-Technology Division; Solo Librarians Division; SLA Europe Chapter

Sponsored by: EBSCO; Morgan & Claypool; ProQuest and Dialog

10:00 am - 11:30 am

Data Curation: Reinventing Science Librarianship

Location: Convention Center, Room R07

We all hear about data curation, digital curation, data preservation services, even e-Science. What does this mean, and how will it impact science librarians? Learn what skills you probably already possess, and those you may want to develop, that will allow you to participate in digital data curation efforts at your own organization.

Moderated by: Zahra Kamarei, University of North Carolina-Chapel Hill; Ruth Kneale, National Solar Observatory

Speaking: Michael Fosmire, Purdue University; Reagan Moore, University of North Carolina-Chapel Hill

Presented by: Physics-Astronomy-Mathematics Division; Chemistry Division; Science-Technology Division
Sponsored by: H. W. Wilson; Thomson Reuters

12:00 pm - 1:30 pm

Computer Science Roundtable

Location: Convention Center, Room R09

Join us for a lively session on issues facing computer science. Topics will focus on Kindle/e-reader loan programs, digital image metadata, and augmented reality. Boxed lunches will be provided while supplies last!

Moderated by: Susan Smith, University of Kentucky; Lea Wade, Army Research Lab

Speaking: Dennis Clark, Texas A&M University Libraries; Donald Collins, National Oceanic

and Atmospheric Administration; Alex Grigg, Lexmark Library

Presented by: Science-Technology Division; Physics-Astronomy-Mathematics Division
Sponsored by: ACM (Association for Computing Machinery); H. W. Wilson; IEEE

12:00 pm - 1:30 pm

Science Information on Mobile Devices

Location: Convention Center, Room R06
How information professionals and information providers are using mobile devices. Three speakers from industry and academic libraries will: provide an overview of chemical and scientific information available for mobile devices; demonstrate specific applications; and discuss user expectations and experiences, and how access to information via mobile devices will change information vendors and libraries.

Speaking: Robin Dasler, University of Houston; Joe Murphy, Kline Science Library, Yale University; Antony Williams, Royal Society of Chemistry

Presented by: Chemistry Division; Science-Technology Division
Sponsored by: ACS Publications; Springer

2:00 pm - 3:30 pm

Science of Hot Sauce

Location: Convention Center, La Louisiane Ballroom

Our speakers include: Dr. Ben Villalón, or "Dr. Pepper," a retired Texas Extension Specialist who will discuss the scientific properties of hot sauces and more spicy information; and Cindy and Eddie Darce, owners of a local hot pepper relish company. They will discuss their company, do a food demonstration, and have hot pepper relish available for purchase. This spicy session is co-sponsored with three other science divisions.

Speaking: Cindy and Eddie Darce, Cuddin Eddie's; Ben Villalón, Retired

Presented by: Food, Agriculture & Nutrition Division; Biomedical & Life Sciences Division; Chemistry Division; Retired Members

Caucus; Science-Technology Division
Sponsored by: Annual Reviews; Wiley; Dialog

5:30 pm - 7:30 pm

All Sciences Poster Session & Reception

Location: Sheraton Hotel, Rhythms Ballroom 2
Enjoy refreshments and posters showcasing the work of your colleagues in the science divisions. The themes: New Strategic Alignments; Survival and Success Beyond an Economic Recession; and Information Literacy, User Instruction and E-Learning in the Sciences During and Beyond an Economic Recession: New Methods, New Participants, New Tools.

Presented by: Chemistry Division; Biomedical & Life Sciences Division; Engineering Division; Food, Agriculture & Nutrition Division; Physics-Astronomy-Mathematics Division; Science-Technology Division
Sponsored by: ACS Publications; Cold Spring Harbor Laboratory Press; CrossRef; Taylor & Francis Group

Wednesday, June 16, 2010

8:00 am - 9:30 am

Grants Librarianship

Location: Convention Center, Room 207
Join us in this session on grants librarianship as we focus on strategies for marketing services as a grants librarian and integrate services with university/organization practices. Speakers will discuss outreach, coordination of funding opportunities and elements of a successful grant application. This morning session includes coffee and donuts (while supplies last)!

Moderated by: Susan Kendrick, Cornell University

Speaking: Elizabeth Brown, Binghamton University Libraries; Linda Galloway, State University of New York

Presented by: Science-Technology Division; Social Science Division
Sponsored by: Elsevier

Two Free SLA Student Memberships Available

Submitted by Thea Allen, Student Relations Chair, Sci-Tech Division

Are you a Library/Information Science student interested in Sci-Tech Librarianship? Would you like to join the Special Libraries Association (SLA)? The Student Relations Committee of the Sci-Tech Division of SLA is offering a FREE one-year membership in SLA (includes affiliation with the Sci-Tech Division as well as one chapter affiliation of your choice) ! To be eligible for one of the free student memberships, all you have to do is come up with some creative & relevant ways that the Sci-Tech Division should engage with library/information science students who are looking forward to a career in Sci-Tech librarianship. Check out what we already do at the Sci-Tech Division website: <http://units.sla.org/division/dst/index.html>.

To apply, send your creative ideas, along with your name, email, phone number, address, and the library/information science program in which you are enrolled to theaallen@gmail.com. **Deadline May 21, 2010.**

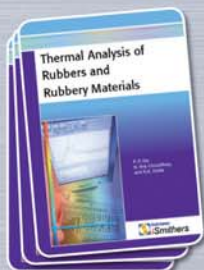
Winners will be selected and notified by June 1, 2010. If you are not selected for one of the two free memberships, you can still become connected to a wealth of professional development opportunities, colleagues, and mentors by applying for the SLA one-year student membership, a bargain at \$40. Visit <http://www.sla.org/content/membership/> to learn about the benefits of an SLA membership.

World leading publisher of information on all aspects of polymers, plastics, rubber, composites, and much more...



Rapra Publishing
www.Polymer-Books.com

VISIT US
in **BOOTH 1418**
at the
SLA CONFERENCE
in New Orleans

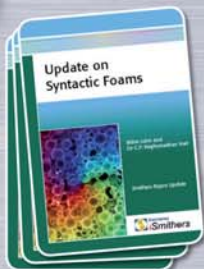
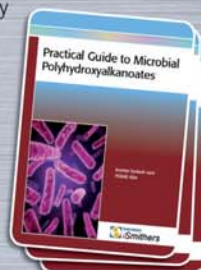


Thermal Analysis of Rubbers and Rubbery Materials

This multi-authored handbook is a must for everybody involved in material and product development, testing, processing, quality assurance, or failure analysis in industry and laboratories.

Practical Guide to Microbial Polyhydroxyalkanoates

This guide provides detailed information on the various microbial aspects that govern the design and synthesis of commercially useful PHA - a great reference guide to researchers in industry and academia.



Update on Syntactic Foams

Part of our acclaimed 'Update' series, this book gives a first-rate insight into the properties, manufacture and uses of syntactic foams. It will be of significance to all those who produce polymer products that need very high strength, as well as manufacturers of raw materials used in these products.

NEW JOURNAL – Polymers from Renewable Resources

This pioneering peer reviewed journal will publish leading research that is focused on the development of renewable polymers and their application in the production of industrial, consumer, and medical products.



Rapra Polymer Library

www.polymerlibrary.com

The world's largest database dedicated to plastics, rubber, polymer composites and adhesives - an indispensable research tool for those in industry or academia. The Polymer Library is an abstracts database that helps you to trace the information you need quickly and more effectively.

Around a million polymer-related records can be accessed through our user-friendly search interface at www.polymerlibrary.com or through third-party hosts. Call for a demo or a trial.

Current Awareness - Keep up-to-date with one of over 50 Polymer Bulletins, including:

- Silicone Elastomers
- Flame Retardants
- Biodegradable Plastics
- Tires

Bulletins delivered to your desktop every two weeks. Single and multi-user licenses available.



For more information, please visit us at www.iSmithers.net or call us at **330-762-7989 (US)** or **+44 1939 250383 (UK)**



for Special Libraries

SLA Sci-Tech Division Webinar – May 12, 2010

1-2:30pm Eastern / 12-1:30pm Central /
11am-12:30pm Mountain / 10-11:30am Pacific

Free for SLA Sci-Tech Division members, \$25 for non-members

Sponsored by:  American Institute of Physics



Description:

Twitter, the popular micro-blogging social network is a great interactive tool for engaging library patrons in a real-time and mobile medium. Its skyrocketing popularity, strong and flexible features, and expanding role in the world of information make Twitter a fabulous tool for enhancing and expanding library services and collections. In this session, speaker Joe Murphy will present all the basic skills for implementing and supporting cutting edge services with this emerging mobile and social technology.

Learning outcomes:

By the end of this program, the participants will:

- Fully understand Twitter's evolving role and value in library services, specifically reference and instruction.
- Become familiar with Twitter's functionality and fluent with its multiple features.
- Become familiar with the basic and advanced uses of Twitter in order to design successful applications of Twitter in their libraries.
- Be familiar with the management and technological considerations in order to implement carefully planned services with sustainable work flows using Twitter at their libraries.
- Gain the full suite of hands on skills for designing, implementing, and providing reference and instruction services with Twitter.

Presenter:

Joe Murphy (@libraryfuture on Twitter) of the Yale Science Libraries (@yalescilib) is a leading innovator helping libraries engage mobile & social technologies by addressing the practical considerations. Joe received the *Library Journal* 'Movers & Shakers' award in 2009 for innovations in mobile reference, and is at the forefront of designing and implementing strategies for mobilizing library services & collections with tools such as Twitter.

Registration:

To register, send an email to Susan Shepherd, sushepherd@ucsd.edu with your name, affiliation, email address, and whether or not you are a member of the SLA Sci-Tech Division. Deadline for registration is May 5, 2010. Non-members please make your check for \$25 payable to Science-Technology Division and send it to:

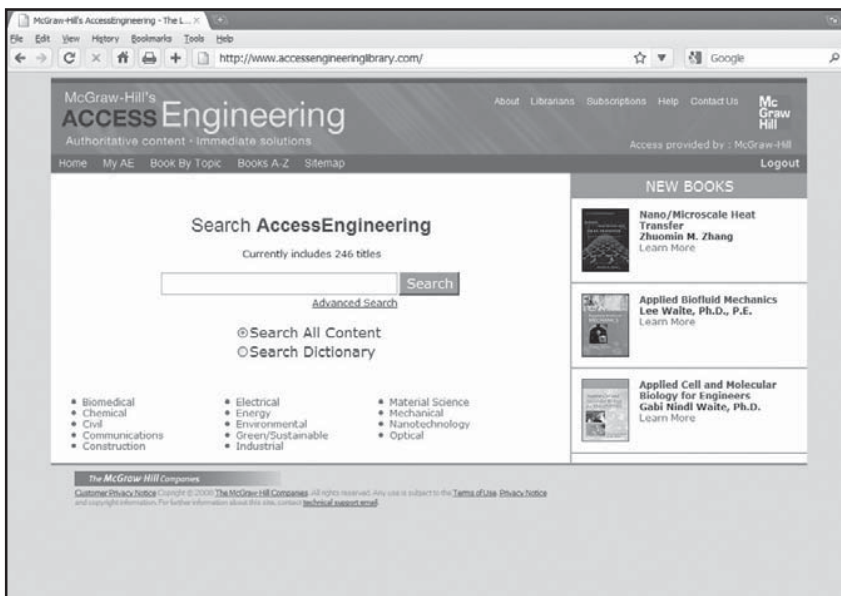
Susan Shepherd
Science & Engineering Library
University of California, San Diego
9500 Gilman Drive #0175E
La Jolla, CA 92093-0175

McGraw-Hill's ACCESS Engineering

Authoritative content • Immediate solutions

A powerful new tool from McGraw-Hill offering quick and unparalleled access to the world's most comprehensive online collection of engineering information.

For nearly a century, McGraw-Hill has provided the engineering community with the authoritative and up-to-date references their practice demands. With AccessEngineering, we continue this tradition by offering a selection of more than 250 engineering books delivered right to the desktop, providing essential information that meets the needs of research professionals.



Content and coverage

Focused around 14 major areas of engineering, AccessEngineering features a new taxonomy book view offering comprehensive coverage and faster title-by-title access to our engineering collection in the following subject areas:

- / Biomedical
- / Chemical
- / Civil
- / Communications
- / Construction
- / Electrical
- / Energy
- / Environmental
- / Green/Sustainable
- / Industrial
- / Material Science
- / Mechanical
- / Nanotechnology
- / Optical

accessengineeringlibrary.com

Authoritative content from a trusted source

McGraw-Hill's brand-new AccessEngineering is a redesign of the premiere online engineering resource, formerly known as McGraw-Hill's Digital Engineering Library. The website's new user-focused design enhances this dynamic source of world-renowned engineering content, and supports all levels of research and innovation in the corporate, industrial, government, and academic sectors.

AccessEngineering offers the complete contents of more than 250 outstanding McGraw-Hill books, including *Marks' Standard Handbook for Mechanical Engineers*, *Perry's Chemical Engineers' Handbook*, and *Roark's Formulas for Stress and Strain* with new titles added biweekly. In addition, a science and engineering dictionary containing more than 18,000 terms is included in a fully searchable, taxonomically organized database. Sophisticated personalization tools allow content to be easily integrated into user workflow.

Institutions can sign up for a free, no obligation 30-day trial.

www.accessengineeringlibrary.com

Aerospace Section

Hema Ramachandran,



The Aerospace Section of the Engineering Division encourages communication and cooperation among information professionals concerned with aerospace, aeronautical and related technologies. In addition, it fosters dialog with entities such as NASA, the AIAA and other important sources of technical data and bibliographical services.

When this issue is published, we will be putting the final touches to the program in New Orleans. So far so good, we have not had any major glitches! Since the last issue of this newsletter, we have all been busy working on all the details that it takes to put together an annual conference. The Engineering Division's Vendor Relations Chair, Sara Davis and her team have probably worked the hardest in securing sponsorship for our programs. It is very gratifying, given the economy, that so many companies are supporting our programs. You will see their names in the program and at the various events. My first priority in New Orleans is to thank them in person. Personally, it has been a positive learning experience for me and I appreciate even more the amount of dedication and attention to details it takes to put on a major conference!

As mentioned in the last issue, Monday June 14th is Aerospace Day! Start the day with the Aerospace Section Business and Breakfast meeting from 8:00 to 9:30 am at the New Orleans Marriott, St. Charles (41st floor). This is a ticketed event (#410) so if you haven't already, please remember to purchase a ticket for \$20.00. Network with friends and colleagues and help us to celebrate the recipient of this year's George Mandel Memorial Award – Diane Brenes.

Diane Brenes has worked in Boeing's Library Services since 1988 and currently works in the Huntington Beach location. Her areas of expertise include business and engineering information research, vocabulary management, and collection development of which Diane leads the team. She has over 20 years of experience working in corporate libraries and holds a Master of Library and Information Science degree from Simmons College. Diane has been a member of SLA for over 20 years and wrote the Web Reviews section of *SciTech News* from 2006 to 2007.

In 2009, Diane Brenes and her 12 person Boeing team won the SLA Innovations in Technology award for their groundbreaking "Building Communities Through Content" project. The

team included librarians from Huntington Beach, CA and the Seattle offices of the Boeing Company. One of the key initiatives of the team was to connect the various communities and departments at Boeing through shared content. This was accomplished through the use of departmental collections within Boeing's Millennium catalog that are linked to Gateway web pages which gather and filter content for particular groups or departments. The Boeing team successfully combined off-the-shelf and home-grown technologies to develop a cutting-edge, cross-connected, customized enterprise library service giving all Boeing employees a gateway to the full complement of information resources including access to a wealth of filtered internal resources. In addition to the traditional resources this includes podcasts and special collections of papers by the company's top technical experts. Of particular note, is the Boeing team's project to capture the work and institutional knowledge of retiring engineers.

Diane is also an active and contributing member of numerous other teams including the Electronic Subscription Team, the virtual reference team and a host of web redesign and enhancement efforts resulting in easier resource access for library users. She is a regular participant in Boeing's Technical Excellence Conferences and enthusiastically markets Library Services to her site. She is highly respected by her peers, has repeatedly received appreciation and acknowledgement awards from her customers for the quality of her research.

Later the same day we will have two back-to-back Aerospace-sponsored sessions centered around "Workplace Information Literacy." The newly formed Academic Division is also a sponsor. Part 1 from 2:00 to 3:30 pm will be a panel of national experts presenting their research on the topic. Part 2 from 4:00 to 5:30 pm (in the same room) will be a panel of corporate and academic librarians in engineering making brief presentations followed by a discussion and exchange on the challenges of teaching information literacy and research skills to their respective constituencies. We

want to acknowledge the generous support of H.W. Wilson, ACM and Knovel for these two sessions.

Catch me on Monday evening at the West Coast Reception and other receptions as I unwind (with a pina colada and then some...) after a busy and hectic day of programming. ❖

Hema Ramachandran

SCIENTIFIC AMERICAN

Re-engineered. Rediscovered.

Site license access now available
from Nature Publishing Group



NOW POWERED BY **nature.com**

www.nature.com/scientificamerican

nature publishing group 

Web Reviews

Lisa R. Johnston



Reviews of web resources of interest to *SciTech News* readers.

Astronomy Star Gazing Tools

Spring is here. And when this arrives at your email doorstep, summer will be around the corner! What this means, in the SciTech library, is recreational astronomers appear looking for answers. So next time an astro-newbie is attempting to check out a reference book on Deep-Space NGC Objects (when all they really want to know is what that bright star above the garage is each night), you can smile and say, "Let me show you some great online tools that will help find out which star, or planet, that is." All of these web applets are freely available and easy to use. When possible I have included information on their portability away from the computer, out to the night sky. Of course, mobile phones make portability a snap and development of mobile sky apps will be the subject of a later column.

Astronomy Magazine's Star Dome

<http://www.astronomy.com/asy/stardome/default.aspx>

This interactive star chart displays RA/Dec coordinates for displayed objects. The tiny cursor must be directly over a star or planet, but the information, including object name and exact coordinates, are invaluable to enter into your motorized or equatorial telescope mount. On the downside it seems that you are unable to switch to full-screen of the tool. Also, StarDome Plus features are only available with the magazine subscription, including planet orbits and Jupiter and Saturn moon tools (each of which is freely available elsewhere...read on!).

