Medinfo 2010 is the premier international health informatics event which brings together world leaders in this field to share knowledge and experiences. Medinfo is a unique opportunity to meet these leaders and to hear of, and contribute to, advances in eHealth developments internationally in both biomedical and health informatics. This will be a historical event as Medinfo is hosted in Africa for the first time.

Medinfo 2010 is hosted by the South African Health Informatics Association (SAHIA) on behalf of the International Medical Informatics Association (IMIA) and supported by the South African National Department of Health.

THEME

Partnerships for effective eHealth solutions with a particular focus on how innovative collaborations can promote sustainable solutions to health challenges.

CONGRESS TOPICS

Health information systems design and architecture
eHealth infrastructures
Health informatics evaluation
Education and building health informatics capacity
Consumer health informatics
Translational bioinformatics
Emerging technologies
Decision support systems
Knowledge management
Ontologies and terminologies
Data and text mining
Organisational, economic, workflow and policy issues
Standards
Electronic health records
National & international health IT efforts & implementations.
The Informatics of Large Scale Healthcare Reform and Funding

KEY DATES

28 February 2010: Publication of scientific programme

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CONTACT DETAILS

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e-mail: info@medinfo2010.org

MEDINFO
2010 CAPE TOWN SOUTH AFRICA

Partnerships for Effective eHealth Solutions

International Medical Informatics Association

13th World Congress on Medical and Health Informatics

12th to 15th September 2010

CAPE TOWN
International Convention Centre

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Instructions for authors.

To submit a paper/poster/panel/tutorial proposal you must connect to the web site:
http://medinfo2010.online-registry.net/

Prior to submitting a paper online you must register, using your email as login and a password of your choice.

You will receive confirmation of your registration via email.

Once registration is complete, login to the website. On the menu on the left of the screen click on "Submission of contributions", then
1. Select the theme and topic to which your submission belongs. Your submission will be sent to reviewers based upon your topic selection.
2. Select the type of submission from the options: Paper / Poster / Scientific demonstration / Panel / Pre conference tutorial or workshop.
3. Add keywords
4. Specify the list of authors
5. Attach your file which should be in word or pdf format
5. Upload your paper by clicking on the 'upload' button

Once the paper is submitted you will receive an email confirmation of your submission.

The format of submission should follow the guidelines described in the word templates that can be downloaded from the top of the submission page.

Please take note of the following instructions:

Papers. Original contributions which advance the science of health/biomedical informatics with a clear statement of research objectives, methods, results and discussion should be submitted and be no more than **five page papers** in length. Accepted papers will be presented as an oral presentation at the conference. See website for the paper submission template.

Posters. Posters which describe pilot research, research in progress, or the design of systems or processes, with a clear statement of the degree of innovation, should be submitted as **one page paper (extended abstract)**. Accepted contributions will presented as posters during the poster session.

Scientific demonstrations. Demonstrations of innovative, non-commercial systems are invited. In a **one page paper (extended abstract)** contributors should describe the system/process to be demonstrated and provide a clear statement of the innovation.

Panels. Submissions for panels should include an outline of the objectives of the panel and an overview of the discussion topic. Topics for panels should include an in-depth analysis of an issue or identification of emerging issues in health informatics. Panels should include not more than four presenters. Preference will be given to panels with presenters from multiple countries or perspectives. All speakers on the panel must be listed on the **two page submission**. Strategies to engage the audience in panel discussion are encouraged.

Pre-Congress Tutorials and Workshops

Submissions for pre-congress tutorials and workshops should list: i) a set of learning objectives, iii) expected outcomes, and iii) a description of the material to be covered including the interactive strategies which will be used during the tutorial/workshop to engage the audience. Please send a **three page submission**. Submissions will be evaluated on the anticipated educational and participant benefits, presenters' qualifications/credentials and on audience engagement strategies proposed.
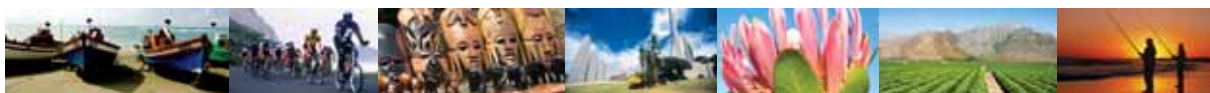
Please also note that

• Contributors are invited to submit unpublished original papers.
• Contributors may be first author on no more than one contribution per category (Paper / Poster / Scientific demonstration / Panel / Pre conference tutorial / workshop) submitted for review.
• The papers must be in English.
• All submissions are due by no later than **15th October, 2009 (new deadline)**.
• All submissions will be reviewed by at least two referees and a member of the Scientific Programme Committee.
• Contributors for papers could be asked to reduce their papers to abstracts and to present their work as posters.
• IMIA holds the copyright of accepted papers.
• Published proceedings will be distributed at Medinfo 2010.

SATURDAY 11 SEPTEMBER 2010

TIME:	VENUE:	ACTIVITY:
		PRE CONGRESS TUTORIALS
09h00	1.4.1 & 1.4.2	*781 EHR Implementation Tips (Part I) (R Gopalan, R Berger, J Kichak)*
		999 EHR Implementation Tips (Part II) (R Gopalan, R Berger, J Kichak)

Tips and Ideas for Successful EMR Implementation

The tutorial is based on the real world experience of implementing a comprehensive CDR and EMR in a large academic medical center. It will provide the audience with tips and techniques to successfully design, develop and implement an EMR system. The speaker will talk about the important components of an EMR, and how to integrate those components across the EMR, so that data flows from one component to others just as the patient flows through the healthcare system, thereby eliminating redundant data entry. It also takes advantage of the data provided by one set of providers to be readily available to the other set of providers in their own context. The EMR should span across inpatient and ambulatory care setting so that there is continuity of care across those transition points. This requires data exchange across those settings. The critical components of any EMR are the communication mechanism that is available at the point of care among the care providers in the context of the current active EMR patient. This tutorial will provide the framework, and tools and tips for the audience that can be taken back and immediately put to use either in their own environment

| | 1.4.3 & 1.4.4 | *502 Open EHR (Part I) (H Leslie, K Atalag, R Chen, R Cruz-Correia, S Garde, S Heard, S Kobayashi, H Leslie, I McNicoll, T Shannon)* |

1012 Open EHR (Part II)) (H Leslie, K Atalag, R Chen, R Cruz-Correia, S Garde, S Heard, S Kobayashi, H Leslie, I McNicoll, T Shannon)

1013 Open EHR (Part III) (Part I)) (H Leslie, K Atalag, R Chen, R Cruz-Correia, S Garde, S Heard, S Kobayashi, H Leslie, I McNicoll, T Shannon)

1015 Open EHR (Part IV)) (H Leslie, K Atalag, R Chen, R Cruz-Correia, S Garde, S Heard, S Kobayashi, H Leslie, I McNicoll, T Shannon)

Clinician-driven EHRs - the openEHR approach

Formal modelling of clinical content that can be shared between across application, provider and geographical boundaries is one of the most promising pathways to semantic interoperability of health information.

This tutorial is designed to provide an overview of the openEHR approach to clinical modelling using openEHR (ISO 13606) archetypes and templates. Attendees will gain theoretical knowledge, view demonstrations and examples of openEHR models being used in practice, presented by international openEHR experts. Demonstrations will include tools to create archetypes and templates, and the new online Clinical Knowledge Manager that facilitates international collaboration to define, agree and govern clinical content. The role of the openEHR community, and particularly the engagement of grassroots clinicians in building and supporting openEHR models for re-use and sharing as common content definitions for health information will be a major focus of discussion. Practical examples of archetypes and templates in use in a variety of settings will be demonstrated.