Portability: Printing option is an enlarged version of the current sky view.

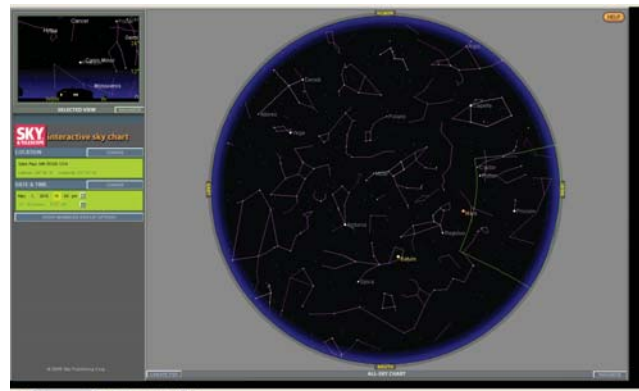


Sky & Telescope's Interactive Sky Chart

<http://www.skyandtelescope.com/observing/skychart>

A quick and painless (Free!) registration allows you to log in and save your location to begin using this easy web-application. The Interactive Sky Chart features labels for constellations, bright stars, major objects, and planets. Try also other free S&T tools like the Moons of Jupiter app. The zoom function, however, is cumbersome as it projects a separate, albeit upright, view in the top left screen.

Portability: Generates a PDF version to print. The java will not display on most mobile phones.

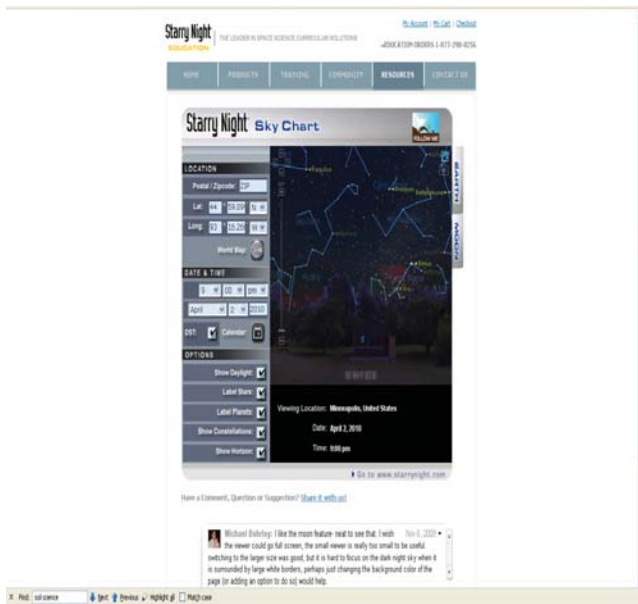


Starry Night Sky Chart

<http://www.starrynighteducation.com/skychart>

This tool has a very nice zoom feature allowing you to view the sky at less than 1 degree field of view (out of a potential 180 degree field of view). Also the display options and input fields for data, time, and location are larger and clearer than in other tools. Overall, Starry Night's Sky Chart is high functionality with low complexity. I also liked the view of the sky from the moon. A stumbling block might be the functionality issues with the interface. The field of view on the chart does not pan unless the user clicks the arrow navigation.

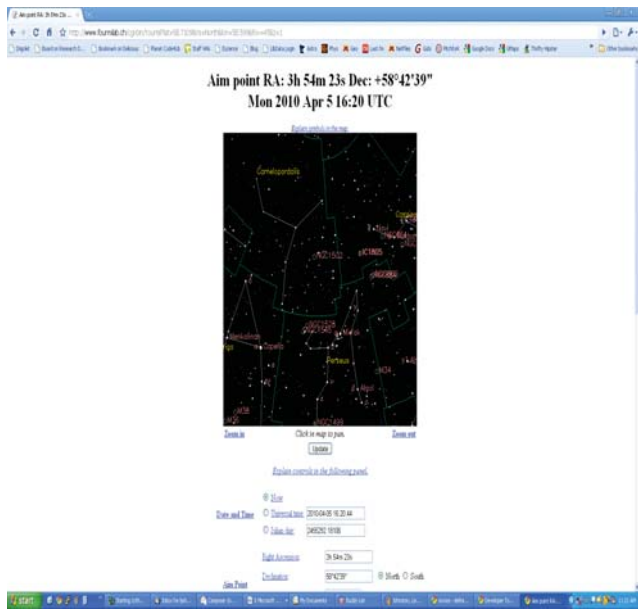
Portability: No printable sky chart.



Your Sky,
<http://www.fourmilab.ch/yoursky>

This application is one of the many tools created by John Walker and hosted on his Fourmilab site since the early 1990s. Your Sky was last updated in 2003, so needless to say Web 2.0 is not enabled. But if you can forgive the screen refresh each time you zoom or change a parameter, this tool's detailed search functionality is timeless. Also try the cool calendar converter tool (<http://www.fourmilab.ch/documents/calendar/>).

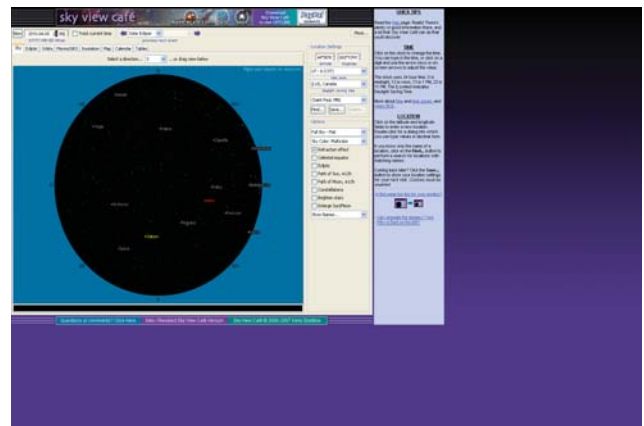
Portability: The tool will function on most web-enabled phones, but there is no easy way to switch between the horizon view and the Zoom-in feature. There are no printing features.



Sky View Café
<http://www.skyviewcafe.com/skyview.php>

Here is another tool that might not look too pretty to a novice star gazer, but the functions it boasts are an experienced user's dream. These advanced features (looking very similar to Astronomy Magazine's tools) include elliptic views, solar system orbital positions, moons of Saturn and Jupiter, Earth daylight/night map and a Moon phase calendar. This is all in addition to the countless data tables and ephemeris that the tool can generate (the next lunar eclipse date for example). My favorite feature: the sky chart will track the current time and update itself!

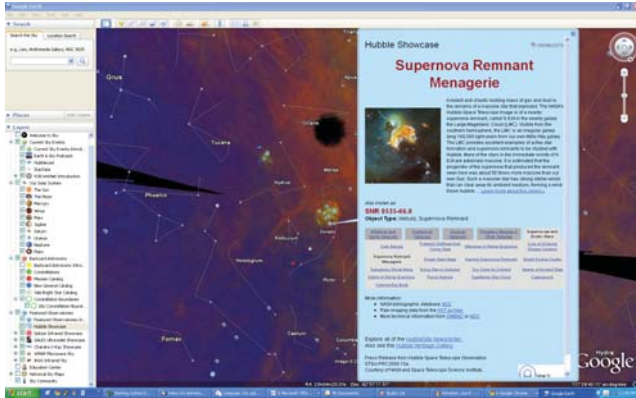
Portability: Java will not run on most mobile phones; however you can print a portable star chart for any date and time.



Google Earth and Google Sky
<http://earth.google.com>

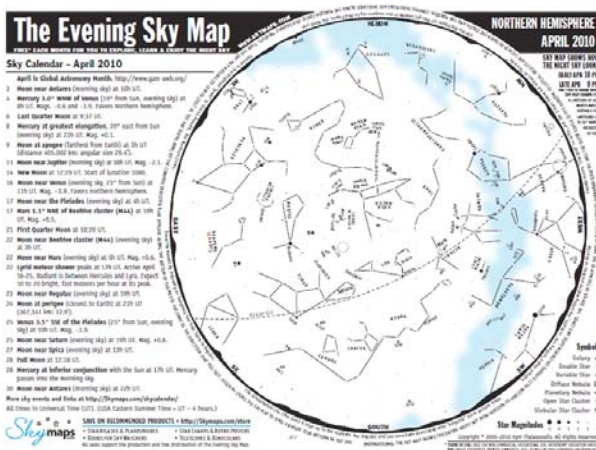
This is not a recommended star chart, but with so much information packed into one application, it's hard not to mention the Sky view in Google Earth. This desktop program is freely available for download, and can be a fun interactive way to navigate the earth with maps and satellite imagery. The Sky feature in Google Earth is rather hidden and must be selected by clicking View < Explore and selecting Sky from the toolbar. Once there the sky is navigated by keyword or by panning and zooming across the heavens. Features include "layers" that display information like objects of interest, telescope images, embedded news stories, user photos, Wikipedia entries, podcasts, the list goes on! As a start chart, this tool will be confusing and not functional. However, on those cloudy nights, you can easily spend hours exploring this virtual sky.

Also try Google Sky (<http://www.google.com/sky/>), a web-based version of Sky that feels a lot like Google Maps. Here you can navigate and search for telescope images in several wavelengths including visual, microwave, and infrared.



Sky Maps
<http://www.skymaps.com/downloads.html>

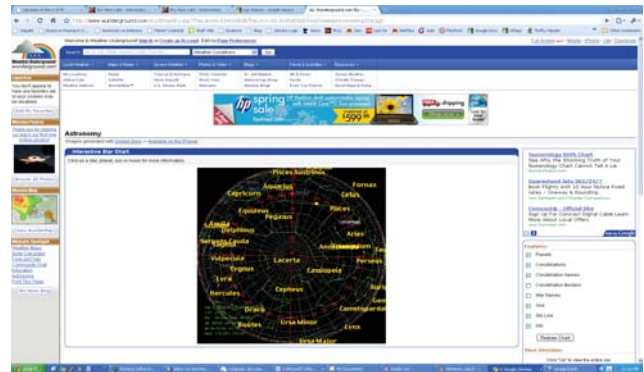
No bells, no whistles, just a really nice pdf handout of the night sky for the current month. Why is this note worthy? The service allows for distribution of up to 300 non-commercial use copies to the public and the handout is available in Spanish, French, Portuguese, Turkish, Italian, and German. Print-out portability, again is the feature here.



Weather Underground Interactive Star Chart

<http://www.wunderground.com/sky/index.asp>

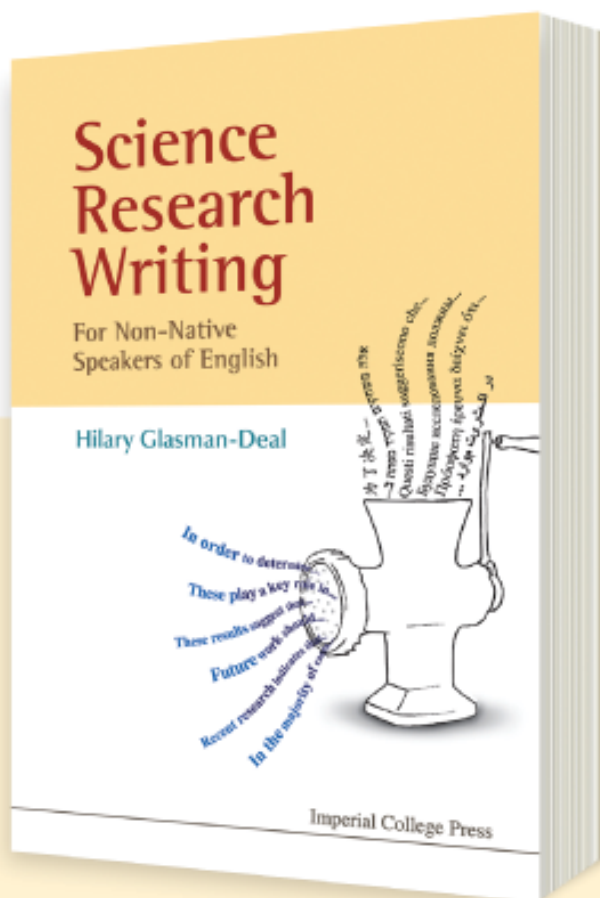
If this was the only online astronomy tool on the web, you would be better off drawing the constellations and planet names yourself. Seriously, whatever you come up with will look better – both in functionality and visual presentation. I’m happy to review them if you send yours in!



Science Research Writing

For Non-Native Speakers of English

Hilary Glasman-Deal (*Imperial College London, UK*)



272pp

978-1-84816-309-6

978-1-84816-310-2(pbk)

Dec 2009

US\$58

US\$25

This book is designed to enable non-native English speakers to write science research for publication in English. It can also be used by English speakers and is a practical, user-friendly book intended as a fast, do-it-yourself guide for those whose English language proficiency is above intermediate.

Science writing is much easier than it looks because the structure and language are conventional. The aim of this book is to help the reader discover a template or model for science research writing and then to provide the grammar and vocabulary tools needed to operate that model. There are five units: Introduction, Methodology, Results, Discussion/Conclusion and Abstract. The reader develops a model for each section of the research article through sample texts and exercises; this is followed by a Grammar and Writing Skills section designed to respond to frequently-asked questions as well as a Vocabulary list including examples of how the words and phrases are to be used.

ADAMWAT10102311C

www.worldscientific.com

Beyond the Chemistry Web...

Bob Buchanan, Chemistry Librarian, Auburn University



This column looks at resources for learning chemistry at the undergraduate level. These sites may be useful to students and instructors.

Digital Lab Techniques Manual from MIT OpenCourseWare by the Department of Chemistry is a series of seventeen videos that cover basic laboratory techniques used in freshman, organic, and analytical labs. These informative videos range from five to twenty minutes. The University of Alberta **Laboratory Techniques Videos** offers twelve short videos on basic laboratory techniques which are a bit more entertaining than those in the MIT collection. **Laboratory Technique Videos** from the College of Oneonta consists of twelve short, matter-of-fact demonstrations for freshman chemistry lab. There is some overlap in coverage between these three sites but not as much as you might imagine.

<http://ocw.mit.edu/OcwWeb/resources/RES-5-0001Spring-2007/ResourceHome/index.htm>

<http://www.chem.ualberta.ca/~orglabs/Techniques.html>

<http://employees.oneonta.edu/viningwj/videos/index.html>

The *Journal of Chemical Education* and the Multimedia Educational Resource for Learning and Online Teaching (MERLOT) have partnered to create the **Merlot Chemistry Portal**. The Learning Materials database contains nearly 700 records and is organized by instructional categories and by types of learning materials (simulations, animations, lectures, tutorials, tests, practice, and collection), but it also offers a sophisticated Advanced Search. Records found by a keyword search, or all 696 records, can be sorted by overall ranking, relevance, date added, date modified, title, or author.

<http://chemistry.merlot.org>

Resources for Chemical Educators

provides annotated links to instructional materials and other resources of interest to chemistry teachers and course designers. Stephen Lower, formerly a Chemistry Professor at Simon Fraser University, chooses links that he considers the most useful and exemplary Web-accessible resources. Coverage is largely, but not exclusively, at the college-level. If you look at only one web site from this column, this should be it.

<http://www.chem1.com/chemed>

Chemistry Teaching Resources is an extensive portal that “attempts to present a comprehensive list of chemistry teaching resources.” This portal is more international in scope than the rest of this column’s sites.

<http://www.anachem.umu.se/eks/pointers.htm>

Organic Chemistry Help eMediately is a nice site created by Thomas Poon, Chemistry Professor at the Claremont Colleges. It provides flash cards, tutorials in over 50 topics, and roughly 40 old exams with the corresponding answer key. Although designed to support the classes of one teacher at a single college, the content is standard for undergraduate organic chemistry.

<http://ochem.jsd.claremont.edu/index.htm>

Point frustrated pre-professional students taking organic chemistry to the **Electronic Organic Chemistry Flashcards** from the Ohio State Chemistry Department.

<http://www.chemistry.ohio-state.edu/organic/flashcards> ❖

Science Today in Verse

Hope Leman, Samaritan Health Services



A new quarterly column giving a more light-hearted view of science--Editor

Open Notebook Science

What's an Open Notebook and what does it involve?

It's an online record of your attempt to solve
Some nagging question that has yet to be
Dealt with satisfactorily
And enables all on earth to view
What your lab's attempting to
Accomplish and thereby
Your salary to justify

Open Data

Open data all can share
Crunch and talk about
Sending them from there to there
And never feeling doubt
That you can act as you see fit
And research results transmit
To journals, students and your peers
In days that once took years

Open Peer Review

Open peer review means that I
Can express to all my view
And who I am is known to you
And you can tell me why
You think my comments are unfair
And we'll all proceed from there

Open Science

Thinking outside the box
And trying something new
Moving from the orthodox
And determining what is true
By harnessing the Internet
Our results to disseminate
Even though we've never met
We can still communicate
And when I am stuck and need some help I will
never lack
A cohort of scientific friends to get my mojo
back

Data Mining

You start with data—lots of
stuff
And when you think you have
enough
To determine what you need to know
Into detail you will go
You will start to data mine
And everything will turn out fine
For in the data you'll behold
Statistical bits of info gold
And just the information
To make your reputation
As a scientist sublime
In absolutely record time ❖



Technical translations since 1996



FAST-TRANS™

Machine Translation (MT)

- Fastest turnaround
- Lowest cost
- Rapid document screening
- “Gist” type translation
- Text only

KWIKTRANS™

Machine Aided Translation (MAT)

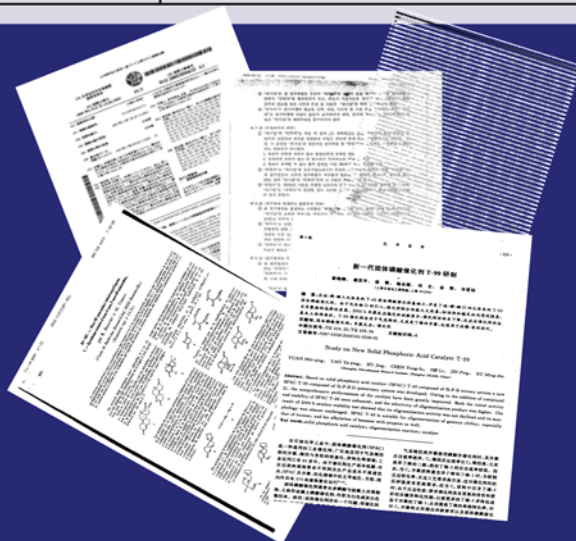
- Human post-edit of MT
- Better quality than Fast-Trans
- 80%-90% of full human quality
- Charts, Tables, Graphs

Human Translation (HT)

- Best quality
- Native language translators
- Subject Matter Experts
- Competitive rates
- Volume discounts

MT/MAT Languages:

- Arabic
- Chinese
- Dutch
- French
- German
- Greek
- Italian
- Japanese
- Korean
- Portuguese
- Russian
- Spanish
- Swedish



Convert PDF Image / Hardcopy → TEXT

Customized requests:

- Claims by Human, rest by MT
- Claims and Examples by Human
- Pages 2-4 by Human, rest by MAT
- Claims ONLY
- MT today, HT in two weeks

Optimize your research by applying precision only where you need it!

Over 70 languages available for Human Translation – Patents, MSDS, Contracts, Package Inserts, Labels...

Telephone interpreting 24/7 available in 150 languages

Request a translation TODAY!

WWW.GLTAC.COM

877.68TRANSLATE

877.688.7267

Sci-Tech Book News Reviews Susan Fingerman, Selector



The following section consists of 100 book reviews selected from *Sci-Tech Book News*, reprinted with the permission of Book News Inc. This review journal is published four times a year, each issue reviewing over 2,000 new titles in the physical and biological sciences, mathematics, engineering, computer science, technology, and agriculture. For a sample issue and subscription information, contact Book News Inc. at 5739 NE Sumner Street, Portland, OR 97218. Phone: (503)281-9230; Fax: (503)287-4485; E-mail: booknews@booknews.com.

PSYCHOLOGY

BF76 2009-024842 978-1-4338-0695-7

Advanced methods for conducting online behavioral research.

Title main entry. Ed. by Samuel D. Gosling and John A. Johnson.

American Psychological Assn., ©2010 286 p. \$79.95

Written for students and researchers already familiar with the basics of Web-page construction, uploading, and maintenance at the level presented in, for example, Fraley's *How to Conduct Behavioral Research Over the Internet: A Beginner's Guide to HTML and CGI/Perl* (2004), Gosling (psychology, U. of Texas) and Johnson (psychology, Pennsylvania State U.) have aimed this book one level above the Fraley text, for those who want more information on more specific topics and on new methods of online behavioral research (such as text analysis) They present 16 self-contained tutorial chapters, organized into sections providing an overview of major techniques; discussing considerations when designing Web pages; describing methods for studying Internet behavior; describing how to transport traditional methodologies to the Web; and examining cross-cutting issues such as the use of incentives, ethical issues, and security and data protection.

GEOGRAPHY, HYDROLOGY, ENVIRONMENT

G70 2009-015958 978-0-470-72211-4

Kernel methods for remote sensing 1; data analysis 2.

Camps-Valls, Gustavo and Lorenzo Bruzzone.

John Wiley & Sons, ©2009 403 p. \$135.00 (pa)

This work presents research related to remote sensing techniques based on recent advances in kernel methods. Two early chapters provide background on machine learning techniques in remote sensing data analysis, and theoretical and practical foundations of kernel methods. The rest of book addresses recent research in developing kernel methods in remote sensing for supervised classification, semi-supervised classification, regression, and feature extraction. Some specific topics covered include the support vector machine (SVM) algorithm, a domain adaptation SVM for land-cover map updating, kernel methods for unmixing hyperspectral imagery, kernel-based quantitative remote sensing inversion, and kernel multivariate analysis in remote sensing feature extraction.

The book is for engineers, scientists, and researchers involved in remote sensing data processing. Camps-Valls teaches in the Department of Electronics Engineering at the University of Valencia, Spain. Bruzzone is professor of telecommunications at the University of Trento, Italy.

HF5548 2009-934713 978-1-60750-052-0

Techniques and applications for mobile commerce; proceedings.

TAMoCo (2009). (Frontiers in artificial intelligence and applications, v.201)

IOS Press, ©2009 169 p. \$145.00 (pa)

Papers from a 2009 conference describe recent international work in mobile commerce devices, and discuss issues of interoperability, usability, security, and privacy in the context of mobile services and commerce. Material is in sections on mobile technologies in urban systems and education, autonomic computing and mobile commerce, and context-aware and Web services for mobile systems. Some specific topics include aspect-oriented techniques for web services and their mobile clients, transaction management in mobile computing, adaptive learning using Moodle and handheld devices, and wireless city initiatives in Europe. Other topics are a model-driven framework for autonomic mobile commerce engineering, location constraints for mobile workflows, and a swarm intelligence solution for financial documents.

HV6773 978-1-84392-524-8

Handbook of internet crime.

Title main entry. Ed. by Yvonne Jewkes and Majid Yar.

Willan Publishing, ©2010 654 p. \$59.95 (pa)

Jewkes (criminology, U. of Leicester, UK) and Yar (criminology, U. of Hull, UK) compile 28 essays on cybercrime for criminologists, students, and researchers. Scholars in criminology, sociology, social theory, media and communication studies, information technology, psychology, politics, law, and socio-legal studies from the US, Europe, and Australia consider issues and debates related to internet crime, including its history and social, political, and economic contexts; forms, threats, and risks from hackers, viruses, terrorism, cyber-protest, intellectual property crime, identity theft and fraud, the sex industry, child pornography and sexual exploitation, and cyber-suicide and homicide; laws and regulations in the UK, US, and transnationally; and policing. Distributed in the US by ISBS.

KF27 978-1-60692-320-7

Aviation and the environment.

Title main entry. Ed. by Jon C. Goodman.

Nova Science Publishers, ©2009 515 p. \$95.00

Nine white papers from the Aviation-Climate Change Research Initiative (ACCRI) report findings by meteorologists and other earth and environmental scientists on upper troposphere and lower stratosphere chemistry and transport, the climatic impact of contrails and contrail cirrus, contrail-specific microphysics, contrail/cirrus optics and radiation, metrics for comparing climate impacts from well mixed greenhouse gases and inhomogeneous forcing such as those from ozone and contrails, climate metrics and aviation, and research and development as keys to reducing emissions and their impact on health and climate.

SCIENCE (GENERAL)

Q295 2009-035001 978-0-521-76505-3

Handbook of hybrid systems control; theory, tools, applications.

Title main entry. Ed. by Jan Lunze and Françoise Lamnabhi-Lagarrigue.

Cambridge U. Press, ©2009 565 p. \$95.00

As systems combining components with continuous and discrete behavior, hybrid systems raise important methodological issues of modeling, analysis, and design because they necessitate the combination of continuous variable system descriptions like differential and difference equations with discrete-event models like automata or Petri nets. This handbook, edited by Lunze (Institute of Automation and Computer Control, Ruhr-U. Bochum, Germany) and Lamnabhi-Lagarrigue (Director of Research, Signals and Systems Laboratory, National Center of Scientific Research, France), surveys the main approaches, methods, and results from the last decade of research in the field and also reviews new phenomena and theoretical problems. Hybrid systems theory is described, with an emphasis on analysis and control design. Hybrid automata, switched systems, mixed logical dynamical systems, complementarity systems, quantized systems, and stochastic hybrid systems are among the approaches explained. The focus then switches to describing the tools needed for computer-aided systems analysis, control design, and verification, as well as the issue of tool integration. Finally, applications to energy management, industrial controls, automotive control, networked control, and solar air conditioning are described.

Q325 2009-021595 978-1-60566-810-9

Machine learning methods for commonsense reasoning processes; interactive models.

Naidenova, Xenia.

Information Science Reference, ©2010 410 p. \$180.00

This book demonstrates the possibility of transforming machine learning algorithms into integrated commonsense reasoning processes in which inductive and deductive inferences correlate and support one another. Methodological approaches to the organization of data and knowledge in

intelligent computer systems are discussed. Examples are given of expert system construction via machine learning mechanisms. Early chapters cover logic-based reasoning in the framework of artificial intelligence, the coordination of commonsense reasoning operations, the logical rules of commonsense reasoning, and human commonsense reasoning processes. Later chapters describe an integrative model of deductive-inductive commonsense reasoning, a model of fuzzy commonsense reasoning, object-oriented technology for expert system generation, and case technology for psycho-diagnostic system generation. The book is for logicians and mathematicians working with the theory of classification and models of logical inference. It will also interest specialists in artificial intelligence, machine learning algorithms, and knowledge engineering. Naidenova is the head of Project DIALOG: Methods of Data Mining in Psychological and Physiological Diagnostics, at the Military Medical Academy, St. Petersburg, Russia.

Q335 2009-015920 978-0-470-33187-3

Diagrammatic reasoning in AI.

Nakatsu, Robbie.

John Wiley & Sons, ©2010 330 p. \$110.00

Nakatsu (finance and computer information systems, Loyola Marymount U.) examines the use of diagrams to help learners understand complex ideas, and how diagrammatic user interfaces can help us better understand and visualize artificial intelligence (AI) systems. The author considers how diagrammatic reasoning enhances various AI programming strategies, including expert systems, model-based reasoning, inexact reasoning such as certainty factors and Bayesian networks, and logic reasoning. To address diagrammatic reasoning in a coherent, unified way, Nakatsu also proposes classification of the variety of diagrams in use today within six categories: system typology, sequence and flow, hierarchy and classification, association, cause and effect, and logic reasoning. Suitable for practitioners and researchers in AI and human-computer interaction, business and computing professionals, graphic designers and designers of graphical user interfaces, and noncomputing professionals interested in the power of diagrams, the text assumes no prior knowledge of AI or mathematics beyond high school algebra.

MATH, COMPUTERS

QA76.575 2009-022437 978-1-4200-9338-4

Ubiquitous multimedia computing.

Title main entry. Ed. by Qing Li and Timothy K. Shih. (Chapman & Hall/CRC studies in informatics series)

CRC / Taylor & Francis, ©2010 392 p. \$89.95

Including contributions from dozens of leading experts, this book describes ubiquitous multimedia computing on the levels of infrastructures, middleware, and applications. Contributors examine various architectures for delivering multimedia content, including streaming devices, wireless networks, and hybrids. This volume is a valuable reference for researchers working in product development and human computer interaction, and

will also interest engineers, doctors, educators, and graduate students interested in multimedia computing.

QA76.58 2009-031419 978-0-470-07294-3

Advanced computational infrastructures for parallel and distributed adaptive applications.

Title main entry. Ed. by Manish Parashar and Xiaolin Li.

John Wiley & Sons, ©2010 518 p. \$135.00

This work brings together recent research on the design of large-scale adaptive scientific and engineering applications, and describes applications of interest to system architects, software engineers, computational scientists, and application scientists. The first part of the book describes real-world application scenarios, such as parallel computing engines for subsurface imaging technologies, in order to demonstrate their uses and requirements. The second part identifies widely used adaptive computational infrastructures, such as the Uintah framework. The third part of the book investigates partitioning and runtime management issues, with chapters on areas such as mesh partitioning for efficient use of distributed systems, and physics aware optimization methods. The book can be used as resource for professionals, and for advanced courses in computational science and software/systems engineering. Parashar teaches electrical and computer engineering at Rutgers University. Li teaches computer science at Oklahoma State University.

QA76.59 2009-008027 978-1-60741-101-7

Mobile computing research and applications.

Title main entry. Ed. by Kevin Y. Chen and H.K. Lee.

(Computer science, technology and applications)

Nova Science Publishers, ©2009 282 p. \$129.00

To open this collection, researchers at the University of Ulster outline a web-based application for diabetics to track and monitor their blood sugar levels and other statistics whether online or offline through synchronization with the Google Gears API. Other topics of the 12 papers include a dynamic vertical handoff protocol, power efficient broadcasting in wireless sensor networks, mobile database performance issues, a formal specification of requirements for safety critical applications, and fractional derivatives applied to linear systems.

QA76.59 2009-020551 978-1-60566-978-6

Multimodality in mobile computing and mobile devices; methods for adaptable usability.

Title main entry. Ed. by Stan Kurkovsky.

Information Science Reference, ©2010 384 p. \$180.00

Computer and information scientists, electrical engineers, and researchers in other technical fields describe the latest offspring of the cross between the Internet and the mobile phone, and predict the next generation ("She has her uncle Mac's color"). They cover theoretical foundations, design approaches, applications and field reports, and new directions. Specific topics include multimodal and multichannel issues in pervasive and ubiquitous computing, platform support for multimodality on mobile devices, two frameworks for the

adaptive multimodal presentation of information, exploiting multimodality for intelligent mobile access to pervasive services in cultural heritage sites, and towards multimodal mobile geographical information systems (GIS) for the elderly. References are provided at the end of each chapter, but also compiled into a common bibliography for the whole volume.

QA76.5915 2009-031090 978-1-60566-960-1

Ubiquitous and pervasive computing; concepts, methodologies, tools, and applications; 3v.

Title main entry. Ed. by Judith Symonds.

Information Science Reference, ©2010 1819 p. \$1,845.00

This three-volume reference begins at the beginning with coverage of fundamental concepts and theories and so brings newcomers to a field that likely will change how everyone lives. For the audience with more experience and knowledge, coverage in the subsequent sections is of development and design methodologies, tools and technologies, utilization and application, organizational and social implications, managerial impact, critical issues, and emerging trends. In all, some 120 contributed chapters under the editorial leadership of Symonds (Auckland U. of Technology, New Zealand) offer information pertaining to ambient intelligence, location information management, smart embedded systems, and topics relevant to architecture, healthcare, communication, risk analysis, business processes, and web-based human machine interaction. The contributors are based all over the world, and their work has been drawn together in a well-designed wide-ranging reference useful and accessible for students and professionals in the many fields that will be touched by the evolution of this technology.

QA76.758 2009-036577 978-0-07-162161-8

Software engineering best practices; lessons from successful projects in the top companies.

Jones, Capers.

McGraw-Hill, ©2010 660 p. \$75.00

Jones, who has worked in programming technology and software research and has written many other books on software, explains the need for better measurements, benchmarks, quality control, and security in software engineering. Drawing from observations of projects in about 600 companies, he shows how a combination of metrics and measurement can demonstrate effectiveness of software engineering methods, and presents 50 best practices for development, maintenance, management, sociology, risk analysis, governance, and renovation of legacy applications. He then explores software engineering 40 years in the future and technical topics such as the role of data mining, intelligent agents and search-bots, and other improvements. He also discusses ways for learning new software engineering information, curricula for engineers and personnel, different kinds of team organization and specialization, project management, requirements and design issues, programming and code development, and measuring programming productivity and quality levels. He includes

material on dealing with layoffs and downsizing, the changing economic balance between the US and other countries, and the economics of software during a recessionary period.

QA76.76 2009-037003 978-1-4398-0321-9

Enterprise-scale agile software development.

Schiel, James. (Auerbach series on applied software engineering)

CRC Press, ©2010 363 p. \$89.95

In this pick-and-choose reference for organizations attempting to convert to agile software development, Schiel, a certified Scrum trainer, draws on his experience leading the transition of a 1,400-person organization. He shows how to use Scrum as an organizational framework, and how to implement XP practices used to define how software is written and tested. Chapters are sequenced to match a typical developmental progression. The book also includes information on good development practices based on the ISO 9001 standard. A section on planning gives advice on creating the transition team and determining goals. The section on starting the transition covers budget, training, and communication plans, selecting pilot projects, and customer involvement. There is also material on monitoring progress, launching and managing Scrum teams, and product management. A companion web site contains sample presentations to support training, and sample policies and documents conforming to the regulatory framework provided in the book. Schiel is owner and CEO of a software development company.

QA76.76 2009-013183 978-1-56881-338-7

Level design; concept, theory, and practice.

Kremers, Rudolf.

A K Peters Ltd., ©2009 385 p. \$59.00 (pa)

Kremers, an experienced game designer, explores the logic behind designing video game levels that will challenge players' skills while also leaving them with a sense of reward after figuring out the tasks. The book examines how game stages serve as emotional feedback systems based on player actions within the game world, considers visual and audio aspects of the game environment, and introduces the fundamentals of storytelling, world building, puzzle theory, and artificial intelligence.

QA76.76 2009-043408 978-0-230-22244-1

Managing component-based development in global teams.

Kotlarsky, Julia and Ilan Oshri.

Palgrave Macmillan, ©2009 272 p. \$94.95

In this era of globalized e-commerce, demand has outstripped supply for software services. Kotlarsky (information systems, Warwick Business School, UK) and Oshri (strategy and technology management, Rotterdam School of Management, the Netherlands) introduce the recent trend of Globally Distributed Component-Based Development methodologies (GD CBD) such as Enterprise JavaBeans, Microsoft COOM and CORBA. Used in the automotive, electronics, and other industries, CBD

architecture is flexible, extensible, reusable, and easier to maintain than monolithic Information and Communication Technologies (ICT) structures. The authors discuss tools and team practices that they have found to be most effective in managing GD CBD projects, e.g., teleconferencing combined with e-meeting, and the theoretical framework. This valuable contribution to this emerging field includes a glossary and real-world case examples of CBD- based ICT.

QA76.76 2009-008870 978-0-470-40908-4

UML 2 semantics and applications.

Title main entry. Ed. by Kevin Lano.

John Wiley & Sons, ©2009 400 p. \$110.00

Unified Modeling Notation (UML) is a widely adopted software modeling notation that was introduced in order to solve the incompatibilities between the hundreds of modeling notations in use in the 1980s and early 1990s. While it partially solved the problem, other compatibility issues have become apparent, including the differing semantic uses of UML between different developers, the possibility that graphical UML models of a system don't correctly express the requirements and that the meaning of the models are not correctly implemented in an executable implementation of the system, and the problems of expressing models correctly after having applied a transformation in order to improve quality or refine code. A large number of semantics have been developed or proposed to deal with these issues. In this work, Lano (computer science, King's College, UK) explores and explains these issues, first introducing the UML notations considered as subjects for semantic definition<->class diagrams, state machines, interactions, use cases, OCL, and activity diagrams<-->and providing an overview of different semantic approaches and the role of semantics in contributing to the definition of UML. In the main part of the book he presents a range of semantic approaches to defining the semantics of UML models and in the final chapters he describes applications of UML semantics for verifications.

QA76.884 2009-019358 978-0-470-50094-1

Information processing by biochemical systems; neural network-type configurations.

Filo, Orna and Noah Lotan.