TIME:	VENUE:	ACTIVITY:
	1.6.1 & 1.6.2	*213 Change Management (Part I) (P Procter, R Hayward, J Foster, C Bond)*
		1000 Change Management (Part II) (P Procter, R Hayward, J Foster, C Bond)

Working in Partnership to Reduce Conflicts in Health System Implementation

The developments in the use of information and communications technologies across health and social care are advancing at an alarming rate and this rate is unlikely to reduce over the next ten to twenty years. This tutorial has been designed to allow delegates to explore, through group activity, some of the lesser considered issues associated with the implementation of such systems.

The primary aim of the tutorial is through structured group dynamics, to identify and explore with the delegates the key areas where conflict may occur in the implementation of health and social care systems. Driving this aim will be knowledge around change management and change agents; information system development life cycle theories; structured methodologies; and end user perspectives.

The secondary aim of the tutorial is to highlight management boundaries in relation to ownership of information system implementation within a health and social care setting. Driving this aim will be the understanding of technical feasibility, social feasibility, operational feasibility and economic feasibility; physical resources, external environment, internal environment and organisational goals and policies.

The management of change with particular reference to the implementation of clinical information systems at local level.

	2.6.1 & 2.6.2	*834 Evaluating Patient Centered HI (Part I) (D Kaufman, J Starren)*
		1001 Evaluating Patient Centered HI (Part II) (D Kaufman, J Starren)

Evaluating and Designing Patient-Centred Health Information Technologies

Recently, we have witnessed a significant growth of patient-centred health information technologies. Patients represent a population of users that are distinctly different from clinicians. The tutorial will provide attendees with a set of knowledge and skills pertaining to the use of cognitive-engineering methods in the design and evaluation of health information technologies designed for patients. Patients differ significantly in their computer acumen, literacy and their physical capabilities. In particular, we will focus on targeting patients across the digital divide including seniors and low-literacy participants. The tutorial will focus on four broad areas. First, it will address the theoretical and practical foundations for interface design tailored to patients, especially the growing elderly population. Second, interaction design methods will be presented and tailored for this population. Third, it will present methods for the evaluation of patient-centered informatics interventions including; the Cognitive Walkthrough and Video-Analytic Usability Testing for evaluating the use of eHealth technologies in patients' homes. Fourth, strategies will be presented for converting evaluation results into concrete interventions to improve existing systems. Approximately 50% of the tutorial will be devoted to hands-on activities in which participants will engage in a multi-faceted evaluation process and interface-design prototyping. The tutorial will draw on several studies including 1) a cognitive assessment
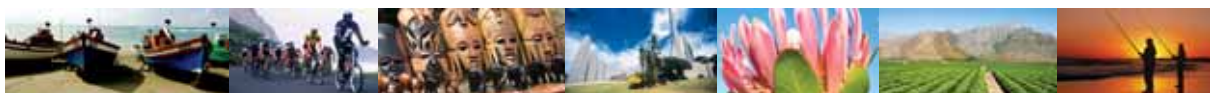
TIME:	VENUE:	ACTIVITY:
		of a home telemedicine project and 2) a community-based programme to promote health information access in medically underserved populations. The methods described in this tutorial will be of interest to anyone interested in innovative methods for designing and evaluating health information technologies.
	2.6.4 & 2.6.5	*860 Natural Language Processing (Part I) (S DuVall, B South, L D'Avolio, W Chapman, G Savova)* *1011 Natural Language Processing (Part II) (S DuVall, B South, L D'Avolio, W Chapman, G Savova)* **A Hands-on Introduction to Natural Language Processing in Healthcare** This tutorial aims to provide attendees with a hands-on introduction to natural language processing (NLP) in healthcare. Participants will be introduced to NLP, the types of problems that can be addressed with NLP, and how to effectively plan and execute an NLP task in healthcare. De-identified healthcare documents will be provided along with open-source tools that allow participants to implement a working NLP system. Knowtator and Apache UIMA will be introduced and used to illustrate the complete life cycle of an NLP project, from design to manual annotation to NLP system creation to evaluation. Natural language processing (NLP) is used in healthcare in order to automatically obtain information contained in clinical notes and other narrative text in computerised medical records. Much information relevant to patient care is stored in narrative text, because writing is a more natural form of communication and can provide much richer detail than searching a limited number of options in drop-down boxes or using other structured methods of information collection. To effectively use the pertinent information contained in narrative text for decision support, research, and other tasks, the information must be captured in a more formal representation that computers can manipulate. NLP tasks can advance the effective use of unstructured text and other types of clinical data in the electronic health record by automatically extracting and structuring the information.
13h30	1.4.1 & 1.4.2	*62 Evaluation of HI Overview (Part I) (C Cusack, E Poon, B Dixon)* *1007 Evaluation of HI Overview (Part II) (C Cusack, E Poon, B Dixon)* **Evaluation of Health Informatics: Why, How, Challenges** Despite the large dollars being spent throughout the world investing in health informatics, there remains a small evidence base as to its impact on quality, safety and efficiency of healthcare. Implementing has remained difficult and costly, with high failure rates, leaving little resources for evaluation. Measuring the impact of a health informatics implementations however has a number of benefits both to a project itself and to its stakeholders. Evaluations may be used to provide data to funders and stakeholders, to convince late adopters of the value of a system, to provide stories which resonate for the press, and to allow for continuous improvements to an implementation and future enhancements. While there are many resources available around the theory of evaluation, there

is a dearth of practical real-world tools to help organisations construct plans around evaluation. The instructors in this course have taken the theory of evaluation, HIT, and developed a practical approach to choosing measurements for an evaluation. The course will cover why implementers should be investing in evaluating their health IT projects, discuss how to choose measures, present a case study, and review common pitfalls and challenges.

| | 1.6.1 & 1.6.2 | *960 Terminology (Part 1) (C Chute)*
1008 Terminology (Part II) (C Chute) |

Medical Concept Representation: From Classification to Understanding

The effective application of medical informatics tools to the conduct of health services research, quality improvement, clinical decision support, or administrative practice management, requires a conceptual framework for representing and invoking clinical event data. Traditionally, such a framework has been realised by classification systems, such as the International Classification of Disease (ICDs). However, the pressures and needs for detailed clinical information, comparable data, and standard representations are influencing the scope, rigor, and impact of modern nomenclatures.

This tutorial will briefly trace the evolution of clinical classification from the 17th century efforts attributed to John of Graunt, through Bertillon, to the present day repertoire of clinical, reimbursement, and comorbidity systems. The concept of multiaxial representation (à la SNOMED) and its logical extension to semantic frames will be considered. The strengths and weaknesses of several systems will be highlighted including: ICD-9-CM, ICD-10, CPT, SNOMED, DRGs, DSM-IV, Read codes, UMLS, and nursing classifications. Summaries of new systems, such as Galen or XML based terminologies will be considered. A comprehensive handout includes all overhead slides and pertinent summaries of topics covered.

| | 2.6.1 & 2.6.2 | *1009 Clinical Engagement (Part II) (M Ball, J Tresling, A Geissbuhler, YC Li, J Silva, Z Junping, M Costin)* |

Clinical Transformation: Towards a Successful Clinical Implementation Tool Kit

This tutorial presents strategies to engage clinicians and create a sustainable culture that integrates health information technology into patient care. The faculty will focus on implementing computerised physician order entry (CPOE), and electronic health records (EHRs), with special emphasis on lessons learned and developing a portfolio of approaches and tools for use in transformational efforts for successful outcomes.

The objective will also be to provide exemplars, from personal experiences, for the transition from paper-based systems to an electronic one. The tutorial will review successful implementations at multiple institutions and from different countries and cultures. Faculty will describe their own "on-the-ground" experiences for insights into change management, stressing the importance of human factors, politics, and cultural differences, and describing proven strategies that engage all clinical constituencies, including physicians, nurses, pharmacists, etc., throughout the implementation process and beyond.
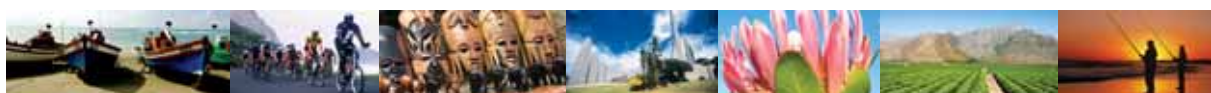
TIME:	VENUE:	ACTIVITY:
		In addition to emphasizing the critical need to employ a change management strategy that is sustainable, the tutorial offers proven remedies for the predictable hurdles and will present strategies to foster clinical adoption with reluctant participants as well as early adopters and champions. It is offered with a broad international perspective, represented by the diverse faculty who will participate. The faculty will discuss creating a receptive culture for change, evaluating readiness, assuring sustainability, and setting timelines and clear expectations. "Nuts and bolts" advice covers how to achieve clinical transformation for the long haul by ensuring the appropriate infrastructure, from a diverse point of view. Examples will be presented addressing when and how to go live and roll out, how to allocate support resources, and how to provide meaningful training.
	1.6.3 & 1.6.4	*298 Usability Evaluation (Part I) (M Jaspers, L Peute)* *1010 Usability Evaluation (Part II) (M Jaspers, L Peute)* **Usability Evaluation Methods for Interactive Healthcare Computer Applications** Users' adoption and usage of interactive health care applications often have been hampered by their poor design, making these systems difficult to learn and complicated to use. System implementation failures pinpoint to recurrent problems in the design process. Usability evaluation is therefore now widely recognised as critical to the success of interactive health care applications. The acknowledged need for these kinds of studies and the widespread use of usability evaluation methods has resulted in growing attention within the usability engineering field for a proper implementation of these methods and on main issues as what kind of expertise is needed to produce reliable results, which method to use in a certain context, and to what extent different usability evaluation methods bring forth different results. The variety of empirical and analytic methods for assessing and improving the usability of interactive computer applications, most of which stem from the usability engineering field, make it therefore difficult to decide on a usability assessment plan. To guide novices in the human-computer interaction field, in this tutorial we provide an overview of the methodological and empirical research available on the three usability inspection and testing methods most often used. Two 'expert-based' and one 'user-based' usability method will be introduced (1) the heuristic evaluation, (2) the cognitive walkthrough, and (3) the think aloud. Each of these three usability evaluation methods has shown its usefulness, but has its own advantages and disadvantages. In the tutorial, participants will learn about the strengths and weaknesses of each of these methods. Another aim of this tutorial is to provide participants guidance on the design and execution of a usability assessment plan for healthcare information systems so that costly mistakes can be avoided. The theory will be exemplified by case studies concerning usability evaluations of interactive healthcare applications. Furthermore, innovative mobile and automated solutions to support end-user testing have emerged making combined approaches of laboratory, field and even remote usability evaluations of new health care applications more feasible. With these automated usability analysis tools, important moments

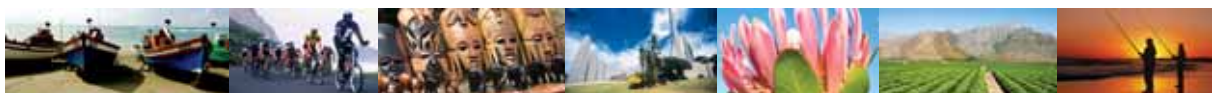| TIME:	VENUE:	ACTIVITY:
		in the interaction can be marked directly when they happen, dramatically reducing the amount of work required to analyse video, audio and verbal protocol data resulting from end user test sessions. Participants in the tutorial will learn how to use a software tool (Morae) to conduct and analyse the results of end user testing of an interactive Electronic Medical Record in a simulated environment.
		Student Paper Competition
		Workshops
17h00 - 18h30	1.4.1 & 1.4.2	*363 Evaluation of Cost and Benefits (V Vimarlund, E Eisenstein, A Kustniruk)*
		Evaluating the Costs and Benefits of ICT-based Applications in Healthcare Across Multiple Levels
		The economic evaluation of information technology in healthcare has been a major issue internationally. In order to justify large expenditures on such technology and to provide appropriate feedback about what works and what doesn't from an economic perspective, improvements in our approaches to analysing costs and benefits of ICT-based applications are needed. This workshop will describe a multi-level approach to the evaluation of costs and benefits of ICT-based applications in healthcare. The workshop will provide attendees with both the background to the approach and practical knowledge in how to apply it to improve economic analyses of healthcare ICT. (98)
	1.4.3 & 1.4.4	*894 Evidence-based Decision Support (C Craven, C Hullin, E Caballero, W Hersh, J Blaya)*
		Evidence-Based Clinical and Decision-Support Content in Point of Care Systems: Context, Considerations and Options for Developing Countries
		Presenters from the United States, Chile and Australia, with global informatics perspectives and expertise and a range of backgrounds, present a workshop intended for all interested informaticists and students who would like to (1) Understand the terms and concepts involved in evidence-based medicine and practice; (2) Gain a deeper understanding of the research and evidence-creation pipeline; (3) Recognise high-quality evidence-based practice guidelines and point-of-care resources, and how to critically appraise them; (4) Learn more about high-quality clinical content creation; (5) Understand the difference between research and prototype "infobuttons" CDS projects and the CDS functionality widely available within commercial systems today; (6) Familiarise themselves with ehealth projects in various settings that incorporate content and (7) Visualise and start to plan for systems that will incorporate evidence-based content and clinical decision support within their own contexts. (135)

SATURDAY 11 SEPTEMBER 2010

TIME:	VENUE:	ACTIVITY:
	1.6.1 & 1.6.2	*519 Millennium Development goals in Africa (A Kanter, P Mechael, M Berg, P Pronyk)* **Integrating Bottom-Up with Top-Down Health Information Systems to achieve the Millennium Development Goals in Africa** Achieving the Millennium Development Goals in Africa will require a substantial effort and necessitate close collaboration between development experts and health informatics specialists. This workshop, made up of implementers from the Millennium Villages Project, will provide experience from the field implementing an integrated, enterprise health information system in rural villages. The workshop will highlight key lessons from implementations of OpenMRS, RapidSMS/ChildCount+, CommCare and how they support health service delivery and reporting. The objectives of the workshop include sharing the role of enterprise architecture and how primary care information systems in rural Africa can feed into a comprehensive health information solution at higher levels. (103)
	1.6.3 & 1.6.4	*328 Infectious Disease ontology (A Goldfain, B Smith, L Cowell, C Louis, R Scheuermann)* **Infectious Disease Ontology Workshop** Infectious diseases inflict a disproportionate burden on developing countries. This underscores the need for approaches to informatics support which leverage limited resources as effectively and efficiently as possible. Increasingly, response to infectious disease requires the use of information from multiple, constantly changing data sources. The Infectious Disease Ontology (IDO) addresses the problem of data silos by providing a consistent terminology, taxonomy, and logical representation of entities relevant to all infectious diseases. IDO is already being applied to the study of seven diseases. The objectives of this workshop are to introduce IDO and the methodology for creating disease-specific IDO extensions, to present applications of the ontologies to the study of Malaria, HIV, and Influenza, and to open up the IDO enterprise to a wider audience of medical informaticians. (127)

SUNDAY 12 SEPTEMBER 2010

TIME:	VENUE:	ACTIVITY:
		Pre Congress Tutorials
09h00 - 12h30	1.4.1 & 1.4.2	*234 Writing for Publication (Part 1) (D Aronsky, J Talmon, R Haux, N de Keizer, TY Leong, C Safran, C Lehmann)* *1002 Writing for Publication (Part 1) (D Aronsky, J Talmon, R Haux, N de Keizer, TY Leong, C Safran, C Lehmann)* **Writing for Publication in Biomedical Informatics Journals** Participants will learn how to plan and prepare manuscripts, select an appropriate audience, decide on a suitable type of publication, understand the submission,

TIME:	VENUE:	ACTIVITY:
		peer review, and editorial decision making process, and learn how to reply to reviewers' comments. Manuscript preparation will include a detailed explanation of the various sections of a manuscript, elements of writing style, use of abbreviations, formatting of tables, preparing of figures, creating bibliographies, and common errors to avoid. Ethical considerations, such as authorship responsibilities, conflict of interest, duplicate submissions, plagiarism, prepublication, etc., will be discussed. For authors whose primary language is not English, the tutorial will provide advice on the general aspects of writing scientific English.