John Wiley & Sons, ©2010 148 p. \$69.95

Filo has been developing diagnostic imaging technologies in the medical equipment industry for over decade, and Lotan (biomedical engineering, the Technion) is trained as a chemical engineer. They describe some of the current research into how biological systems process information at the molecular level, an area that many hope to exploit when electronic medical devices have reached the limit of possible miniaturization. They consider materials, instruments, experimental and computational methods, theoretical matters and results, biochemical systems of the neural network type, experimental results of the basic system, and theoretical concerns and results for the extended basic system.

QA76.9 2009-017978 978-1-58488-820-8

Algorithms and theory of computation handbook; special topics and techniques, 2d ed.

Title main entry. Ed. by Mikhail J. Atallah and Marina Blanton. (Chapman & Hall/CRC applied algorithms and data structures series)

CRC Press, ©2010 -- p. \$119.95

The second edition of this reference for computer professionals and engineers, students, and researchers has been expanded to two volumes to incorporate a total of 21 new chapters. Offering broad coverage of algorithms and theoretical computer science, the handbook defines terms, describes major techniques and applications, and discusses research issues in the field. Some new topics covered include self-stabilizing algorithms, theories of privacy and anonymity, databases, computational games, pricing algorithms for financial derivatives, and communication networks. Atallah teaches computer science at Purdue University. Blanton teaches computer science at the University of Notre Dame.

QA76.9 2009940414 978-0-7695-3877-8

E-science; proceedings. (CD-ROM included)

International Conference on E-Science (5th: 2009: Oxford, UK)

Computer Society Press, ©2009 106 p. \$213.00 (pa)

This is a collection of 51 abbreviated versions of research papers originally presented during the Fifth IEEE International Conference on e-Science held in Oxford, United Kingdom, in December 2009. The topics varied and include bioinformatics and health, climate and earth sciences, digital repositories and data management, physical science and engineering, and arts, humanities, and social science. A CD-ROM is included.

QA76.9 2008-052172 978-1-60692-768-7

Grid technology and applications; recent developments.

Title main entry. Ed. by G.A. Gravvanis et al.

Nova Science Publishers, ©2009 303 p. \$79.00

Grid technologies bring together geographically separated computing resources to manage complex processes. The successful application of grid technologies requires expert knowledge of system capabilities, coordination of resources, and vigilant oversight. This book provides descriptions, methods, and case studies to help grid managers and application developers keep pace with hardware and software developments that affect grid capabilities. The book presents the work of nearly three dozen contributors from institutions in Canada, Europe, and Asia. Chapters are grouped into two broad sections: Algorithms and Techniques, and Methodology, Middleware, and Tools.

QA76.9 2009-028581 978-1-60566-858-1

Scalable fuzzy algorithms for data management and analysis; methods and design.

Title main entry. Ed. by Anne Laurent and Marie-Jeanne Lesot.

Information Science Reference, ©2010 444 p. \$180.00

Intended to bridge the gap between the database and machine

learning communities, this guide gathers theoretical and experimental contributions on fuzziness, scalability, and the use of fuzzy methods for very large datasets. The databases considered include data warehouses, data cubes, tabular or relational data, and different application types, such as multimedia, medical, bioinformatics, financial, semantic web, and data stream contexts. Two introductory chapters provide general overviews of fuzziness and scalability. A section on databases and queries examines methods that consider data structuring as the core of the approach. The next section looks at fuzzy approaches for extracting relevant information from large datasets to provide summaries of the whole data.

QA186 2009-021572 978-1-4398-1157-3

Fundamentals of linear systems for physical scientists and engineers.

Puri, N. N.

CRC / Taylor & Francis, ©2010 873 p. \$99.95

For engineers and physical scientists, Puri (power electronics and control systems, Rutgers U.) discusses linear systems theory from the introductory to advanced level. He introduces basic concepts of systems, signals, and their interaction in a mathematical form; linear operators and matrices from a systems perspective; ordinary differential and difference equations; complex variables for transform methods; integral transform methods and their properties; digital systems, Z-transforms, and applications; the internal structure of the system and the input-output system performance; the principles of variational calculus and the synthesis of optimal control systems; and stochastic processes and their linear systems response.

QA276 2009-033999 978-0-470-28430-8

Complex surveys; a guide to analysis using R.

Lumley, Thomas. (Wiley series in survey methodology)

John Wiley & Sons, ©2010 276 p. \$69.95 (pa)

Writing primarily for those with some experience in applied statistics in the social and health sciences, Lumley (biostatistics, U. of Washington) presents a guide to analyzing complex surveys using the open-source statistical computing program R. Because of the intended audience, he devotes more attention to graphics, regression, and two-phase designs than is typical for a survey analysis text. Individual chapters discuss basic tools; simple and stratified sampling; cluster sampling; graphics; ratios and linear regression; categorical data regression; post-stratification, raking, and calibration; two-phase sampling; missing data; and causal inference.

QA278 2009-017248 978-0-470-41169-8

Multivariate statistics; high-dimensional and large-sample approximations.

Fujikoshi, Yasunori et al. (Wiley series in probability and statistics)

John Wiley & Sons, ©2009 533 p. \$115.00

This reference explains how traditional multivariate methods can be adapted and used in the place of conventional statistical tools. It offers explanations of the basic tools and exact distributional results of multivariate statistics,

statistical methods for high-dimensional data, and bootstrap approximations from a methodological perspective. Topics also include: high-dimensional approximations of various statistics, selection of variables based on the model selection approach, and more. Chapters provide real-world applications and analyses of data. The book is intended for both graduate level course work in probability theory and as a reference for practical and theoretical statisticians. Authors are Fujikishi (emeritus, Hiroshima U.), Ulyanov (mathematical statistics, Moscow State U.), and Shimizu (emeritus, Institute of Statistical Mathematics, Japan). While extremely technical, the book is formatted in a convenient manner.

QA297 2009-031934 978-1-4398-0697-5

MATLAB with applications to engineering, physics, and finance.

Baez-Lopez, David.

CRC Press, ©2010 412 p. \$79.95

For new and experienced mathematics users, Baez-Lopez (computers, electronics, and mechatronics, Universidad de las Américas, Mexico) explains how to perform complex math tasks with relatively simple programs using MATLAB software. Focusing on the toolboxes for physics, finance, and engineering, he describes simple functions such as differentiation, integration, and plotting, and advanced topics like programming, producing executables, publishing results directly from MATLAB programs, and creating graphical user interfaces. He also provides examples of Simulink and its advantages for system modeling and simulation, and details the use of MATLAB in applications such as digital signal processing, chemical and food engineering, astronomy, optics, kinematics, annuities, and financial derivatives.

ASTRONOMY

QB981 2009-455375 978-3-527-40862-7

String cosmology; modern string theory concepts from the big bang to cosmic structure.

Title main entry. Ed. by Johanna Erdmenger.

Wiley-VCH, ©2009 313 p. \$200.00

Over the past quarter century, new observations and phenomenological models have propelled cosmology forward; at the same time, once-shy string theory has been filling out as a possible candidate for a quantum theory of gravity. But some obstacles remain before The Big Untying can be consummated: theorists would like a microscopic understanding of the effective theories of the early universe, and truth to tell, the physics close to the initial singularity are still a bit obscure. Undaunted, theoretical physicists explore possible links between the field of inquiry and the fundamental theory, from the perspectives of string inflation from branes and moduli, cosmic superstrings, the cosmic microwave background as a possible probe of string theory, string gas cosmology, gauge-gravity duality, and heterotic M-theory and cosmology.

PHYSICS

QC7 2009-275918 978-0-19-954469-1

The harvest of a century; discoveries of modern physics in 100 episodes.

Brandt, Siegmund.

Oxford U. Press, ©2009 500 p. \$70.00

Brandt (Physics, University of Siegen) looks at one hundred fundamental discoveries of physics between 1895 and 2001, including relativity, quantum mechanics, semiconductors, lasers, and the expansion of the universe. Each "episode" introduces readers to the scientists involved and the scientific background for the discovery, and then describes the groundbreaking work that was done. Episodes also include photographs of the scientist(s) and any apparatus involved, diagrams, and extensive references. Although nicely designed and very well written, this book is probably over the heads of readers who lack a good grounding in basic mathematics and physics.

QC52 2009-033347 978-0-7637-7999-3

Multiphysics modeling using COMSOL; a first principle approach. (CD-ROM included)

Pryor, Roger W.

Jones & Bartlett, ©2011 852 p. \$89.95

COMSOL Multiphysics software is a finite element, partial differential equation tool for modeling of physical systems and devices. This book/DVD package for students, engineers, and scientists focuses on models in electrical, electronic, electromagnetic, optical, thermal physics, and biophysics areas. It introduces techniques for hands-on computer model building and solving with the COMSOL Multiphysics software, the AC/DC Module, the Heat Transfer Module, and the RF Module. The models presented are built within the context of the physical world and are explored in light of first principles analysis techniques. The DVD contains executable copies of each model and related animations. The book is for senior undergraduate and graduate students, and for scientists or engineers interested in exploring the behavior of different physical device structures through computer modeling. Pryor is a COMSOL Certified Consultant.

QC145 2009-011771 978-0-521-86025-3

Electrokinetically-driven microfluidics and nanofluidics.

Chang, Hsueh-chia and Leslie Y. Yeo.

Cambridge U. Press, ©2010 508 p. \$125.00

Electrokinetics holds out the promise of allowing for true micro- and nanofluidic technology that doesn't require external handling procedures or large capillary pumps because electric fields are able to facilitate the actuation and manipulation of micro- and nanofluids. Chang (chemical and biomolecular engineering, U. of Notre Dame, US) and Yeo (mechanical and aerospace engineering, Monash U., Australia) describe analytical tools and demonstrative experiments for understanding the nonequilibrium and nonlinear electrokinetic phenomena associated with electrolytes and

dielectric liquids at the micro and nano scales. They review classical equilibrium electrokinetic theories, along with more recent theoretical developments; discuss electro-osmotic transport and its application to the design of DC electrokinetic pumps; and examine electrophoresis and its applications. They then switch focus to nonequilibrium electrokinetic phenomena in chapters discussing field-induced dielectric polarization, field-induced double layer polarization, dielectrophoresis, and electrorotation. Finally, they examine the linear and nonlinear electrokinetics associated with free surfaces, the concepts of electrohydrodynamic atomization and the electrospinning of polymer fibers, and electrowetting and electrokinetic bubble transport.

QC760 2009-011957 978-0-470-50203-7

Electromagnetic simulation techniques based on FDTD method.

Title main entry. Ed. by Wenhua Yu et al.

John Wiley & Sons, ©2009 206 p. \$110.00

This book offers an explanation of the finite difference time domain method (FDTD) and instruction on how to design FDTD projects. It provides step-by-step guidance on the implementation of electromagnetic simulation techniques based on FDTD methods and an understanding of the logic behind them. In addition to basic principles, the book also: presents basic concepts of parallel processing techniques and systems, illustrates practical simulation techniques with engineering applications, and offers an introduction to advanced simulation techniques. Chapters include individual reference listings and sets of problems. The book is clearly written, well organized, and amply illustrated. Authors are Yu, Yang, Liu, and Mittra (electrical engineering, Penn State U.).

QC787 2009-464267 978-3-527-40572-5

RF superconductivity; science, technology, and applications.

Padamsee, Hasan.

Wiley-VCH, ©2009 448 p. \$230.00

Padamsee (physics, Cornell U., US) is project leader of the Superconducting Radio Frequency Group, pushing accelerator technology for particle physics at the energy and luminosity frontiers. His 1998 *RF Superconductivity for Accelerators* (John Wiley & Sons) continues to be the standard text, but the changes it has played a large part in bringing about over the past decade have surpassed much of it. Rather than trying to incorporate both the old and new in a second edition, he here focuses on developments since then, and even so must be selective and representative. For example, he has no room to deal with cryomodule and cavity/cryomodule integration or feedback and low-level RF controls. Taking in turn the science, the technology, and applications, he considers such topics as new cavity geometries, multipacting and field emission, input couplers, tuners, storage rings, heavy-ion accelerators, nuclear astrophysics, and transmutation.

QC981 2009-017103 978-1-59726-567-6

Climate change science and policy.

Schneider, Stephen H. et al.

Island Press, ©2010 522 p. \$95.00 (pa)

Schneider (Woods Institute for the Environment, Stanford U.), Rosencranz (founder and former president of the environmental organization Pacific Environment), Mastrandrea (Woods Institute for the Environment, Stanford U.), and Kuntz-Durizeti (managing editor, *Climatic Change*) present 49 chapters that collectively comprise a broad survey of the science of global climate change and the policy options available for prevention and/or mitigation. Papers are presented in sections that focus on the impacts of climate change relative to species extinction, marine ecosystems, hurricanes, wildfires, tropical forests, food security, human health, and other issues; policy analysis issues such as economic impacts, integrated assessment modeling, risk perceptions and behavior, carbon taxes and trading; international considerations such as European Union climate policy, international treaties, international inequities and imbalances, and developing country perspectives; US domestic issues such as state policies, policies to stimulate corporate action, and the media and public education; and mitigation options relative to energy efficiency, renewable energy, hydrogen energy supply chains, nuclear energy, coal capture and storage, and tropical forests.

QC981 2009-930851 978-1-84844-037-1

Distributional impacts of climate change and disasters; concepts and cases.

Title main entry. Ed. by Matthias Ruth et al. (New horizons in environmental economics)

Edward Elgar Publishing, ©2009 216 p. \$100.00

While global climate change and climate change-induced natural disasters, such as stronger hurricanes or prolonged droughts, are frequently declared to be a problem for the whole world together, their economic and social impacts are of course distributed unevenly, according to the factors noted by editors Ruth (natural economics, U. of Maryland, US) and Ibararán (economics, U. Iberoamericana Puebla, Mexico) in their introduction: income levels, the age and gender structures of populations, access to information and environmental assets, social and human capital, economic capacity, institutional development, and strength of social cohesion. They present 11 papers exploring these relationships, beginning with opening materials that summarize issues of vulnerability and adapting capacity worldwide and the connections between climate change and macroeconomic performance. The remaining chapters focus in on different facets of the overall picture, including health impacts of heat; income distribution effects of greenhouse gases mitigation policies in Mexico; differential climate change impacts on cities in industrialized countries; the security challenges of climate change; and distributional effects and different types of adaptation in Germany and Indonesia.

CHEMISTRY

QD20 2009-277397 978-1-86094-986-9

Chemistry was their life; pioneering British women chemists, 1880-1949.

Rayner-Canham, Marelene F. and Geoff Rayner-Canham.

Imperial College Press, ©2008 542 p. \$85.00

Despite the old assertion that “women didn’t do that sort of thing,” women not only did chemistry in Britain between 1880 and 1949, but *a lot* of women were chemists during those years. The Rayner-Canhams (Physics [Marelene] and Chemistry [Geoff], Memorial University of Newfoundland) present biographies of 141 women chemists (out of the 896 known), clearly showing that British women were willing and able to break down the barriers keeping them out of chemistry. Organized mainly by university and chemistry subdiscipline, the book does much to put women back into the history of chemistry. Scholarly but eminently readable, this book will appeal to readers interested women’s history and the history of science.

QD79 2009-031933 978-1-4398-0096-6

Ion-pair chromatography and related techniques.

Cecchi, Teresa. (Analytical chemistry series)

CRC / Taylor & Francis, ©2010 201 p. \$129.95

Italian research and teaching chemist Cecchi (Camerino U. and ITIS Montani) has concentrated her attention on ion-pair chromatography, encompassing such aspects as retention modeling, zwitterions and other unusual analytes, and applications to non-separative functions. She explains that the technique, a mode of high-performance liquid chromatography, was developed to overcome the drawbacks of ionic suppression and ion exchange chromatography, and allows the separation of complex mixtures of polar, ionic, and ionogenic species. She balances between depth and breadth here as she explains recent developments and the current status of the separation method. The study could be used as a textbook, she suggests, though it is really intended for researchers.

QD262 2009-019344 978-0-470-09603-1

Dynamic combinatorial chemistry; in drug discovery, bioorganic chemistry, and materials science.

Miller, Benjamin L.

John Wiley & Sons, ©2010 265 p. \$79.95

Editor Miller (dermatology, biomedical engineering, biochemistry, biophysics, U. of Rochester) and 17 co-authors provide a foundational overview of Dynamic Combinatorial Chemistry (DCC) and its extensive applications. The reference includes an introduction to DCC, approaches to binding in proteins and nucleic acids, molecular recognition, self-sorting, catalyst recovery, materials discovery, and analytical chemistry challenges. It is intended encourage new solutions and strategies for chemists working on structure libraries and designing compounds and materials. The book is technical but well-written, includes a substantial amount of references, and is very well illustrated.

QD262 2009-030808 978-0-470-51116-9

Linker strategies in solid-phase organic synthesis.

Title main entry. Ed. by Peter J. H. Scott.

John Wiley & Sons, ©2009 677 p. \$205.00

Countering claims that solid-phase organic synthesis

died with its champion Robert Bruce Merrifield in 2006, scientists from North America, Europe, and China introduce the technique and the earlier traditional linker units, then explore the current state-of-the-art multifunctional linker units that are being applied in diversity-oriented synthesis, chemical genetics, focused library preparation, and other growing fields. Their topics include cyclative cleavage as a solid-phase strategy, photolabile linker units, hydrazone linker units, diversity cleavage strategies from phosphorus linkers, silicon and germanium linker units, linkers releasing olefins or cyclo-olefins by ring closing metathesis, and solid-phase radiochemistry. A final section provides tables for selecting linkers for various groups of compounds.

QD383 2008-053452 978-0-470-19343-3

Polyphosphazenes for biomedical applications.

Title main entry. Ed. by Alexander K. Andrianov.

John Wiley & Sons, ©2009 462 p. \$135.00

For researchers, clinicians, and undergraduate and graduate students in pharmaceutical sciences and biomaterials, Andrianov, who works in the discovery and development of novel polymers for biological applications, compiles 20 chapters that review recent research in development of polyphosphazenes, an emerging class of polymers that includes macromolecules and are biocompatible, biodegradable, and bioactive. Researchers working in chemistry, infectious disease, pharmaceutical sciences, chemical engineering, virology, and other fields in North America, Europe, Asia, and Chile cover general aspects, the main synthetic approaches, rational design as it relates to biological applications, and the main representatives of biomedical polyphosphazenes. They then discuss vaccine delivery and immunomodulation, biomaterials, drug delivery systems, biodetection, and the synthetic aspects and novel molecular architectures of well-defined polyphosphazenes. Polyelectrolytes and applications in tissue engineering, surface modification, and in composite and nanofabricated materials are also detailed.