The presenters will share their knowledge and learned lessons from being authors, research advisors, reviewers, editorial board members and editors, so that participants can become more familiar with the process. |
| | 1.4.3 & 1.4.4 | *755 Data Mining (Part I) (N Peek, A Abu-Hanna)*

1003 Data Mining (Part II) (N Peek, A Abu-Hanna)

Essentials of Data Mining in Clinical Applications: Development, Evaluation, and Use

The increasing amounts of clinical data that are being captured digitally today create ample opportunity to expand our knowledge. In consequent, clinical applications of data mining are becoming commonplace and data mining techniques are finding their way to the modern medical informatician's curriculum. The objective of this tutorial is to offer an accessible treatment of data mining in clinical applications, covering issues pertaining to the development, evaluation, and clinical use of data mining methods. Specifically, the learning objectives of the tutorial are to understand the main concepts pertaining to knowledge discovery in clinical databases; to appreciate how these concepts fit in the lifecycle of real world applications; and to provide "best practice" guidelines for developing clinical data mining applications. The tutorial targets researchers and practitioners at the beginner and intermediate levels. A framework for understanding the essentials of data mining in clinical applications is presented that should allow attendees to approach their own applications in a principled manner, and to scrutinise and criticise other approaches to learning from data. Various case studies from the teachers' own experiences will be presented. |
| | 1.6.1 & 1.6.2 | *56 HL7 CDA + CDS (Part I) (B Dolin)*

1004 HL7 CDA + CDS (Part II) (B Dolin)

HL7 Clinical Document Architecture and HL7/ASTM Continuity of Care Document Standards

Learning objectives: Provide an introduction and overview of the HL7 Clinical Document Architecture (CDA) and HL7/ASTM Continuity of Care Document (CCD) standards.

The tutorial is geared towards medical informaticians who do not have significant familiarity with HL7 Version 3, and it is intended to introduce the approach and objectives used in the creation of the standards and present an overview of the standards - not sufficient for implementation but sufficiently detailed to enable the student to understand the scope and contents of the specifications. |
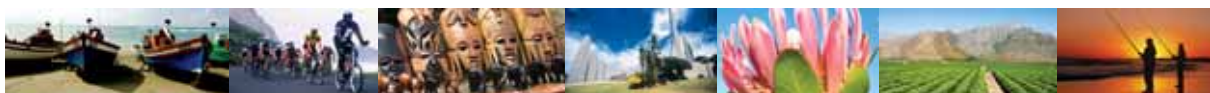
SUNDAY 12 SEPTEMBER 2010

TIME:	VENUE:	ACTIVITY:
		The tutorial will introduce the audience to the HL7 Clinical Document Architecture, Release 2 (CDA R2) and Continuity of Care Document (CCD) specifications. CDA R2 became an ANSI approved HL7 Standard in May 2005, is derived from the HL7 Reference Information Model (RIM), and is expressed in XML. It's model is richly expressive, providing a mechanism for incremental semantic interoperability. CCD is the product of collaboration between ASTM and HL7, and reflects the ASTM Continuity of Care Record data elements expressed as a CDA R2 document.
	1.6.3 & 1.6.4	*415 Clinical Decision Support (Part I) (R Jenders, D Sittig, A Wright)* *1005 Clinical Decision Support (Part II) (R Jenders, D Sittig, A Wright)* **Clinical Decision Support: A Practical Guide to Developing Your Programme to Improve Outcomes** This tutorial will provide attendees with a practical approach to developing and deploying clinical decision support (CDS) interventions that measurably improve outcomes of interest to a health care delivery organisation. The following key steps, including overcoming barriers, will be examined in detail: selecting appropriate CDS goals and enhancing organisational structures needed for CDS success; surveying available organisational information systems pertinent to delivering CDS; selecting appropriate CDS interventions to accomplish the goals from a broad array of options; and developing and launching the interventions and measuring their effects. The systematic approach to CDS implementation will be presented in an interactive, "case-oriented" fashion, incorporating examples provided by tutorial leaders and participant's experiences Tutorial faculty members will provide an international perspective through their work with standards development organisations and other leadership roles. In this light, the speakers will describe approaches to clinical decision support that can be used by workers at health care organisations with clinical information systems ranging from the limited to the complex
	2.6.4 & 2.6.5	*611 GRID Computing (Part I) (T Solomonides, H Mueller, M Mirza, M Kratz)* *1006 GRID Computing (Part II) (T Solomonides, H Mueller, M Mirza, M Kratz)* **Grid Computing for Biomedicine** Grid computing is both a paradigm for collaborative eHealth and a promising infrastructure for wide-area, heterogeneous health information systems. Grid or 'utility' computing is characterised by the transparent provision of massive computational power and federated database capabilities 'to the desktop' – much like the electricity grid provides power. In reality, grid computing is more about collaboration according to accepted rules than it is about Information Communication Technology (ICT) infrastructure on which information systems run. A 'healthgrid' is a virtual organisation which makes collaboration between public health officials, physicians, researchers and medical managers possible through a multi¬layered complex of computer processors, data storage, network protocols, 'middleware' services and shared policy. This tutorial offers an introduction to the concept of grid computing, associated

TIME:	VENUE:	ACTIVITY:
		e-science principles and the roots of healthgrid which extends e-science principles to eHealth. Real-world use-cases illustrate how healthgrid succeeds in supporting a wide variety of valuable programmes, from clinical care, translational science and basic research. A variety of global examples emphasize the flexibility of the grid concept and the breadth of its utility. Major research issues will be discussed - such as resource management, security, and interoperability standards - to convey a realistic picture of the current state and the prospects of healthgrid. Analysis of ethical, legal and social approaches for healthgrid will provide the necessary next steps for deploying or participating in a virtual organisation.
12h00 - 17h00		Registration
16h30	Audi 1	**Welcome Opening Plenary 1**
		Prof Reinhold Haux Minister of Health – Dr A Motsoaledi
		Keynote Address: Dr Najeeb Al-Shorbaji (WHO)
	Ballroom	**Welcome Cocktails**

MONDAY 13 SEPTEMBER 2010

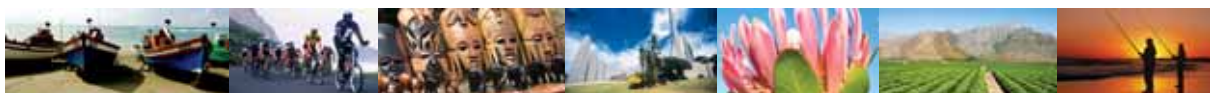|		
08h30 - 10h00		**Student Paper Awards**
Session 1	Audi 1	**Plenary 2** *Dr Marion Ball* *Prof Reinhold Haux*
10h00 -10h30	Exhibition Hall 4	**Break**
10h30 12h15		**Parallel Session**
		Papers
Session 2	1.4.1 & 1.4.2	**Public Health Informatics I** **Chair: Mikko Korpela** *683: Traffic Accidents in Crete (1996-2006): the Role of the Emergency Co-ordination Center (D Vourvahakis, C Chronaki, V Kontoyiannis, D Panagopoulos, S Stergiopoulos)* *422: Traffic Accident in Cuiaba-MT: An Analysis through the Data Mining Technology (N Dreyer Galvão, HF Marin)* *644: Obesity Atlas and Methodbox: Towards an Open Framework for Sharing Public Health Intelligence Workflows (S Thew, P Jarvis, J Ainsworth, I Buchan)* *731: IMPACT: A generalisable system for simulating public health interventions (I Buchan, J Ainsworth, E Carruthers, P Couch, M O'Flaherty, D Smith, R Williams, S Capewell)* *935: Combining Vital Events Registration, Verbal Autopsy and Electronic Medical Records in Rural Ghana for Improved Health Services Delivery (S Ohemeng-Dapaah, P Pronyk, E Akosa, B Nemser, A Kanter)*