QD400 2009-013357 978-0-470-45211-0

Fluorinated heterocyclic compounds; synthesis, chemistry, and applications.

Petrov, Viacheslav A.

John Wiley & Sons, ©2009 515 p. \$125.00

The subgroup of heterocycles was intensively developed only after World War II, and is now used in agricultural products, pharmaceuticals, and several varieties of plastic and chemicals. Organic chemists from many countries look at such topics as fluorinated three-membered ring heterocycles, five-membered nitrogen-containing species, synthesizing fluorinated sugars from fluorine-containing synthons, the synthesis and chemical transformation of six-membered aromatic heterocycles containing perfluoro-alkyl groups, and seven-membered and even larger ring-fluorinated heterocycles.

QD505 2009-455373 978-3-527-32095-0

Catalysis for sustainable energy production.

Title main entry. Ed. by Pierluigi Barbaro and Claudio Bianchini.

Wiley-VCH, ©2009 452 p. \$215.00

Contributors based mainly in Italy, but also in France, Switzerland, and Japan offer 13 articles of the latest research on various types of sustainable energy production using catalysis design. Fuel cells, hydrogen storage and production, and industrial catalysis are the broad subjects, with individual papers on topics that include photovoltaics, the use of catalysis to produce bio-diesel, electrocatalysis in water electrolysis, autothermal reforming of natural gas, production of methane and hydrogen from organic waste, and research on how to convert bioethanol cleanly into electricity. The essays are written for other researchers and graduate students and feature in-depth discussion of the state of research in the field. The papers were delivered in earlier form at the November-December 2006 workshop Catalysis of Sustainable Energy Production, held in Florence, Italy.

QD880 2009-051006 978-0-470-25557-5

Electrochemistry of functional supramolecular systems.

Title main entry. Ed. by Paola Ceroni et al. (Wiley series on electrocatalysis and electrochemistry)

John Wiley & Sons, ©2010 597 p. \$149.95

The editors (all of the U. of Bologna, Italy) present 17 chapters covering a broad range of topics in supramolecular chemistry with the goal of providing the reader "with an overview of current electrochemical research applied to multicomponent chemical systems, with particular attention to properties and functions, and to strengthen the contacts between the electrochemical community and the researchers engaged in the field of nanoscience." Specific topics include molecular encapsulation of redox-active guests, dendritic encapsulation of redox-active units, redox-active metal-polypyridine dendrimers as light-harvesting antennae, dendrimers as multielectron storage devices, self-assembled monolayers and multilayers of electroactive thiols, electrochemistry of carbon nanoparticles, molecular devices based on fullerenes and carbon nanotubes, functional electroactive biomolecules, biohybrid electrochemical devices, and electroactive molecules and supramolecules for information processing and storage.

QD906 2009-031427 978-0-470-69961-4

NMR crystallography.

Title main entry. Ed. by Robin K. Harris et al. (EMR handbooks)

John Wiley & Sons, ©2009 504 p. \$140.00

Chemists and physicists explain techniques by which nuclear magnetic resonance imaging can provide illuminate the disposition of atoms in the unit cells of crystals, and can ferret out information about the crystal structures that is inaccessible by diffraction methods. After an introduction, they cover chemical shifts, coupling interactions, determining crystal structure, properties of the crystalline state, and applications to crystalline solids. Among specific topics are

experimental characterizations of nuclear spin interaction tensors, symmetry effects at the local level, indirect coupling and connectivity, tensor interplay, intermolecular interactions and structural motifs, and structural biology.

BIOLOGY

QH323 2009-025699 978-0-8493-2782-7

Fractals and multifractals in ecology and aquatic science.

Seuront, Laurent.

CRC Press, ©2010 344 p. \$89.95

Fractals, those intriguing geometric shapes that are composed of increasingly smaller copies of themselves can be found in mathematics, art, music, and, as Seuront (biological oceanography, Flinders U., Australia) notes, in atmospheric and oceanic turbulence. He offers a basic understanding of fractals and multifractals and how to use them when studying ecological phenomena and explores most of the data analysis methods used against a background of case studies frequently based on his own work. He explains the complex mathematical methodology in a way that lends the subject to a variety of fields, including biology and microbiology, social sciences, oceanography, geology, hydrology, ecology, and finance. The book is packed with supporting illustrations, graphs, and tables.

QH324 2009-028768 978-0-470-18093-8

Elements of computational systems biology.

Title main entry. Ed. by Huma M. Lodhi and Stephen H. Muggleton. (Bioinformatics; computational techniques and engineering)

John Wiley & Sons, ©2010 412 p. \$115.00

Aimed at researchers and scientists from the fields of biology, chemistry, mathematics, physics, and computer science interested in computational systems biology, this collection of 17 papers explores core and foundational areas of the field. The editors (both associated with the Department of Computing, Imperial College London, UK) present the papers in sections devoted to biological network modeling, biological network inference, genomics and computational systems biology, and software tools for systems biology. Specific topics include *in silico* analysis of combined therapeutics strategy for heart failure, rule-based modeling and model refinement, simulating filament dynamics in cellular systems, reconstruction of biological networks by supervised machine learning approaches, supervised inference of metabolic networks from the integration of genomic data and chemical information, analysis and control of deterministic and probabilistic Boolean networks, probabilistic methods and rate heterogeneity, the impact of whole genome *in silico* screening for nuclear receptor-binding sites in systems biology, environmental and physiological insights from microbial genome sequences, validation issues in regulatory module discovery, and computational imaging and modeling for systems biology.

QH345 2009-020581 978-1-4398-0474-2

Biopharmaceuticals in plants; toward the next century of medicine.

Hefferon, Kathleen Laura.

CRC / Taylor & Francis, ©2010 206 p. \$99.95

For students and researchers in medicine, plant science, biotechnology, crop science, natural products chemistry, and engineering, Hefferon (Human Metabolic Research Unit, Cornell U.) surveys the major aspects of the development and production of plant-made pharmaceuticals. She covers history, theory and practice of modern plant transformation techniques for both nuclear and plastid genomes, the generation of transgenic plants, the engineering of plant virus expression vectors for transient expression of vaccine proteins and other therapeutics, the role of glycosylation in the production of plant-made mammalian proteins, the basis of mucosal immunity using plant-based oral vaccines, the scale-up of plant-derived vaccine and therapeutic proteins in entire crops or large batch cell suspension cultures, the development of clinical trials, the immune response to plant-derived pharmaceuticals, and risks and biosafety.

QH438 2009-010497 978-1-60566-124-7

Symmetrical analysis techniques for genetic systems and bioinformatics; advanced patterns and applications.

Petoukhov, Sergey and Matthew He.

Medical Information Science Reference, ©2010 271 p. \$245.00

This work on matrix genetics compiles approaches to the structural analysis of genetic systems and bioinformatics. Kronecker matrix families of square matrices are applied to genetic informatics to derive the following results: new phenomenological rules of evolution of the genetic code, connections of genetic code structures to multi-dimensional algebras, and parallels with quantum computers. Material is in sections on symmetrical analysis techniques and symbolic matrices; numeric matrices of the genetic code; and algebras of genetic codes. A final section on connections with other fields looks at Fibonacci numbers, algebraic models of physiological cycles in matrix genetics, and connections between genetic matrices and the ancient Chinese prognosticator the I Ching. The book is for researchers and students in molecular genetics, bioinformatics, computer informatics, mathematical and theoretical biology, and psychophysics. Petoukhov is affiliated with the Mechanical Engineering Research Institute at the Russian Academy of Sciences, Moscow. Matthew He is professor and director of the Division of Math, Science, and Technology at Nova Southeastern University.

QH450 2009-017383 978-1-60566-685-3

Handbook of research on computational methodologies in gene regulatory networks.

Title main entry. Ed. by Sanjoy Das et al.

Medical Information Science Reference, ©medi 710 p. \$325.00

This collection introduces the different tools for decoding, modeling, and analyzing gene-gene interactions through

gene regulatory networks (GRNs). The papers on network inference shed light in how GRNs can be reverse engineered from experimental data while the heterogeneous data papers show how linear programming can be used to synthesize GRNs from multiple data sources. Three case studies walk through GRN intervention planning, mathematical modeling of the ? switch, and application of Petri net theory. Other topics include structural learning based on prior biological knowledge and microarray gene expression measurements, improved model checking techniques for state space analysis, and approaches for modeling intrinsic noise and delays. The editors are affiliated with Kansas State University and Michigan State University.

QH506 2009-455363 978-3-527-40702-6

Handbook of molecular biophysics; methods and applications.

Title main entry. Ed. by Henrik G. Bohr.

Wiley-VCH, ©2009 1033 p. \$350.00

Derived from the monumental 12-volume *Encyclopedia of Applied Physics* (2004), this single-volume reference offers a handier packaging of 28 articles pertaining to specific physics applications in the biosciences. Rather than aiming at comprehensive coverage of particular topics, the contributing authors present the latest research, including their own, thus making this reference something other than a monograph or a textbook. Arrangement of the contents is in sections on quantum mechanics methods for molecular biophysics and electronic structure calculations of biomolecules; studies of motions of biomolecules and molecular dynamics calculations; biomolecular structures and dynamics in proteins, lipids, and DNA; radiation and spectroscopy methods; neurobiophysics and ion channels; techniques for detecting molecular structures down to the single molecule level; physical effects in biomolecules and larger organic systems; and applications in medicine. Editor Bohr is based in Denmark (Danish Technical U.), as are at least a half dozen of the contributors; the rest are from the US and other European countries.

QP517 2009-025910 978-0-470-85153-1

A practical guide to scientific data analysis.

Livingstone, David.

John Wiley & Sons, ©2009 341 p. \$85.00

For scientists with little statistics background, such as chemists, biochemists, pharmacists, and biologists, Livingstone (U. of Portsmouth, UK) provides a guide to scientific data analysis that focuses on the application of mathematical and statistical techniques and the interpretation of their results. He covers the most common multivariate statistical methods for examining and exploring relationships in data, with many examples from different scientific disciplines, including the design of foods, drugs, and cosmetics, and chapters covering aspects from planning an experiment, to examining and displaying data, to constructing quantitative models. Discussion of theory is minimized. Elementary knowledge of statistics is assumed.

QP519 2009-931798 978-1-60327-320-6

Bioluminescence methods and protocols, 2d ed.

Title main entry. Ed. by Robert B. LaRossa and Christelle Douillet. (Methods in molecular biology; v.574)

Humana Press Inc., ©2009 267 p. \$99.00

The editors (both of the U. of North Carolina at Chapel Hill) present 20 chapters describing recently developed methods and protocols for the application of bioluminescence for the study of molecular biology. Examples of topics discussed include validation of bioluminescent imaging techniques, imaging vasculature and lymphatic flow in mice using quantum dots, bioluminescent imaging of transplanted islets, detection of apoptosis using cyclic luciferase in living mammals, noninvasive bioluminescent imaging of infections, real-time bioluminescence imaging of viral pathogenesis, bioluminescent monitoring of in vivo colonization and clearance dynamics by light-emitting bacteria, and novel tools for use in bioluminescence resonance energy transfer. As with other volume in the series, each chapter includes an introduction to the principles of the topic, lists of necessary materials, step-by-step laboratory protocols, and notes on troubleshooting and pitfalls.

QP624 2009-041483 978-0-470-74138-2

Batch effects and noise in microarray experiments, sources and solutions.

Title main entry. Ed. by Andreas Scherer.

John Wiley & Sons, ©2009 252 p. \$105.00

Researchers, clinicians, laboratory personnel, managers, and others responsible for gene expression studies are the expected readers as like professionals in a wide range of fields explain bias in microarray data, describe sources of technical and biological variation in such experiments and genome-wide associated studies, and suggest how to reduce bias. Many of the statistical methods they provide for reducing bias and alleviating its effects are previously unpublished. Among their topics are microarray platforms and aspects of experimental variation, aspects of technical bias, bioinformatic strategies for cDNA-microarray data processing, adjusting batch effects in microarray experiments with small sample size using empirical Bayes methods, visualizing cross-platform microarray normalization, and standard operating procedures in clinical gene expression biomarker panel development.

MEDICINE (GENERAL & PUBLIC ASPECTS)

R856 978-1-59693-400-9

Biomicrofabrication and biomicrofluidics.

Title main entry. Ed. by Jeffrey D. Zahn. (Methods in bioengineering)

Artech House, ©2010 352 p. \$129.00

Forty academics and researchers from the US, South Korea, and Singapore contribute 13 chapters describing a variety of methods used in the field of microfluidics to handle, manipulate, and/or analyze cells, particles, or biological components, such as proteins and DNA, for microdiagnostics. Coverage includes common microfabrication techniques utilized to create microfluidic devices and on-chip flow control

and mixing microsystems, on-chip electrophoresis and isoelectric focusing methods for quantitative biology, electrical methods for manipulations of droplets via electrowetting and particles via dielectrophoresis for separations and chemical reactions, methods for integrated optical characterization of microfluidic devices and for controlling chemical gradients within devices, microimmunoassay diagnostics, MicroFACS system, and microtubule motors in microfluidics. For engineers, scientists, and students. Illustrated with b&w and color diagrams and photographs.

R857 2009-015103 978-1-60741-617-3

Biosensors; properties, materials and applications.

Title main entry. Ed. by Rafael Comeaux and Pablo Novotny. (Biotechnology in agriculture, industry and medicine)

Nova Science Publishers, ©2009 390 p. \$129.00

New materials, technologies, and applications of the sensors are surveyed by researchers from both the technical and applications sides. Though by definition the sensors include biological elements and exploit biological responses to the environment, and though so far they are used primarily in medical and biological applications, there is interest in developing them for other uses as well. Among their topics are an update of biosensor use in controlling food safety, enzyme modified screen printed electrodes, properties and choice of material for microbial biosensor, fabrications and applications of electro-chemi-luminescent sensors, a yellow fluorescent variant as an intracellular iodide biosensor in thyroid cells, the human olfactory system and olfactory biosensors, and developing whole-cell biosensors harboring the carotenoid-converting reporter genes.

R857 978-1-59693-439-9

Cell-based biosensors; principles and applications.

Title main entry. Ed. by Ping Wang and Qingjun Liu. (Artech House series engineering in medicine and biology)

Artech House, ©2010 271 p. \$129.00

Eleven biomedical engineering academics and researchers from Zhejiang U., Hangzhou, China, contribute ten chapters surveying the field of cell-based biosensors from a systems engineering perspective. Designed for researchers and professionals, the text covers the development history and basic concept and knowledge of cell-based biosensors; cell culture on chips; the mechanism and models of cell-based biosensors; the microelectrode array as a cell-based biosensor designed for transferring and recording cellular action potential; the cell-based field-effect transistor sensor fabricated by semiconductor technology; proposal of a light addressable potentiometric sensor; the electric cell substrate impedance sensing; the patch clamp chip; other cell-based biosensors, such as quartz crystal microbalance, surface plasmon resonance, and immune cell-based biosensors; and developing trends. Illustrated with b&w diagrams and photographs.

R858 2009-926171 978-1-934115-63-3

Biomedical informatics.

Title main entry. Ed. by Vadim Astakhov.

Humana Press Inc., ©2009 270 p. \$99.00

Technicians and researchers from San Diego, California survey novel cyber-infrastructures that are currently under development in various biomedical centers around the world. They describe several architectures for large-scale collaboration across multiple centers, modern approaches in various areas of bioinformatics, and software challenges and strategies for overcoming them. Among specific topics are mediator infrastructure for information integration and a semantic data integration environment for biomedical research, current computational methods for prioritizing candidate regulatory polymorphisms, predicting protein structure from sequence similarity, the brain model of text animation as a data mining strategy, and single sign-on in a grid portal. The material could be helpful to practitioners working in bioinformatics or students preparing for it.

TECHNOLOGY (GENERAL)

T57 2009-025987 978-0-470-37306-4

Applied integer programming; modeling and simulation.

Chen, Der-San et al.

John Wiley & Sons, ©2010 468 p. \$115.00

Requiring only background in linear or matrix algebra, this application-oriented text covers modeling techniques, problem-solving methods, and algorithms employed in current commercial mixed integer programming (MIP) software. The first section introduces integer programming models and applications, and combinatorial optimization. Next, basic algebraic and geometric concepts of linear programming theory and network flows are reviewed. The last section outlines fundamentals of typical software systems, and describes classical and modern solution approaches. Each new concept or algorithm is illustrated with a numerical example. The book also contains 100 b&w figures, flowcharts, and simple geometric drawings to illustrate concepts. Chapter exercises are included, along with 35 pages of worked out and explained selected answers. The text can be used for a two-semester sequence in linear and integer programming at the senior or Master's level, in engineering, computer science, applied mathematics, or business programs. The book will be useful as a reference for MIP software developers and analysts. Chen is affiliated with the Department of Industrial Engineering at The University of Alabama.

T57 2009-038606 978-1-60566-192-6

Using activity domain theory for managing complex systems.

Taxén, Lars.

Information Science Reference, ©2010 317 p. \$180.00

This work offers a new approach to complex system development in general and to project management in complex systems, based on activity domain theory (ADT) and on theoretical developments of meaning construction. A preface overviews the telecommunications industry, where

ADT originated. The first two sections of the book describe the empirical background of ADT and describe theoretical roots of ADT in Marxian philosophy and activity theory. The third section conceptualizes ADT as an elaboration of activity theory. The last part of the book discusses implications of the theory in several areas, with focus on the coordination of complex systems. Coverage is intentionally balanced to appeal to action-oriented and more reflective practitioners, theoreticians with or without a practical inclination, and those who see practice and theory as two sides of the same coin. Taxén is affiliated with Linköping University in Sweden.

T58 2009-024351 978-1-4200-7821-3

Handbook of enterprise integration.

Title main entry. Ed. by Mostafa Hashem Sherif.

CRC / Taylor & Francis, ©2010 685 p. \$99.95

Interoperability has become a fairly well-used term, but it is a key concept in many industries, and certainly in designing and implementing enterprise integration projects. All elements and/or equipment in a system need to be compatible, able to communicate with each other. This book sheds light on current research and applications for a variety of professionals, from infrastructure and software engineers to system designers and project managers. It illustrates best practices in enterprise systems integration by focusing on: bringing existing systems together to improve business processes, designing and implementing systems that can adapt quickly and easily to changing needs, and establishing procedures for seamless transitions from legacy systems with as little disruption as possible. Editor Sherif (long-time AT&T professional and certified project manager) and 57 co-authors contributed to the book.

T58 2009-035472 978-1-60566-970-0

Methodological advancements in intelligent information technologies; evolutionary trends.

Title main entry. Ed. by Vijayan Sugumaran.

Information Science Reference, ©2010 373 p. \$180.00

International researchers detail recent advances in intelligent information technologies and their use in organizational environments. The first section of the book discusses issues related to intelligent agent and multiagent systems, the second section introduces semantic technologies and their applications, and the third section delves into decision support and modeling. Some specific areas explored are inference degradation in information fusion, an agent-based approach to process management in e-learning environments, a semantically enriched model for ontologies, agent-based semantic interoperability of geo-services, agile workflow for long-term processes, and semantic supplier contract monitoring and execution for DSS architecture. Sugumaran is a professor of management information systems at Oakland University, Rochester, MI.

T174 2009-288088 978-981-4241-38-0

Nanobiotechnology & nanobiosciences.

Nicolini, Claudio. (Pan Stanford series on nanobiotechnology; v.1)

World Scientific, ©2009 367 p. \$119.00

Nicolini (biophysics, U. of Genoa, Italy) defines and reviews the major areas of nanobiotechnology and nanobiosciences and their recent developments. He covers the basic principles and main applications of nanobiotechnology as an emerging field, including the status of new materials by organic and biological nanotechnology and their applications, nanoscale probes, and applications in science and health in the areas of protein crystallography, medicine, genomics, proteomics, cell science, mechanics, optics, and magnetism. The final chapter addresses applications to industry and energy. He focuses on technology that has been accomplished in his laboratory at the Nanoworld Institute in Genoa over the last eight years.

ENGINEERING (GENERAL, CIVIL)

TA166 2009-018069 978-1-4398-0991-4

Human factors in the design and evaluation of central control room operations.

Title main entry. Ed. by Neville A. Stanton et al.
CRC Press, ©2010 416 p. \$129.00

This work offers guidelines for accommodating human factors and ergonomics considerations in the design and evaluation of control rooms intended for remote and continuous operation, in industries such as defense, surveillance, resource extraction, power generation, and energy distribution. Self-contained chapters are written in a modular structure, with outlines, key points, and sections on standards, recommendations, assessment and evaluation, and examples. Some areas examined include automation, supervision, shift patterns, control room layout, alarms, human error, and safety culture. The guide includes numerous b&w figures and tables, and a few b&w photos. It will be useful for those who are involved in developing and upgrading central control rooms, and for postgraduate students. Stanton is chair of the School of Civil Engineering at the University of Southampton.

TA169 2009-018436 978-0-470-40503-1

Architecting resilient systems; accident avoidance and survival and recovery from disruptions.

Jackson, Scott. (Wiley series in systems engineering and management)

John Wiley & Sons, ©2010 297 p. \$79.95 (pa)

For students, practicing engineers, systems architects, technology managers, government agencies, and others, Jackson (systems architecting and engineering, U. of Southern California) presents a systems approach for resilience that public and private organizations can use in establishing procedures for anticipating, surviving, and recovering from disruptions like natural disasters, internal failures, and terrorist attacks. He covers prevention, averting worsening of a problem, and recovering; discusses infrastructure, culture, capabilities, governance, measuring resilience, and cost; and includes both holistic and analytical methods, with a focus on the holistic, in which systems

architecting has emphasis. Case studies of different industries from chemical facilities to commercial aircraft are included.

TA174 2009-031430 978-1-4200-7169-6

Real options in engineering design, operations, and management.

Title main entry. Ed. by Harriet Black Nembhard and Mehmet Aktan.

CRC / Taylor & Francis, ©2010 244 p. \$79.95

Eighteen international academics and researchers contribute 15 chapters synthesizing current knowledge regarding real options for engineering design, operations, and management. Coverage includes an introduction to real options; an overview of how real options came to be used as an analytical tool in engineering problems; real options in manufacturing operations; a real options framework for valuing quality improvement programs; the application of real options in outsourcing; barriers to real options adoption and use in architecture, engineering, and construction project management practice; identifying real options to improve engineering systems design; mining systems planning and design; creating real options in flexible systems, and comparing and optimizing the flexibility among alternative design solutions; and management applications of real options in the areas of workforce cross-training, sustainable product quality production, nanotechnology investments, and pharmaceutical development.

TA219 2009-013022 978-1-4200-8897-7

Mathematical methods for accident reconstruction; a forensic engineering perspective.

Franck, Harold and Darren Franck.

CRC / Taylor & Francis, ©2010 302 p. \$119.95

Harold and Darren Franck, both of Advanced Engineering Associates, have investigated hundreds of vehicle accidents over the past 25 years. Their book, based on their experiences and the basic principles of physics, explains the application of mathematics in modeling vehicle accident reconstruction for a variety of vehicles, from bicycles and motorcycles to cars and large trucks as well as construction equipment. Topics include: foundations of measurement, energy methods used in reconstruction, momentum methods, vehicle specifications, failure analysis, geometrical characteristics of highways, crash data recorders, low speed impacts, standards and protocols, and visibility, perception, and reaction. The book is intended for a technical audience.

TA354 2009-013703 978-1-4200-6556-5

Formulas for mechanical and structural shock and impact.

Szuladzinski, Gregory.

CRC / Taylor & Francis, ©2010 768 p. \$159.95

A specialist in mechanical engineering and structural mechanics, Szuladzinski worked in the US from 1966 to 1980 in aerospace, nuclear engineering, and shipbuilding; since then, he has worked in Australia applying his skills in the aerospace, railway, power, offshore, automotive, and process industries. He offers what is essentially a collection of formulas describing dynamic responses to shock loads.

inspired by Roark's classic *Formulas for Stress and Strain* presenting equations and explanatory sketches in a compact manner. Coverage includes concepts and foundations; natural frequency; simple linear and nonlinear systems; wave propagation; yield and failure criteria; impact; collision; cables and strings; beams; columns and beam-columns; plates and shells; dynamic effects of explosion; penetration and perforation; and damage, failure, and fragmentation. For engineers and other professionals who desire insight into how objects and structures respond to sudden, strong impulses that are usually of short duration.

TA355 2009-037408 978-0-07-150819-3

Harris' shock and vibration handbook, 6th ed.

Title main entry. Ed. by Allan G. Piersol and Thomas L. Paez.

McGraw-Hill, ©2010 -- p. \$150.00

Cyril Harris (then engineering, Columbia U.) was one of two editors of the 1961 first edition, and soldiered alone through edition after edition until the fifth in 2002, when he brought Piersol on board and Harris' name was added to the title. This edition is a more radical revision of the material than has gone before: several chapters on obsolete material have been dropped to make way for new techniques, all but one of the chapters whose authors have died were revised or rewritten by living authors, and most of the numerical values throughout are in customary units followed by SI units in parenthesis. What remains unchanged is the goal of providing practical guidance to working engineers and scientists actively engaged in solving shock and vibration problems.

TA403 2009-034795 978-1-4200-8272-2

The physical chemistry of materials; energy and environmental applications.

Roque-Malherbe, Rolando M. A.

CRC / Taylor & Francis, ©2010 500 p. \$149.95

Physicist Roque-Malherbe believes that a new branch of materials science has sprouted, the physical chemistry of materials, which emphasizes the study of materials that have application in chemistry, sustainable energy, and pollution abatement. He introduces the methods of synthesis and characterization and the properties and applications of adsorbents, ion exchangers, cationic conductors, catalysts, and permeable porous and dense materials. Among his specific topics are materials physics, diffusion in materials, adsorption in nanoporous materials, solid-state electrochemistry, heterogeneous catalysis and surface reactions, and membranes.

TA418 2009-000612 978-1-60692-476-1

Fatigue crack growth; mechanics, behavior, and prediction.

Title main entry. Ed. by Alphonse F. Lignelli.

Nova Science Publishers, ©2009 264 p. \$89.00

Fatigue damage is one of the most common sources of structural degradation in mechanical systems. This work presents current research on fatigue crack growth. Five chapters offer research and review studies on real-time

fatigue damage monitoring via in situ ultrasonic sensing, multiscale approaches to fatigue crack growth from the debonding of particle/ductile-matrix interfaces, advances in the numerical modeling of fatigue crack closure using finite elements, textural fractography of fatigue fractures, and a novel fractography for investigation of the fatigue fracture process in materials. Short communications review work on topics such as a fatigue behavior model for short fiberglass reinforced polyamides, and fatigue crack growth prediction in asphalt concrete materials with a damage mechanics model. Information on the editor is not given.

TA418 2009-030939 978-1-84821-170-4

Machining composite materials.

Title main entry. Ed. by J. Paulo Davim.

ISTE/Wiley, ©2010 262 p. \$120.00

Mechanical engineers review the fundamentals and describe recent developments in machining material that combine polymers, metals, and/or ceramics for modern manufacturing engineering. They cover the mechanics and modeling of machining polymer matrix composites reinforced by long fibers, the machinability of polymer matrix composites, drilling technology, abrasive water jet machining, metal matrix composites, and ceramic matrix composites.

TA654 2009-035874 978-0-470-05982-1

Smart structures; physical behaviour, mathematical modelling and applications.

Gaudenzi, Paolo.

John Wiley & Sons, ©2009 177 p. \$115.00

Understanding the physics, creating a mathematical model, and developing a numerical simulation are the steps Gaudenzi (aeronautical engineering, U. di Roma la Sapienza) goes through in his own research, and so uses them as a framework within which to present some results of research into smart structures over the past 20 years or so. After a general introduction to smart structures, he covers the mathematical modelling of piezoelectric bodies, actuation and sensing mechanisms, active composites, and applying smart structures in engineering practice. The material should be accessible to graduate students, researchers, and designers in structural and mechanical engineering.

TA664 2009-037001 978-1-4398-0175-8

Capacity and transport in contrast composite structures; asymptotic analysis and applications.

Kolpakov, A.A. and A.G. Kolpakov.

CRC Press, ©2010 321 p. \$159.95

For applied mathematicians and engineers, A.A. Kolpakov (Novosibirsk State U., Russia, and U. of Fribourg, Switzerland) and A.G. Kolpakov (Università degli Studi di Cassino, Italy, and Siberian State U. of Telecommunications and Informatics, Russia) present new and modified asymptotic methods for real-world applications in composite materials development, with a focus on the analysis of transport problems for systems of densely packed, high-contrast composite materials. They cover historical developments and

new progress in math calculations, computer techniques, finite element computer programs, and presentation of results of numerical computations, as well as discussion of asymptotic analysis of partial differential equations, the capacity of a system of closely placed bodies, and the total flux, energy, and capacity of the model. Other topics include material science, the transport of elastic properties of thin layers, highly filled contrast composites, and the analysis of effective properties of electroceramics.

TA1520 978-1-60511-155-1

Materials for nanophotonics <--> plasmonics, metamaterials, and light localization; proceedings.

Symposium on Materials for Nanophotonics (2009: San Francisco, CA) Ed. by Luca Dal Negro et al. (MRS symposium proceedings; v.1182)

Materials Research Society, ©2009 179 p. \$111.00

The 23 peer-reviewed papers address challenges in material fabrication for engineering light localization, optical dispersion, and plasmonic fields in complex optical media. Such research has the potential to boost the scaling of optical technologies below the diffraction limit, opening unprecedented opportunities for basic and applied research. Among the topics are low-energy ion beam synthesis as a new route toward plasmonic nanostructures, improved analytical models for single-layer and multi-layer silver superlenses, the effective excitation of superfocusing surface plasmons using phase controlled waveguide modes, a subwavelength terahertz waveguide using negative permeability metamaterial, large-area light propagation in quasi-zero average refractive index materials, and optimizing plasmonic nano-antennas.

TA1520 2009-035663 978-0-8194-7773-6

Tutorials in complex photonic media.

Title main entry. Ed. by Mikhail A. Noginov et al.

SPIE, ©2009 696 p. \$103.00

Recent breakthroughs in optics and photonics such as holography, optics of scattering media, and metamaterials have involved inhomogeneous, composite, and multiphase materials, whose structures are either photoinduced or determined by synthesis or fabrication. Presented by Noginov (Norfolk State U., US), Dewar (U. of North Dakota, US), McCall (Imperial College London), and Zheludev (U. of Southampton, UK), the purpose of this book is to present students and practicing engineers with tutorials in these complex photonic media, with each of the 19 chapters proceeding from basics towards discussion of more advanced topics. The chapters discuss negative refraction, negative refractive index and subwavelength imaging, magneto-optics and the Kerr effect with ferromagnetic materials, symmetry properties of nonlinear magneto-optical effects, optical magnetism in plasmonic metamaterials, chiral photonic media, optical vortices, photonic crystals, wave interference and modes in random media, chaotic behaviors of random lasers, lasing in random media, feedback in random lasers, optical metamaterials with zero loss and plasmonic nanolasers, resonance energy transfer, optics of nanostructured materials from first

principles, organic photonic materials, charge transport and optical effects in disordered organic semiconductors, holography and its applications, and slow and fast light.

TA1530 2009-455376 978-3-527-32121-6

Nanophotonics and nanofabrication.

Title main entry. Ed. by Motoichi Ohtsu.

Wiley-VCH, ©2009 259 p. \$190.00

Ohtsu (electrical engineering and information systems, U. of Tokyo, Japan) presents 11 chapters outlining the principles and practices of nanofabrication using the optical technology of nanophotonics, a technology fusing optical fields and matter that utilizes the nanometer-sized light localized on the surface of a nanometric material. Following the introductory chapter discussing the history and present status of nanophotonics and its application to nanofabrication, the second chapter presents the principles of nanofabrication based on dressed-photon models, describes adiabatic and nonadiabatic processes in nanofabrication, and demonstrates their application to chemical vapor deposition and lithography. The remaining ten chapters discuss practices of nanofabrication, including nanofabrication using self-organization and related technology to control the size and position of fabricated nanometric materials, the fabrication of semiconductor quantum dots, lithography based on nanophotonics, x-ray device fabrication using nanophotonic lithography, and periodic nanostructure formation on hard thin films using femtosecond laser ablation, among other topics.

TA1637 2009-022292 978-1-84821-139-1

Multivariate image processing.

Collet, Christophe.

ISTE/Wiley, ©2010 459 p. \$150.00

Multivariate imaging is a big family of information media that includes color imaging, multimodal data, multispectral and hyperspectral data, multidata images, heterogeneous data, multisource observations. The 14 studies here grew out of a 2005-08 research project that involved analyzing and manipulating multivariate imaging from theoretical or application motivations, emphasizing the wealth and complexity of the data, the diversity of the goals, and the variety of the methods. They cover registration and fusion, detecting change, de-noising and segmentation, and new challenges for massive multicomponent image analysis. Among specific topics are fusing satellite images at different resolutions, detecting and tracking emission rays in radio astronomy, multivariate mathematical morphology applied to color image analysis, and parallelizing image analysis applications for spectral microscopy.

TA1675 2009-009170 978-1-60692-896-7

Fiber lasers; research, technology, and applications.

Title main entry. Ed. by Masato Kimura. (Lasers and electro-optics research and technology series)

Nova Science Publishers, ©2009 225 p. \$129.00

This volume contains seven studies and four short communications on fiber lasers and their applications. An international group of contributors working in optics and

photonics, physics, applied mathematics, engineering, neuroscience, and life, chemical, and social sciences discuss multiple four-wave mixing processes; amplified femtosecond fiber lasers; the intra-cavity dynamics, possible operation modes, and performance optimization of the laser cavity; bacterial cell interactions with optical fiber surfaces; single-frequency fiber lasers; the properties of frequency modulation mode-locked lasers; the operation of passively mode-locked lasers with nonlinear optical loop mirrors; and the use of laser scanning in eye movements.

MECHANICAL ENGINEERING & MACHINERY

TJ163 2009-025318 978-1-4398-2145-9

Handbook of energy audits, 8th ed.

Thumann, Albert et al.

Fairmont Press, ©2010 492 p. \$125.00

This handbook walks through the process of planning and carrying out energy audits of electrical, mechanical, and building systems in any type of facility. It will be useful for energy engineers, non-engineers, and others new to the field of energy management. The handbook explains how to evaluate how energy is used in commercial facilities, how to establish accurate baseline information, and how to identify where energy consumption can be reduced. Topics covered in detail include energy accounting procedures, electrical, mechanical, building, and process systems analysis, life cycle costing, and maintenance management. The handbook includes example calculations and a glossary. This eighth edition covers ASHRAE Level 1 and 2 energy audits, and contains a new chapter on water conservation. The book is distributed in the US by Taylor and Francis. Thumann is executive director of the Association of Energy Engineers, and a veteran of the Bechtel Corporation.

TJ217 2009-039083 978-1-4200-7924-1

Intelligent control systems with an introduction to system of systems engineering.

Nanayakkara, Thrishantha et al. (System of systems engineering series)

CRC Press, ©2010 421 p. \$99.95

System of systems (SoS) refers to conglomerates of complex operational systems interacting among themselves to achieve a common goal. This work offers a practical review of SoS and some of its applications, integrating traditional systems control theory with discussion of fields underlying SoS engineering, such as dynamic systems, control, neuroscience, soft computing, signal processing, and systems integration. Chapters progress from elements of a classical control system and an introduction to SoS, to areas such as observer design and Kalman filtering, SoS simulation, and reward-based behavior adaptation. Two final chapters offer detailed case applications in mine detection. MATLAB code for hands-on projects can be downloaded from a web site. Nanayakkara is affiliated with the Computer Science and Artificial Intelligence Laboratory of the Massachusetts Institute of Technology.

TJ233 2009-993532 978-1-61503-012-5

Systems failure analysis.

Berk, Joseph.