MONDAY 13 SEPTEMBER 2010

	1.4.3 & 1.4.4	**Translational Bioinformatics** **Chair: Fernando Martin-Sanchez**

395: The Clinical Research Data Repository of the US National Institutes of Health (J Cimino, E Ayres)

592: Scientific discovery workflows in bioinformatics: A scenario for the coupling of molecular regulatory pathways and gene-expression profiles (A Kanterakis, G Potamias, G Zacharioudakis, L Koumakis, S Sfakianakis, M Tsiknakis)

655: A Framework for Comparing Phenotype Annotations of Orthologous Genes (O Bodenreider, A Burgun)

463: Novelty Discovering from Sequential Patterns: application to micro-arrays data analysis for Alzheimer disease (S Bringay, M Roche, M Teisseire, P Poncelet, R Abdel Rassoul, JM Verdier, G Devau)

814: Designing a Concept for an IT-Infrastructure for an Integrated Research and Treatment Center (S Stäubert, A Winter, R Speer, M Löffler)

1.6.1 & 1.6.2 **Interoperability Issues** **Chair: Amado Espinosa**

259: Design and evaluation of a semantic approach for the homogeneous identification of events in eight patient databases: a contribution to the European EU-ADR project (P Avillach, M Joubert, J Hippisley-Coxj, L Pedersenl, M Sturkenboom, R Gini, F Thiessard, F Mougin, M Molokhia, A Pariente, G Polimeni, R Herings, G Mazzaglia, C Fornari, M Fieschi)

393: The Health Service Bus: An Architecture and Case Study in Achieving Interoperability in Healthcare (A Ryan, P Eklund)

697: Usage of international standards for integrating extramural monitoring and personal health device data into medical information infrastructure (A Mense, S Sauermann, F Gerbovics, M Frohner, B Pohn, R Bruckner, P Urbauer, H Wahl, F Eckkrammer)

973: Implemenation of a Secure and Interoperable Generic eHealth Infrastucture for Shared Electronic Health Records based on IHE Integration Profiles (T Schabetsberger, F Wozak, B Katt, R Mair, B Hirsch, A Hoerbst)

987: Integration of Healthcare Information: from Enterprise PACS to Patient Centered Multimedia Health Record (E Soriano, F Plazzotta, F Campos, D Kaminker, A Cancio, J Aguilera Díaz, D Luna, A Seehaus, R García Mónaco, F González Bernaldo de Quirós)

1.6.3 & 1.6.4 **Specialised Registries** **Chair: Shane Reti**

410: Toward an Interoperable System of Human-centered Voluntary Medical Incident Reporting (Y Gong)

449: Development and Testing of a Work Measurement Tool to Assess Caregivers Activities In Residential Aged Care Facilities (E Munyisia, P Yu, D Hailey)

690: TEDIS : an Information System Dedicated to Patients with Pervasive Developmental Disorders (M Ben Saïd, L Robel, E Vion, B Golse, JP Jais, P Landais)

907: Experience Implementing OpenMRS to Support Maternal and Reproductive Health in Northern Nigeria (A Thompson, E Castle, P Lubeck, S Makarfi)

912: Using Electronic Medical Records for HIV Care in Rural Rwanda (C Amoroso, B Akimana, B Wise, H Fraser)

TIME:	VENUE:	ACTIVITY:

2.4.1 & 2.4.2

Adoption Determinants   **Chair: Nicola Shaw (Nikki)**

207: A qualitative analysis of Emergency Department physicians' practices and perceptions in realtion to test result follow-up (J Callen, A Georgiou, M Prgomet, R Paoloni, J Westbrook)

577: Determinants of Clinical Information System Post-Adoption Success (JM Palm, A Grant, JM Moutquin, P Degoulet)

118: EHR Adoption:Measurement of the Utilisation of an Installed Electronic Health Record (P Dullabh, A Moiduddin, E Babalola)

195: Implementation, monitoring and utilisation of an integrated Hospital Information System lessons from a case study (RJ Cruz-Correia)

388: Key Common Determinants for Adoption of Wireless Technology in Healthcare for India and Pakistan: Development of a conceptual model (A Hafeez-Baig, R Gururajan)

2.4.4 & 2.4.5

Implementation   **Chair: Charles Safran**

88: Why don't innovation models help with informatics implementations? (R Ward)

268: Standardising Implementation of a Surgical Information System in Danish Hospitals a Comparative Study (K Lawton, M Holdt, P Kopke, H Sigurdardòttir)

282: eVisit: A Pilot Study of a New Kind of Healthcare Delivery (R Padman, G Shevchik, S Paone, C Dolezal, J Cervenak)

584: Informatics and Evidence-based Medicine: Prescription for Success (J Starmer, N Lorenzi, C Pinson)

457: How are clinicians involved in EHR planning? A process analysis case study of a region in Denmark (AM Hostgaard, P Bertelsen, C Nøhr)

2.6.1 & 2.6.2

Intelligent Analysis of Monitoring Data   **Chair: Ameen Abu-Hanna**

260: Processing gradual information with Fuzzy Arden Syntax (T Vetterlein, H Mandl, KP Adlassnig)

914: Feature importance analysis for patient management decisions (M Valko, M Hauskrecht)

959: Temporal Clustering for Blood Glucose Analysis in the ICU: Identification of Groups of Patients with Different Risk Profile (L Sacchi, G D'Ancona, F Bertuzzi, R Bellazzi)

313: A Markov chain probability model of glucose tolerance in post gestational diabetes follow up study (A Grassi, L Gaetano, G Pacini, A Kautzky-Willer, A Tura)

602: Data Mining to Assess Variations in Oral Anticoagulant Treatment (PB Nielsen, S Lundbye-Christensen, TB Larsen, LH Rasmussen, SR Kristensen, AM Münster, OK Hejlesen)

2.6.4 & 2.6.5

Emerging Technologies   **Chair: Farah Magrabi**

866: Integration of Cognitive and Physical Training in a Smart Home Environment for the Elderly People (E Konstantinidis, A Billis, W Hlauschek, P Panek, P Bamidis)

MONDAY 13 SEPTEMBER 2010

TIME:	VENUE:	ACTIVITY:

976: eBug teaching children hygiene principles using educational games (P Kostkova, D Farell, E de Quincey, J Weinberg, D Lecky, C McNulty)

472: Daily activities and fall risk a follow-up study to identify relevant activities for sensor-based fall risk assessment (M Marschollek, A Rehwald, M Gietzelt, B Song, KH Wolf, R Haux)

621: Can Brain Computer Interfaces Become Practical Assistive Devices in the Community? (P McCullagh, M Ware, M Mulvenna)

688: Augmented notebooks for pervasive learning in medical practice (N Bricon-Souf, N Leroy, JM Renard)

Audi 1

Surveillance   **Chair: Niels Peek**

583: Using Patients as the Primary Information Source for Real-time Surveillance (MA Johansen, JA Johnsen, N Shrestha, JG Bellika)

46: Attempting to predict the fate of an ongoing epidemic. Lessons from A(H1N1) influenza in USA. (JLH Caceres)

535: Exploring new directions in disease surveillance for people with diabetes: Lessons learned and future plans (T Botsis, G Hartvigsen)

550: Spatiotemporal Antibiotic Resistance Pattern Monitoring using GIS based Hierarchical Cluster Analysis (R Hewapathirana, G Wijayarathna)

665: Improving general practice based epidemiologic surveillance using desktop clients: the French Sentinel Network experience. (C Turbelin, PY Boelle)