ASM International, ©2009 202 p. \$90.00

With its four-step, team-oriented problem solving process for systems failure analysis, this work is intended to help product teams discover the causes of defects and failures in complex manufacturing and engineered systems. While portions of the book cover component failure mechanisms, the focus is on causes of system failure, such as complex component and subsystem interactions that don't involve failing parts. Methods discussed include Ishikawa diagrams, the 5-whys approach, and mind mapping. Three chapters are devoted to fault tree analysis. Other topics covered include mechanical and electronic failures, leaks and contaminants, design of experiments, and post-failure analysis activities. B&w photos are included. The book will be useful as a reference for professionals in engineering and quality assurance, as well as manufacturing technicians, purchasing personnel, field service personnel, and operators or other users, working in the aerospace, defense, automotive, biomedical, electronic, energy, and process industries. Berk is a member of the Mechanical Engineering, Civil Engineering, and Engineering Technology departments at the California State Polytechnic University.

ELECTRICAL ENGINEERING, ELECTRONICS, NUCLEAR ENGINEERING

TK5105 2009-021593 978-1-60566-894-9

Cases on semantic interoperability for information systems integration; practices and applications.

Title main entry. Ed. by Yannis Kalfoglou.

IGI Publishing, ©2010 350 p. \$180.00

Powerful and complex information systems have evolved over the past half century that are finely tuned to particular cultural and geographical contexts. Now that globalized business is battering down such obstructive dikes, it requires those systems to be integrated into a universal whole. Translating syntactically<-->moving an element from a place in one system to an analogous place in another system<-->is pretty easy. The hard part, the part addressed here, is to translate the meaning<-->to make sure that a transaction in one country is the same transaction in all countries. Researchers in information and computer sciences look at novel concepts for engineering semantic interoperability solutions, and domain-specific semantic interoperability practices. Among their specific topics are the ontological stance for a manufacturing scenario, streamlining semantic integration systems, semantic synchronization in business-to-business transactions, and data integration in the geospatial semantic web.

TK5105 2009-020544 978-1-60566-384-5

Handbook of research on Web 2.0, 3.0, and X.O; technologies, business, and social applications; 2v.

Title main entry. Ed. by San Murugesan.

Information Science Reference, ©2010 956 p. \$495.00
 This two-volume handbook begins with acknowledgement of the 40th anniversary of the internet, the 20th anniversary of the web, and the fifth anniversary of Web 2.0. For academics, researchers, and practitioners, coverage encompasses both technological developments (and their implications) and social-cultural-commercial applications. After two overview chapters on the history and evolution of the Web (including before and beyond 2.0), another 48 contributions are arranged in sections on the following themes: web modeling and design; architecture; information search, bookmarking, and tagging; semantic analysis and semantic web; quality, trust, security, and effort estimation; educational applications; Enterprise 2.0, healthcare, finance, and other applications; and the social web<-->foundations, analysis, and visualization. Editor Murugesan is affiliated with Multimedia University, Malaysia, and with the U. of Western Sydney Australia; the long list of contributors includes representation from at least a dozen countries.

TK6570 2009-018070 978-1-4200-7777-3

RFID and sensor networks; architectures, protocols, and integrations.

Title main entry. Ed. by Yan Zhang et al. (Wireless networks and mobile communications)

CRC / Taylor & Francis, ©2010 626 p. \$99.95

Sixty-four international academics contribute 21 chapters to a technical guide for students, educators, research strategists, scientists, researchers, engineers, developers, and consultants in the field of wireless communications and networking, particularly those involved in developing radio frequency identification (RFID), wireless sensor networks (WSNs), and integrated RFID and WSNs. The text covers the fundamentals and principles of RFID, including tags, readers, middleware, security, and services; the fundamentals and principles of WSNs, including routing, medium access control, localization, clustering, mobility, security, and cross-layer optimization; and the principles and practical applications of integrated RFID and WSNs, as illustrated by examples such as smart homes, uses for in-hospital and out-of-hospital health care scenarios, and for monitoring building structures.

TK6575 2009-017251 978-0-470-12169-6

EM detection of concealed targets.

Daniels, David J. (Wiley series in microwave and optical engineering)

John Wiley & Sons, ©2010 284 p. \$120.00

This reference text provides an introduction for newcomers as well as a resource for current practitioners. It details the physics of electromagnetic (EM) detection methods, including RF, microwave, millimeter wave, and terahertz detection systems, for detecting concealed targets such as explosive devices and weapons hidden in the ground, clothing, or luggage. The techniques described are also applied to concealed targets such as stowaways or victims of natural disasters. The book is written from the perspective of the equipment designer, with emphasis on the factors that influence system performance. Coverage progresses from

basic principles to system design, with chapters on topics including the physics of propagation, antennas, nuclear quadrupole resonance, radar systems, and passive systems. Applications explored include earthquake and avalanche radar systems, land-mine detection, and through-wall radar for surveillance. Daniels is a sensor technician and consultant.

TK6575 2009-022439 978-0-89871-677-1

Fundamentals of radar imaging.

Cheney, Margaret and Brett Borden. (CBMS-NSF regional conference series in applied mathematics; 79)

SIAM, ©2009 140 p. \$59.00 (pa)

Using an intuitive rather than a rigorous approach, Cheney (mathematics, Rennselaer Polytechnic Institute) and Borden (physics, The Naval Postgraduate School) demonstrate the connection between the physics and mathematics of radar imaging in this work for mathematicians and students. Students should have background in complex analysis, the Fourier transform, the Dirac delta function, one-dimensional wave equations, linear algebra, random processes, and some physics. The first half of the book covers radar basics, with chapters on the history of radar and imaging methods, radar systems, scattering, detection of signals in noise, and the radar ambiguity function. The second half examines radar imaging, covering wave propagation in two and three dimensions, inverse synthetic-aperture radar, antennas, and related techniques. A final chapter presents open problems in waveform design, coding, ambiguity theory, and antennas. B&w and color photos and images are included. The book is for graduate students and mathematicians working in inverse problems, imaging, or electromagnetics, and for students and practitioners of electrical engineering and physics working on radar applications.

TK7867 2009-018610 978-0-470-34360-9

The foundations of signal integrity.

Huray, Paul G.

John Wiley & Sons, ©2010 339 p. \$125.00

Huray (electrical engineering, U. of South Carolina) provides a reference that explores the physical foundation of system integrity based on electromagnetic theory taken from Maxwell's Equations. The author utilizes current research from his team of industrial engineers and graduate students. Topics in this comprehensive textbook and reference include: plane electromagnetic waves, plane waves in compound media, transmission lines and waveguides, ideal models versus real-world systems, surface roughness, advanced signal integrity, and signal integrity simulations. The book would be suitable for undergraduate and junior graduate students as well as engineers in the field. While highly technical, the book is clearly written and amply illustrated.

TK7870 978-1-59693-436-8

Component reliability for electronic systems.

Bajenescu, Titu-Marius I. and Marius I. Bazu.

Artech House, ©2010 685 p. \$129.00

Moving past the days when reliability was an afterthought, this book helps electrical engineers and product developers

take reliability issues into account during the design process, with an emphasis on thermal design, and also during the whole manufacturing process. The Romanian authors describe the primary tools of failure analysis used in the semiconductor industry, illustrated by black and white photographs. The second half of the book walks through reliability tests and failure analyses for diodes, silicon power transistors, optoelectronic components, thyristors, integrated circuits, memories, microprocessors, and microsystems.

TK7871 2009-030895 978-1-4200-7290-7
Organic electronics; materials, processing, devices, and applications.

Title main entry. Ed. by Franky So.

CRC / Taylor & Francis, ©2010 567 p. \$149.95

Invited physicists, chemists, and materials scientists and engineers who specialize in organic semiconductors address the relevant materials and processing, device physics, organic electronic devices, and applications. Among their topics are organic vapor-phase deposition, magnetic field effects in the materials and devices, the role of homolytic reactions in the intrinsic degradation of organic light-emitting diodes, vertical-type organic transistors, mixed molecular heterojunction photovoltaic cells, organic light-emitting diode materials and device architectures for full-color displays and solid-state lighting, and chemical and biological sensors.

TK7872 2009-014024 978-0-470-48781-5
Design and realizations of miniaturized fractal RF and microwave filters.

Jarry, Pierre and Jacques Beneat.

John Wiley & Sons, ©2009 194 p. \$95.00

This guide for RF and microwave engineers and researchers, advanced graduate students, and wireless and telecommunication engineers shows how fractal iterations applied to microwave resonators lead to RF and microwave filters of reduced size, improved selectivity, and stopband rejections. It presents a technique for the design and fabrication of suspended-substrate miniaturized fractal microwave and RF filters for use in applications such as portable and cellular phones, wifi, 3G and 4G, and satellite networks. The design technique described is based on the general coupled resonators network and couple matrix technique. Although the book focuses on filters with symmetrical and asymmetrical frequency characteristics in the C, X, and Ku bands, applications to other frequency bands are also considered. The book can be used for an advanced graduate course in miniaturized RF and microwave filters, and can be used to supplement traditional courses in microwave filter design. Jarry teaches at Bordeaux University. Beneat teaches electrical and computer engineering at Norwich University.

TK7872 2009-031421 978-0-470-17082-3
Wireless sensor and actuator networks; algorithms and protocols for scalable coordination and data communication.

Title main entry. Ed. by Amiya Nayak and Ivan Stojmenovic.

John Wiley & Sons, ©2010 300 p. \$110.00

Editors Nayak (information technology and engineering, U. of Ottawa, Canada), Stojmenovic (editor, researcher, and IEEE fellow), and six co-authors use a problem-oriented approach to exploring a variety of computing and communications problems and solutions in wireless sensor and actuator networks. The reference incorporates both theory and practice in its coverage of applications and models, sensor area coverage, geographic routing in wireless sensor and actuator networks, sink mobility, location service, sensor placement, coordination in sensor, actuator, and robot networks, and more. While technical, the writing is clear, chapters include substantial reference listings, and the format is accessible. It is intended for graduate students in computer science and related fields as well as professionals in engineering, programming, and technology.

TK7895 2009-026282 978-1-84821-143-8
Communicating embedded systems; software and design; formal methods.

Title main entry. Ed. by Claude Jard and Olivier H. Roux.

ISTE/Wiley, ©2010 261 p. \$110.00

This work examines the use of mathematically based formal methods in embedded systems that are linked with other embedded systems, and embedded systems that are connected to other local or remote communication circuit components. It describes elements of current embedded system programs, reviews new research on models and their use, and describes software tools. Chapters cover models for real-time embedded systems, timed model-checking, control and fault diagnosis of timed systems, quantitative verification of Markov chains, tools for model-checking timed systems, and tools for the analysis of hybrid models. Jard is professor at ENS Cachan Campus of Ker-Lann. Roux is assistant professor at Nantes University.

TK7895 2009-036996 978-1-4200-6784-2
Model-based design for embedded systems.

Title main entry. Ed. by Gabriela Nicolescu and Pieter J. Mosterman. (Computational analysis, synthesis, and design of dynamic models series)

CRC Press, ©2010 739 p. \$139.95

Some involved with the process of modeling, and others working in fields where they use models, contributors explain the model-based design of a wide range of products and processes. The idea is that using a computational approach allows designers to raise the abstraction of the system's specification to a level where novel and differentiating functionalities can be captured. They consider such topics as formal performance analysis for real-time heterogeneous embedded systems, reconfigurable multicore architectures for streaming applications, and modeling and simulating mixed continuous and discrete systems.

M I N I N G E N G I N E E R I N G

TN751 978-0-7844-1067-7
Reducing brittle and fatigue failures in steel structures.

Maranian, Peter.

Am. Society of Civil Engineers, ©2010 196 p. \$70.00 (pa)

Maranian, a structural engineer involved in investigations of the Northridge, California, earthquake of 1994 and the Kobe, Japan, earthquake of 1995. This book is based on his work and experiences in steel brittle and fatigue failures. While issues with fatigue and brittle failures have been thoroughly documented, those issues have not led to state-of-the-art design practices. This reference is intended to offer elements to consider in preventing failures and to give engineers a better picture of steel and its uses and limitations. Topics include: fracture and fatigue, steel material, connections and fabrications, demands on steel buildings, and discussion and recommendations. The book includes numerous illustrations and photographs. It will interest structural engineers and bridge construction, design, and maintenance professionals.

CHEMICAL TECHNOLOGY

TP159 2009-039567 978-1-84821-142-1

Chemical and biological microsensors; applications in fluid media.

Title main entry. Ed. by Jacques Fouletier and Pierre Fabry. *ISTE/Wiley*, ©2010 340 p. \$150.00

Fouletier and Fabry (both associated with Grenoble U., France) present 10 chapters discussing both theoretical basic concepts and current state-of-the-art developments related to sensors for ions and gaseous species in solution. Topics addressed include general features of such sensors, development and industrial requirements of chemical sensors, sensitivity and selectivity of electrochemical sensors, potentiometric sensors, amperometric sensors, biosensors and chemical sensors based upon guided optics, sensors and voltammetric probes for *in situ* monitoring of trace elements in aquatic media, chemometrics, and impedancemetric sensors.

TP248 2009-016549 978-0-470-69970-6

Click chemistry for biotechnology and materials science.

Title main entry. Ed. by Joerg Lahann.

John Wiley & Sons, ©2009 411 p. \$155.00

Lahann (U. of Michigan) has gathered an impressive team of experts to introduce the click reactions that have been successful in discovering new drugs over the last several years and outline promising applications to the synthesis of new biotechnology, polymer, and nanotechnology materials. The contributions describe approaches for conjugating proteins and peptides to polymers, generating complex macromolecular architectures via orthogonal and selective cycloadditions, fabricating alkyne and azide functionalized surfaces, and designing multifunctional network polymers. A survey of supramolecular materials prepared via click chemistry is nicely complemented by a chapter on dendrimer synthesis research efforts. Both black and white micrographs and color images are provided.

UG485 2009-011260 978-0-7546-7759-8

Digitising command and control; a human factors and ergonomics analysis of mission planning and battlespace management.

Stanton, Neville A. et al. (Human factors in defence)

Ashgate Publishing Co., ©2009 210 p. \$114.95

This book provides a human factors and ergonomics evaluation of a digital mission planning and battlespace management (MP/BM) system. It emphasizes the functions of brigade and battle group level headquarters. Topics include human factors in system design, mission planning and battlespace management, constraint analysis, hierarchical task analysis, social network analysis, SCADA analysis, and a summary with conclusions and recommendations. The book is illustrated and includes a helpful glossary. Authors are Stanton, Revell, and Rafferty (civil engineering and the environment, U. of Southampton, UK), Jenkins (automotive industry design engineer), Salmon (human factors group, Monash U., Australia), and Walker (built environment, Heriot-Watt U., Scotland).

UG593 2009-034902 978-1-60566-854-3

Net centricity and technological interoperability in organizations; perspectives and strategies.

Ghosh, Supriya.

Information Science Reference, ©2010 288 p. \$180.00

An information technology consultant in Washington, DC, Ghosh analyzes concepts that have transformed the US military recently, and explains how to apply them to business organizations as well. His account could serve as a supplementary textbook for courses on military and defense technology, as a guide for people engaged in government and commercial contracting, or as an introduction to net centricity for lay readers. The 17 chapters are intended to stand alone, each covering a discrete topic, within the larger themes of becoming net centric, transformational perspectives, configuring for net centricity, and assessing net centricity in organizations. Among specific topics are measures on interoperability, target state for defense information enterprise, storage strategy for the distributed enterprise, and the architectural assessment of the federal enterprise.

PUBLISHING, LIBRARY SCIENCE, BIBLIOGRAPHY

Z669 2009-039781 978-1-59158-826-9

Library data; empowering practice and persuasion.

Title main entry. Ed. by Darby Orcutt.

Libraries Unlimited, ©2010 302 p. \$50.00 (pa)

This collection of essays on interpreting and using library-generated data and outside data gives information on using data to inform and persuade, evaluation of monographic collections, serials and e-resources management, using data to improve teaching and learning, and emerging contexts such as data for repositories, and the influence of library homepage vocabulary on database usage. The book offers a review of literature on usage statistics in e-journal decision

making, a case study of maximizing the value of reference data, and advice on investing in electronic resources using capital budgeting. Editor Orcutt teaches in the School of Information and Library Science at North Carolina State University. Libraries Unlimited is an imprint of ABC-CLIO, LLC.

Z675 2009-040981 978-1-59158-887-0

The data deluge; can libraries cope with e-science?.

Title main entry. Ed. by Deanna B. Marcum and Gerald George.

Libraries Unlimited, ©2010 139 p. \$60.00 (pa)

Increasingly scientists pursue their craft at keyboards, pulling data from a vast network of sensors such as telescopes and weather stations and research reports from past or present wet-workers in laboratories, fields, and the like. Library

professionals here ask who will acquire, evaluate, manage, and preserve all these sets of data for as long as they are needed; who will maintain the infrastructure that makes it all possible; who will provide access points; and who will explain to these scientists how to use the system. They highly suspect that research libraries will play a large role, and that librarians had better be prepared. They begin by reviewing such aspects as an agenda for action, and academic libraries in science data set management and scholarly communication for domain sciences and engineering. Then they offer perspectives from national organizations such as the Council on Library and Information Resources, and from individual research libraries such as Johns Hopkins University. Libraries Unlimited in an imprint of ABC-CLIO, LLC. ❖

***SciTech News* Call for Articles!**

SciTech News is looking for a few good authors!

If you have a research project, a new service in your library, a new instructional method, or other information you'd like to share with your colleagues, please consider writing for *SciTech News*. In addition to the regular articles, we now have a refereed section. Colleagues will review your article and provide feedback. Accepted articles will be published in the new electronic *SciTech News*. This is an excellent venue to get your research and ideas out to a group of interested readers and get that important refereed article for your dossier or annual review.

For additional information, contact Editor James Manasco (james.manasco@louisville.edu) or Review Board Chair Bonnie Osif (bao2@psu.edu). Articles for the refereed section may be submitted to the Review Board Chair at bao2@psu.edu.

LET US HELP YOUR LIBRARY

Libraries of every type have two common problems:

SPACE There's never enough space to keep every book.

There's never enough money to enhance the collection. **MONEY**



Librarians deal with everything from aardvarks to zyzzyvas. So does Powell's. With literally millions of books accessible to our customers, our inventory covers subjects from the sublime to the divine, from geology to theology, from cooking to quantum mechanics. And it's all available online at **Powells.com**.

Powells.com/librarians provides access to each of our six Portland-area stores as well as several volume-filled warehouses. Online ordering is available with purchase order, credit card and Powell's Trade accepted as payment options. A world-class inventory of used and new titles (including out-of-print) and worldwide shipping are some of the amenities you'll enjoy as a Powell's customer.

"We went way past the traditional size of bookstores to find the limit of what people would be interested in, and we've never found that limit."

—Michael Powell, Owner,
with daughter Emily Powell

We're always interested in acquiring out-of-print and academic books. Please visit us at **Powells.com/librarians** to learn more about selling gifted books, duplicates, deaccessions, or superceded editions. Libraries in the US and Canada have given their old volumes new life by selling to Powell's. Cash and trade terms available.

How might we help your library?



Powell's

TECHNICAL BOOKS

NW PARK & COUCH • DOWNTOWN PORTLAND • 503.228.4651 • 800.878.7323 • POWELLS.COM

Engineering Division Officers and Board 2010

Chair

Laurie Allen
Teledyne Scientific & Imaging
1049 Camino Dos Rios
Thousand Oaks, CA 91360
Phone: 805-373-4748
lallen@teledyne.com

Chair-Elect

Kathryn Breininger
Boeing Co.
PO Box 3707, MC 62-LC
Seattle, WA 98124-2207
Kathryn.r.breininger@boeing.com

Past Chair

Dee Magnoni
Olin College of Engineering
1000 Olin Way
Needham, MA 02492
Phone: 781-292-2389
dianna.magnoni@olin.edu

Treasurer

Mary Whittaker
Boeing Co
PO Box 3707
MC 62-LC
Seattle, WA 98124-2207
mary.s.whittaker@boeing.com

Secretary

Mary Frances Panettiere
GA Institute of Technology
704 Cherry St,
Atlanta, GA 30332-0900
404-894-0401
maryfrances.panettiere@library.gatech.edu

2011 Conference Planner

Cynthia Eastman
Kennedy Jenks
303 Second St.
San Francisco, CA 94107
415-243-2531
cynthiaeastman@kennedyjenks.com

Awards Chair

Bing Wang
GA Institute of Technology
704 Cherry St,
Atlanta, GA 30332-0900
404-894-0816
bing.wang@library.gatech.edu

Standards Committee

Helen Josephine
Terman Engineering Center
Stanford University
Stanford, CA 94395-4029
650-725-1012
helenj@stanford.edu

Standards Committee

Cheryl Cove
Raytheon Company
M/S 5-1-221
528 Boston Post Road
Sudbury, MA 01776
978-440-2282
Cheryl_a_cove@raytheon.com

Archivist and Mentoring

Bonnie Osif
Pennsylvania State University
325 Hammond Bldg,
University Park, PA 16802
814-865-3697
bao2@psu.edu

Membership

Daureen Nesdill
J Willard Library
295 S 1500 E
Salt Lake City, UT 84112-0860
801-581-7533
daureen.nesill@utah.edu

Discussion List Owner

Bob Tolliver
Pennsylvania State University
105 Deike Bldg,
University Park, PA 16802
814-865-3694
rlt17@psu.edu

Web Editor

Tina Gheem
National Science Foundation
4201 Wilson Blvd, Rm 225
Arlington VA, 22230
703-292-7830
ticlayt@hotmail.com

Vendor Relations

Sara Davis
Jacobs Engineering Group, Inc
5995 Rogerdale Rd,
Houston, TX 77072
832-351-7025
sara.davis@jacobs.com

Aerospace Section

Chair

Hema Ramachandran
California State University,
Long Beach
1250 Bellflower Blvd-MS1901
University Library
Long Beach, CA 90840-1901
562-985-5749
hramacha@csulb.edu

Chair-Elect

Adrienne Jones Washburn
Lockheed Martin Aeronautics
One Lockheed Blvd., Mz 1524
Fort Worth, TX 76108
817-741-7341
adrienne.e.jones@lmco.com

Past Chair

Gale Harris
Lockheed Martin Aeronautics
1 Lockheed Blvd, MZ2246
Fort Worth, TX 76101-0748
817-763-1791
gale.harris@lmco.com

THE JOURNAL OF
PHYSICAL
CHEMISTRY

J | A | C | S

JOC
The Journal of Organic Chemistry

BIOCHEMISTRY
Including Biophysical Chemistry & Molecular Biology

Journal of
Medicinal
Chemistry

ORGANOMETALLICS

analytical
chemistry

ES&T

Inorganic Chemistry

Macromolecules

Langmuir

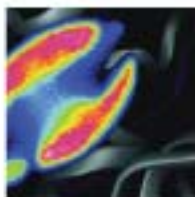
WHY I SUPPORT ACS PUBLICATIONS



"I am very appreciative that ACS Publications is taking the initiative by introducing new journals in 'hot' research areas. ACS Nano, ACS Chemical Biology, and ACS Chemical Neuroscience, for example, will surely be very cost effective venues for ground breaking research results."

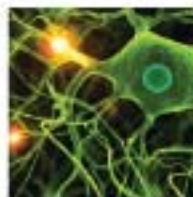
Dana L. Roth, Librarian, California Institute of Technology

NEW ACS JOURNALS IN 2010 — NOW ONLINE



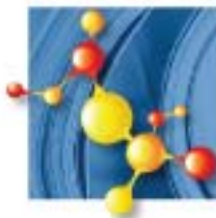
THE JOURNAL OF
PHYSICAL CHEMISTRY
Letters

Complementing the *Journal of Physical Chemistry*, the #1 most-cited journal in physical chemistry, and providing a convenient, single source to view the most cutting-edge research across physical chemistry/chemical physics and related areas of materials and life science.



ACS Chemical
Neuroscience

Publishing high-quality research articles and reviews that showcase chemical, quantitative biological, biophysical and bioengineering approaches to the understanding of the nervous system and to the development of new treatments for neurological disorders.



ACS Medicinal
Chemistry Letters

Publishing brief communications on experimental or theoretical results of exceptional timeliness in all aspects of medicinal chemistry (pure and applied) and its extension into pharmacology.



JOURNAL OF
CHEMICAL EDUCATION

Co-published by the Publications Division of the American Chemical Society (ACS) and the ACS Division of Chemical Education, presenting current, novel research advances coupled with emerging ideas in teaching methods/course organization.



ACS Publications

MOST TRUSTED. MOST CITED. MOST READ.

pubs.acs.org/4librarians

2010 SLA Chemistry Division Executive Board

Chair

Teri Vogel
University of CA, San Diego
858-534-1216
tmvogel@ucsd.edu

Chair-Elect

William Armstrong
Louisiana State University
225-578-2738
notwwa@lsu.edu

Past-Chair /

Nominating Committee Chair

Luray Minkiewicz
E I DuPont De Nemours Co.
Experimental Station
302-695-1257
luray.m.minkiewicz@usa.dupont.com

Secretary

Lee Pedersen
Brown University
401-863-3807
lapedersen@brown.edu

Treasurer

Bob Buchanan
Auburn University
334-844-1292
buchara@auburn.edu

2010 SLA Chemistry Division Advisory Board

ACS Liaison

Norah Xiao
Univ of Southern California
213-740-2214
norah_xiao@yahoo.com

MRM Section Chair / 2009 Program Planner

Jack Bashian
Smithers Rapra Press
330-221-2777
jbashian@smithersmail.com

Professional Development

Ted Baldwin
University of Cincinnati
513-556-4211
baldwitw@ucmail.uc.edu

ASIST Liaison

Christina K. Pikas
Johns Hopkins University
443-778-4812
christina.pikas@jhuapl.edu

MRM Section Past-Chair

Cathy DiPalma
Saint-Gobain NorPro
330-677-3566
cathy.dipalma@saint-gobain.com

Sponsorship

Loren Mendelsohn
City College of NY
212-650-8244
Lmend@sci.ccny.cuny.edu

Archivist

Luray Minkiewicz
E I DuPont De Nemours Co
Experimental Station
302-695-1257
luray.m.minkiewicz@usa.dupont.com

MRM Section Chair-Elect / 2010 Program Planner

Bing Wang
Georgia Institute of Technology
404-894-0816
bing.wang@library.gatech.edu

Strategic Planning

Linda Shackle
Arizona State Univ
480-965-7609
linda.shackle@asu.edu

Membership

Judith Currano
University of Pennsylvania
215-898-2177
currano@pobox.upenn.edu

Mentoring

Denise Callihan
PPG Industries Inc
724-325-5221
callihan@ppg.com

Program Planner - 2010

Cory Craig
UC Davis
530-752-0347
cjcraig@ucdavis.edu

Awards

Cory Craig
UC Davis
530-752-0347
cjcraig@ucdavis.edu

Bulletin Editor

Kiem Ta
Oklahoma State University
405-744-9743
kiem.ta@okstate.edu

Webmaster

Linda Maddux
Reed College
lbm@reed.edu

2010 Science and Technology Division Officers and Committee Chairs

Executive Board

Chair

Hilary Davis
Box 7111, 2 Broughton Dr.
North Carolina State
University
Raleigh, NC 27695
Phone: 919-513-0654
Fax: 919-513-1108
hilary_davis@ncsu.edu

Secretary

Lisa Johnston
Univ of Minnesota-Twin Cities
108 Walter Library, Science &
Engineering Library
117 Pleasant Street S.E.
Minneapolis, MN 55455
Phone: 612-624-4216
Fax: 612-625-5583
ljohnsto@umn.edu

Chair-Elect

Joseph Kraus
University of Denver
Penrose Library
Denver, CO
Phone: 303-871-4586
joseph.kraus@du.edu

Treasurer

Cheryl Hansen
Engineering Systems, Inc.
Library
3851 Exchange Avenue
Aurora, IL 60504-7900
Phone: 630-851-4566
Fax: 630-851-4870
cahansen@esi-il.com

Past-Chair

Pam Enrici
L278 Library
416 Library Drive
University of Minnesota -
Duluth
Duluth, MN 55812
USA
Phone: 218-726-8586
Fax: 218-726-7481
penrici@d.umn.edu

2010 Science and Technology Division Advisory Board

Archivist

Roger E. Beckman
Life Sciences Library &
Chemistry Library
Indiana University
Jordan Hall A30,
1001 E. Third St.
Bloomington, IN 47405-7005
Phone: 812-855-9792
Fax: 812-855-6612
BeckmanR@indiana.edu

Awards Committee Chair

Sheila Rosenthal
Software Engineering Institute
Carnegie Mellon University
4500 Fifth Ave.
Pittsburgh, PA 15213-2612
Phone: 412-268-7846
Fax: 412-268-5758
SLR@sei.cmu.edu

Awards Committee Member

Sara Russell Gonzalez
Patricia Losi
Eleanor MacLean
Kathy Nordhaus
Susan Smith
Lisa Renee Johnston

Conference Program 2011 Planner

Joseph Kraus
University of Denver
Penrose Library
Denver, CO
Phone: 303-871-4586
joseph.kraus@du.edu

Auditor

Sara Davis
Jacobs Engineering
5995 Rogerdale Rd.
Houston, TX 77072
Phone: 832 351-7025
sara.davis@jacobs.com

Communications Committee Chair

Rebecca Pernell
Stanford University
Libraries, 152a Green
557 Escondido Mall
Stanford, CA 94305
Phone: 650-725-1277
pernell@stanford.edu

Communications Committee Members

James Manasco (STN Editor)
Margaret Smith
(Webmaster)

Contributed Papers Committee Chair

John Speagle
Univ of California, Santa Cruz
Santa Cruz, CA
Phone: 831-459-3583
jspeagle@ucsc.edu

Contributed Papers Committee Members

Roger Beckman
Lisa Johnston
Division Chair - ex-officio

Conference Program 2010 Planner

Hilary Davis
Box 7111,
2 Broughton Dr.
North Carolina State
University
Raleigh, NC 27695
Phone: 919-513-0654
Fax: 919-513-1108
hilary_davis@ncsu.edu

2010 Science and Technology Division Advisory Board (cont'd)

e-Discussion Listserv Manager

Rebecca Pernel
Stanford University Libraries,
152a Green
557 Escondido Mall
Stanford, CA 94305
Phone: 650-725-1277
pernell@stanford.edu

Governing Documents Committee Chair

Pam Enrici
L278 Library
416 Library Drive
University of Minnesota -
Duluth
Duluth, MN 55812
Phone: 218-726-8586
Fax: 218-726-7481
penrici@d.umn.edu

Government Relations Committee Chair

Karen Buxton
Information Services
Consolidated Information
Center
2770 University Drive
Richland, WA 99354
Phone: 509-372-7451
Karen.Buxton@pnl.gov

International Relations Committee Chair

Nevenka Zdravkovska
Engineering & Physical Sci Lib
University of Maryland
1403J Mathematics Bldg
College Park, MD 20742-7011
Phone: 301-405-9144
Fax: 301-405-9164
nevenka@umd.edu

Parliamentarian

Jeffrey Bond
Texas Christian University
j.bond@tcu.edu

Membership Committee Chair

Sarah Oelker
Science Librarian
Williston Library 421
Mount Holyoke College
50 College Street
South Hadley, MA 01075
Phone: 413-538-2095
soelker@mtholyoke.edu

Membership Committee Members

P.K. Jain

Professional Development Committee Chair

Susan Shepherd
Science & Engineering Library
University of California - San
Diego
9500 Gilman Drive
La Jolla, California 92093-
0175E
Phone: 858-534-2480
sushepherd@ucsd.edu

Professional Development Committee Members

Tony Aponte
Lorraine Pellack
Stephanie Publicker

Nominating Committee Chair

Christine Whitaker
School of Medicine Library
University of South Carolina
Columbia, SC 29208
United States of America
Phone: 803-733-3346
Fax: 803-733-1509
Christine.Whitaker@uscmcd.sc.edu

Nominating Committee Members

Ann Koopman
Debal Chandra Kar
Nancy Wilmes

Strategic Planning Committee Chair

Sue Brewsaugh
Manager, Library & Learning
Centers
10800 Valley View St.
Cypress, California 90630-
5016
Phone: 714-229-7574
sue.brewsaugh@boeing.com

Strategic Planning Committee Members

Dorothy McGarry

Web Master

Margaret Smith
Bobst Library, New York
University
70 Washington Square South
New York, NY 10012
Phone: 212-998-2619
margaret.smith@nyu.edu

Public Relations Committee Chair

Diane Foster
Dirac Science Library
Florida State University
116 Honors Way
Tallahassee, FL 32306
Phone: 850-644-0022
dkfoster@fsu.edu

Public Relations Committee Members

Thea Allen
Bill Jacobs

Student Relations Committee Chair

Thea Allen
ASRC Management Services
(contractor)
US EPA Headquarters and
Chemical Libraries
US EPA, MC3404T
1200 Pennsylvania Ave., NW
Washington, DC 20460
Phone: 202-566-0502
theaallen@gmail.com

**Student Relations
Committee Members**

Michele Hadburg
Rebecca Miller
Sarah Oekler
Susan Powell

Vendor Relations Chair

Carol Lucke
US Naval Research Laboratory
Research Library
Washington, DC 20375
USA
Phone: 202-767-2348
Fax: 202-767-3352
carol.lucke@nrl.navy.mil

**Vendor Relations
Committee Members**

Nevenka Zdravkovska

2010 Science and Technology Division Liaisons

**ALA/ACRL Science & Technology Section
Liaison**

Open

SLA Cataloging Committee Liaison

Thea Allen
theaallen@gmail.com

SLA Ethics Ambassador

Anna Ren
annawu@northwestern.edu

SLA Alignment Ambassador

Richard Hulser
rphulser@aol.com

**SLA Technical Standards Committee
Liaison**

Susan Fingerman
smfinfo@verizon.net

Medical Library Association Liaison

Carol Vreeland
carol_vreeland@ncsu.edu

**SLA Diversity Leadership Committee
Liaison**

P.K. Jain
pkjain1310@gmail.com

SciTech News

Editor

James E. Manasco
Head, Collection Development
LL38 Ekstrom Library
2301 S. Third Street
University of Louisville
Louisville, KY 40292
Phone: (502) 852-8731
Fax: 502-852-8714
james.manasco@louisville.edu

Assistant Editors

Ann Koopman
Scott Memorial Library
Thomas Jefferson University
1020 Walnut Street, Room M110
Philadelphia, PA 19107-5567
Phone: 215-503-0441
Fax: 215-923-3203
Ann.Koopman@jefferson.edu

Abby Thorne
Bluegrass Comm. & Tech. College
Lexington, KY
Phone: 859-539-5810
abby.thorne@gmail.com

Advertising Manager

Carol Lucke
US Naval Research Laboratory
Research Library
Washington, DC 20375
Phone: 202-767-2348
Fax: 202-767-3352
carol.lucke@nrl.navy.mil

Business Manager

Cheryl Hansen
Engineering Systems, Inc. Library
3851 Exchange Avenue
Aurora, IL 60504-7900
Phone: 630-851-4566
Fax: 630-851-4870
cahansen@esi-il.com

SLA on the Web: *SciTech News* Division Websites

Chemistry Division

Home Page: <http://www.sla.org/division/dche/index.htm>

Newsletter: <http://www.sla.org/division/dche/newsletters/index.html>

Discussion List Instructions:

Send an e-mail to: Lyris@lists.sla.org. In the body of the message: Subscribe sla-dche <your e-mail address> <FirstName> <LastName>

Chemistry Division - MRM Section

Home Page: <http://units.sla.org/division/dche/mrm/index.htm>

Discussion List Instructions:

Send an e-mail to: Lyris@lists.sla.org. In the body of the message write only: Subscribe SLA-DMRM <your e-mail address> <FirstName> <LastName>

Engineering Division

Home Page: <http://www.sla.org/division/deng/index.html>

Discussion List Instructions:

Send an e-mail to: Majordomo@iee.org.uk. Leave the subject line empty. In the body of the message write only: Subscribe sla-eng

Engineering Division - Aerospace Section

Home Page: <http://www.sla.org/division/deng/Aerospace.html>

Discussion List Instructions:

Send an e-mail to: Listserv@sti.nasa.gov. Leave the subject line empty. In the body of the message write only: Subscribe SLA-AERO Your_Name

Science-Technology Division

Home Page: <http://www.sla.org/division/dst/>

Discussion List Instructions:

Send an e-mail to: lyris@sla.lyris.net. In the body of the message: Subscribe sla-dst <your e-mail address> <FirstName> <LastName>

SCITECH NEWS
JAMES E. MANASCO
HEAD, COLLECTION DEVELOPMENT
UNIVERSITY OF LOUISVILLE
LL38 EKSTROM LIBRARY
2301 S. THIRD STREET
LOUISVILLE, KY 40292
USA