Roof Terrace

Mining Clinical Narratives   **Chair: Tze-Yun Leong**

362: Pediatric Pain Management Knowledge Linkages: Mapping Experiential Knowledge to Explicit Knowledge (S Stewart, SSR Abidi, A Finley)

287: The Internal Structure of a Disease Name and its Application for ICD Coding (E Yamada, E Aramaki, T Imai, K Ohe)

670: Performance Analysis of a POS Tagger applied to Discharge Summaries in Portuguese (M Oleynik, P Nohama, PS Cancian, S Schulz)

779: Automatically Detecting Medications and the Reason for their Prescription in Clinical Narrative Text Documents (S Meystre, J Thibault, S Shen, J Hurdle, B South)

791: Extracting Medications from French Clinical Texts (L Deleger, C Grouin, P Zweigenbaum)

12h15 13h30	Exhibition Hall 4	**Lunch** Poster Session & Poster Tours 1
13h30 15h00		**Parallel Session**
		Papers
Session 3	1.4.1 & 1.4.2	**System Usability** **Chair: Vimla Patel** **154:** Measuring Use of Electronic Health Record Functionality Using System Audit Information (W Bowes)

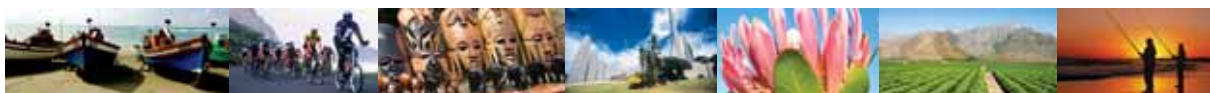| TIME:	VENUE:	ACTIVITY:
		464: Usability of Clinician Order Entry Systems in Singapore: An Assessment of End-User Satisfaction (YM Tan, J Flores, ML Tay)
		753: Why GPs do not follow computerised guidelines: an attempt at an explanation involving usability with ASTI guiding mode (B Seroussi, J Bouaud, D Sauquet, P Giral, P Cornet, H Falcoff, J Julien)
		958: Touchscreen Task Efficiency and Learnability in an Electronic Medical Record at the Point-of-Care (Z Landis Lewis, G Douglas, V Monaco, R Crowley)
	1.4.3 & 1.4.4	**Coding and Terminologies** **Chair: Christopher Chute**
		420: Development and Validation of Data Specifications for Nursing Problems in Maternal Nursing Care (Y Kim, HA Park, YH Min, MK Lee)
		823: Addressing SNOMED CT Implementation Challenges Through Multi-disciplinary Collaboration (J Liu, K Lane, E Lo, M Lam, T Truong, C Veillette)
		942: Information-Content-based Measures for the Structure of Terminological Systems and for Data recorded using these Systems (R Cornet)
		947: Development of Structured ICD-10 and its Application to Computer-Assisted ICD Coding (T Imai, M Kajino, M Sato, K Ohe)
	1.6.1 & 1.6.2	**Citizen-Centric eHealth** **Chair: Heather C Strachan**
		384: Citizen Centric Architecture Approach - Taking eHealth forward by integrating citizens and service providers (Y Han, T Itälä, H Matti)
		541: Patient web empowerment index (PWEI): an index for assessment of healthcare providers' web strategies. Case study: PWEI application in Italy. (L Buccoliero, E Bellio, A Prenestini)
		528: Barriers and facilitators that affect public engagement with eHealth services (N Hardiker, M Grant)
		574: Investigating health information needs of community radio stations and applying the World Wide Web to disseminate audio products (J Snyders, E van Wyk, H van Zyl)
		Panels
	1.6.3 & 1.6.4	*979: The HONcode certification: 13 years of services for improving the quality of the health online information (C Safran, C Boyer, A Geissbuhler, M Ball)*
	2.4.1 & 2.4.2	*963: Accelerating the Translation of Knowledge into Clinical Decision Support: Four National Demonstration Projects (B Middleton, R Greenes, E Fry, KP Adlassnig, I Cho)*
	2.4.4 & 2.4.5	*875: Information Models for Supporting Semantic Interoperability and System Development: Collaborative Efforts from the Domain of Nursing (S Bakken, W Goossen, E Hovenga, D Hoy, HA Park)*
	2.6.1 & 2.6.2	*757: Automatic Data Analysis in Biomedicine: Applications and Challenges (N Peek, J Holmes, TY Leong, A Abu-Hanna)*
	Roof Terrace	*518: Social Media New Tools for Personal Health and Wellbeing (P Kouri, K Saranto, A Moen, P Murray, S Erdley)*

MONDAY 13 SEPTEMBER 2010

TIME:	VENUE:	ACTIVITY:
	Audi 1	*441: Survey for Asia-Pacific Countries/Regions; What are the Medical Records for? (M Kimura, YC Li, YS Kwak)*
15h00 15h30	Exhibition Hall 4	**Break**
15h30 17h15		**Parallel Session**
Session 4		**Papers**

Audi 1

Nursing Informatics   **Chair: Heimar Marin**

120: Clinical users prospective on telemonitoring of patients with long term conditions: understood through concepts of Giddens s structuration theory & consequence of Modernity (U Sharma, M Clarke)

176: Analysis on data captured by barcode medication administration system with PDA for reducing medical error at point of care in Japanese Red Cross Kochi Hospital. (M Akiyama, A Koshio, N Kaihotsu)

993: Foundations for a Nursing Services Reference Model (L Heslop, K Toh, E Hovenga)

653: Ambulatory orthopaedic surgery patients knowledge with Internet-based education (K Heikkinen, S Salanterä, H Leino-Kilpi)

1.4.1 & 1.4.2

Telemedicine   **Chair: Maurice Mars**

859: Leapfrogging Paper-Based Records Using Handheld Technology: Experience from Western Kenya (M Were, J Kariuki, V Chepng'eno, M Wandabwa, S Ndege, P Braitstein, J Wachira, S Kimaiyo, B Mamlin)

59: Cell phone Short Messaging Services (SMS) in Health care pertaining to HIV/AIDS in South Africa. (KC Mukund Bahadur, P J. Murray)

203: Deploying Portable Ultrasonography with Remote Assistance for Isolated Physicians in Africa: Lessons from a Pilot Study in Mali (CO Bagayoko, M Niang, ST Traoré, G Bediang, JM Naef, A Geissbuhler)

774: Exploring Feasibility of Home Telemanagement in African Americans with Congestive Heart Failure (J Finkelstein, E Cha, C Dennison)

224: A Configurable Home Care Platform for Monitoring Patients with Reminder Messaging and Compliancy Tracking Services (D Capozzi, G Lanzola)

1.4.3 & 1.4.4

Communication and Workflow Issues   **Chair: Nicola (Nikki) Shaw**

212: Why is it so difficult to measure the effects of interruptions in healthcare? (F Magrabi, SYW Li, AG Dunn, E Coiera)

397: Impact of a Critical Care Clinical Information System on Interruption Rates During Intensive Care Nurse and Physician Documentation Tasks (M Ballermann, N Shaw, K Arbeau, D Mayes, N Gibney)

749: Peri-operative Communication Patterns and Media Usage Implications for Systems Design (ES Karlsen, P Toussaint)

806: Do CPOE Actually Disrupt Physicians-Nurses Communications? (S Pelayo, F Anceaux, J Rogalski, MC Beuscart-Zephir)

839: The Avoidable Misfortune of a Computerised Patient Chart (I Sørby, G Seland, Ø Nytrø)

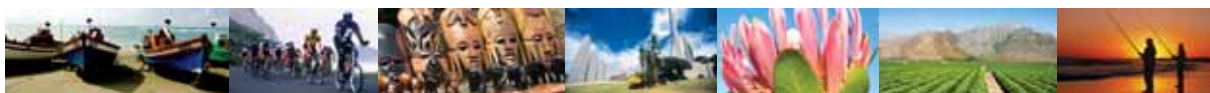| TIME:	VENUE:	ACTIVITY:
	1.6.1 & 1.6.2	**System Design** **Chair: Hiroshi Takeda** *517: How User Centered Design Can Be Applied in a Clinical Context (H Kashfi)* *746: Participatory interaction design in healthcare information system requirements specification (S Martikainen, P Ikävalko, M Korpela)* *805: Model-Driven Traceability in Healthcare Information Systems Development (S Walderhaug, G Hartvigsen, E Stav)* *820: Developing a User-centered Voluntary Medical Incident Reporting System (L Hua, Y Gong)* *990: Ghost Charts and Shadow Records: Implication for System Design (E Balka)*
	1.6.3 & 1.6.4	**Biomedical Data Mining** **Chair: Hauskrecht Milos** *448: Three-Dimensional Morphometric Analysis of the Distal Femur: A Validity Method for Allograft Selection Using a Virtual Bone Bank (L Ritacco, A Espinoza Orias, N Inoue, L Aponte-Tinao, L Múscolo, F González Bernaldo de Quirós)* *408: Using Local Context Information to Improve Automatic Mammographic Mass Detection (M Velikova, P Lucas, N Karssemeijer)* *130: A Self-organising map based morphological analysis of oral glucose tolerance test curves in women with gestational diabetes mellitus (L Gaetano, G Di Benedetto, A Tura, G Balestra, FM Montevecchi, A Kautzky-Willer, G Pacini, U Morbiducci)* *553: A Model Driven Approach to Imbalanced Data Sampling in Medical Decision Making (HL Yin, TY Leong)*
	2.4.1 & 2.4.2	**Decision Support in Clinical Practice 1** **Chair: Christoph Lehmann** *226: Identifying best practices for clinical decision support and knowledge management in the field (J Ash, D Sittig, R Dykstra, A Wright, C McMullen, J Richardson, B Middleton)* *782: Enhanced Notification of Infusion Pump Programming Errors (RS Evans, R Carlson, K Johnson, B Palmer, J Lloyd)* *208: Verification & Validation of knowledge base for the hypertension management CDSS (HY Kim, JH Kim, I Cho, JH Lee, Y Kim)* *883: Understanding Effective Clinical Communication in Medical Errors (S Khairat, Y Gong)* *401: TADAA: Towards Automated Detection of Anaesthetic Activity (B Houliston, D Parry, A Merry)*
	2.4.4 & 2.4.5	**Monitoring and Surveillance** **Chair: Amado Espinosa** *359: Is population-oriented IT supported preventive care in general practice feasible? A database study (J van Wyk, M Mosseveld, J van der Lei)* *684: Electronic Surveillance of Healthcare-Associated Infections with MONI-ICU—A Clinical Break-Through Compared to Conventional Surveillance Systems (W Koller, A Blacky, C Bauer, H Mandl, KP Adlassnig)* *708: Towards A Multi-Level Game Model for Influenza Epidemics (Q Chen, TY Leong)*

MONDAY 13 SEPTEMBER 2010

TIME:	VENUE:	ACTIVITY:
		576: *Measuring the effectiveness of hospital-acquired infection prevention (J Iavindrasana, G Cohen, A Depeursinge, H Müller, R Meyer, H Sax, A Geissbuhler)*
		804: *Using ProMED Mail and MedWorm Blogs for Cross-Domain Pattern Analysis in Epidemic Intelligence (A Stewart, K Denecke)*
	2.6.1 & 2.6.2	**Patient Education** **Chair: Christian Nøhr**
		275: *A Compositional Personalisation Approach for Designing Personalised Patient Educational Interventions for Cardiovascular Risk Management (S Davis, SSR Abidi, S Stewart)*
		486: *Pathways Home: Comparing Voluntary IT and Non-IT Users Participating in a Mentored Self-Management Project (E Cummings, A Robinson, H Courtney-Pratt, H Cameron-Tucker, R Wood-Baker, E Walters, P Turner)*
		193: *Usage and Effect of a Web-based Intervention for the Prevention of Overweight; a RCT (S Kelders, L van Gemert-Pijnen, A Werkman, E Seydel)*
		513: *Learning of each other online: on the division of labour between technology and supervisors (R Roar Stokken)*
		565: *A 3-step eHealth approach to transfer knowledge on HIV and sexual violence in developing countries (H van Zyl, L Dartnall)*
	2.6.4 & 2.6.5	**Ontology Management** **Chair: Paolo Terenziani**
		373: *Ensuring HL7-based information model requirements within an ontology framework (D Ouagne, N Nadah, D Schober, R Choquet, D Teodoro, D Colaert, S Schulz, MC Jaulent, C Daniel)*
		391: *The ObTiMA System Ontology-based Managing of Clinical Trials (H Stenzhorn, G Weiler, M Brochhausen, F Schera, V Kritsotakis, M Tsiknakis, S Kiefer, N Graf)*
		404: *A Unified Framework for Biomedical Terminologies and Ontologies (W Ceusters, B Smith)*
		765: *The DebugIT Core Ontology: semantic integration of antibiotics resistance patterns (D Schober, M Boeker, J Bullenkamp)*
		838: *Mapping BFO and DOLCE (L Temal, A Rosier, O Dameron, A Burgun)*
	Roof Terrace	**Quality** **Chair: Silvana Quaglini**
		865: *A system for solution-orientated reporting of errors associated with the extraction of routinely collected clinical data for research and quality improvement (G Michalakidis, P Kumarapeli, A Ring, J van Vlymen, P Krause, S de Lusignan)*
		240: *The nature of unintended effects of information technology concerning patient safety: a systematic review with thematic synthesis (H Pirnejad, R Bal, N Shahsavar)*
		267: *Evaluating the relevance of disability weights for adjusting disease-cost and comorbidity calculations at the Kigali University Teaching Hospital (F Verbeke, F De Pauw, C Tran Ngoc, G Karara, E Gasakure, M Nyssen)*
		503: *A Framework for Goal-oriented Analysis of Healthcare Processes (M Hägglund, M Henkel, J Zdravkovic, P Johannesson, I Rising, I Krakau, S Koch)*
		738: *SeReM2 - A Meta Model for the structured Definition of Quality Requirements for Electronic Health Record Services (A Hoerbst, W Hackl, E Ammenwerth)*

TIME:	VENUE:	ACTIVITY:
17h15 18h45		*Parallel Session*
Session 5		Poster Session & Poster Tour 2
		Workshops
	Audi 1	**Patient Safety Classification**

Patient Safety Classification

451: International Classification of Patient Safety (ICPS) (JM Rodrigues, R Jakob, O Corcho, P Lewalle, S Schultz)

The workshop is aimed to ask the world medical informatics community to challenge the first results of the WHO International Classification of Patient Safety (ICPS) initiative. This initiative is based on an ontology-driven 5-layer knowledge model supporting automatic multilingual generation. What is expected is an initial quality assurance of the method and the web based collaborative platform tool which has been developed. A demonstration of the web based collaborative tool will be performed to extend the participation in the work by the medical informatics community to ensure that the final classification product can satisfy users and enable measurement and management of the critical patient safety issue. (107)

Audi 2

SNOMED CT Translation

694: Using an International Terminology in a Non-English Speaking Country - Learning from Swedish and Danish Translation Projects (L Asholm, U Gerdin, CW Danielsen, PG Petersen)

For the past few years Denmark and Sweden have been engaged in translating the large clinical terminology SNOMED CT®. The basic objective of any SNOMED CT translation is to provide accurate and unambiguous descriptions of SNOMED CT concepts in the target language. Therefore, a principle of concept-based translation must be used. To support that approach it is crucial to define a set of linguistic guidelines, including syntactical, morphological, and orthographic rules.

The aim of this workshop is to share knowledge and improve international co-operation within health care and the awareness of quality of the translated concepts and terms in clinical settings. The expected outcome is that the attendees will be acquainted with the recommended process of translation as it has been set up for SNOMED CT®, and that they will be aware of the role of team competences and quality aspects of translation. (143)

1.4.1 & 1.4.2

Social Media

904: Using Social Media to Build an Online Community: Learning By Doing (R Hsiung, T Wetter, S Adams, T Grandison, D Nagel, K Anthony, R Nelson, B Anton, S Daviss, J Roth, V Sinisi)

37% of American adults access user-generated online health information. Using social media, consumers build online support communities. In this workshop presented by the IMIA Consumer Health Informatics working group, participants use social media to build an online community before the Congress and then at the Congress discuss both that experience and research findings regarding (1) potential benefits for underserved populations, (2) privacy risks, (3) ethical considerations, and (4) evaluation of online communities. The workshop online
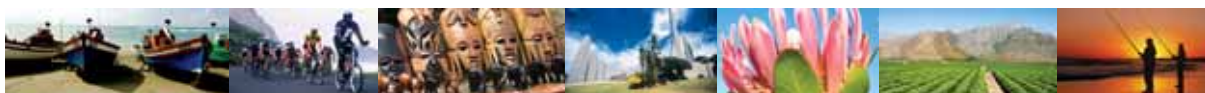
TIME:	VENUE:	ACTIVITY:
		community and online consumer support groups are compared and contrasted.
		The particular social media used are an e-mail list, a message board, a blog, a Facebook group, and Twitter. Online group dynamics are highlighted. Tweeting and displaying a live Twitter stream during the Congress enables those who do not attend to continue to participate. (129)
	1.4.3 & 1.4.4	**Open EHR Developers**
		418: The open EHR developers' workshop (S Kobayashi, T Shannon, T Cook, R Chen, R Cruz-Correia, S Heard)
		The open EHR project is recognised as the development source for the ISO/CEN 13606 standards. These standards are considered the basis of the interoperability for electronic healthcare applications.
		This workshop will discuss the implementation technology of the open EHR specifications and the interoperability of the clinical information using archetypes. There will also be an interoperability demonstration of some of the projects to showcase the simple but effective use of archetype enabled systems to support clinical SOAP note taking and Emergency Summary report production. Such interoperability is a universal clinical requirement for the transport of semantically correct patient information from one system to another. (101)
	1.6.1 & 1.6.2	**FLOSS Open Source**
		752: Free/Libre Open Source Software Prospects, Challenges and Barriers in Healthcare IT (T Karopka, G Wright, C Seebregts, H Betts)
		Free Libre Open Source Software (FLOSS) is reshaping the software industry. FLOSS is being used across all industries and was estimated to be a 30$ Billion market in 2008. Yet in health care adoption is still very low. Although FLOSS has been applied to health care software development from its very inception, there are still significant barriers and obstacles that hinder broader market penetration. Countries from the so-called Global South and emerging economies may especially profit from FLOSS by avoiding high licensing costs and by channeling scarce resources into internal development. However, the health care systems of every other country may also benefit from using open source.
		One of the main virtues of FLOSS is the principle of collaborative development and sharing of code and knowledge. This workshop has the objective to bring together FLOSS experts and interested people from different parts of the world to exchange knowledge and experience and to work on ways of future collaboration in developing sustainable open source health care systems. (166)
	1.6.3 & 1.6.4	**Computerised Detection of Adverse Drug Events**
		720: Design, development and validation of a computerised system that exploits data from electronic health records and biomedical information for the early detection of adverse drug reactions. The EU-ADR project: Preliminary Results (P Avillach, PM Coloma, A Bauer-Mehren, R Gini, F Thiessard, G Trifirò, M Schuemie, MC Sturkenboom, JL Oliveira, F Sanz, E Molero, C Dìaz, J Van Der Lei)
		The EU-ADR Project (Exploring and Understanding Adverse Drug Reactions by integrative mining of clinical records and biomedical knowledge) aims to design,

		develop and validate a computerised integrated system for the early detection of adverse drug reactions (ADRs). The EU-ADR platform currently comprises anonymous healthcare data from eight different European electronic healthcare record (EHR) databases with over 30 million patients from four countries.
		In this workshop we describe the main project framework and preliminary results. We built a shared semantic foundation to harmonise the queries. A purpose-built software called Jerboa© was used to aggregate the data across the different databases. Various techniques are currently being tested to generate drug safety signals across the databases. All the identified drug-event associations (signals) are substantiated in a computational framework that exploits existing biomedical knowledge using a series of bioinformatics approaches. (136)
	2.4.1 & 2.4.2	*201 eHealth security*
	2.4.4 & 2.4.5	**HI4Dev network of networks** *367: Health Informatics for Development (HI4Dev): Establishing a Network of Networks through Collaborative Development (A Marcelo, D Luna, H Durrani, C Fourie)* eHealth (ICT in health care) applications have proven to be effective tools in transitioning developing countries from inefficient, disintegrated health delivery systems to co-ordinated, effective ones. Mobile phones, open source software, and social networking tools are a few examples of emerging applications for health informatics. This session aims to disseminate the work of the IMIA Working Group on Health Informatics for Development (IMIA WG HI4Dev) and the different eHealth networks that have been formed globally and their work on health informatics. By employing social networking tools (mindmaps, wikis, and tweets), the participants have bootstrapped this 'network of networks' and established linkages that could promote further collaboration and development. (108)
	2.6.1 & 2.6.2	**Value of eHealth** *149: International Perspectives on Measuring the Value of eHealth Investments (K Mason, S Muttitt, T Garrido, S Meakin)* Benefits realisation is a term often used but rarely applied consistently. There is no internationally recognised right way to approach it. In response, NHS Connecting for Health (CFH) has sponsored the development of a Benefits Realisation & Achievement International Network (BRAIN), consisting of health informatics academic expert and executives responsible for eHealth programmes at regional or national levels, which has explored a number of challenging topics, including the measurement of eHealth benefits. While obvious and well-recognised measures exist for certain technologies where benefits are tangible and discrete, such as PACS, there are several areas where benefits are intangible and difficult to isolate. Measuring the impact of change enabled by technology is complicated by the complex inter-relationships that are inherent to healthcare processes. This workshop will investigate varying approaches to measuring benefits. (131)

MONDAY 13 SEPTEMBER 2010

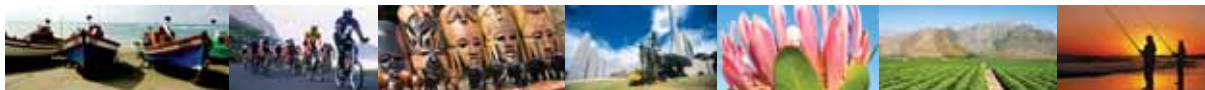| TIME:	VENUE:	ACTIVITY:
	2.6.4 & 2.6.5	**Tiger Initiative Building Capabilities of EHR** *48: Workshop: "The TIGER Initiative: Towards Integrating Evidence and Informatics into Clinical Practice and Education" (M Ball, C Weaver, P Chang, U Huebner, M Troseth, D Alexander, J Martin)* Technology Informatics Guiding Education Reform (TIGER) is working to help the United States realise its 10-year goal of electronic health records for all its citizens. The Initiative aims to enable practicing nurses and nursing students to fully engage in the unfolding digital electronic era in healthcare. The purpose is to identify information/knowledge management best practices and effective technology capabilities for clinicians, starting with nurses. TIGER's goal is to create and disseminate local and global action plans that can be duplicated within nursing and other multidisciplinary healthcare training and workplace settings. The workshop will describe progress to date, lessons learned and disseminated, what has been accomplished and learned over the past 4 years. (112)
	Roof Terrace	**Guidelines for Evaluation of HI** *473: Good Evaluation Practice guidelines for planning and executing an evaluation study in Health Informatics (GEP-HI) (P Nykänen, J Brender, E Ammenwerth, M Rigby, L Hanmer)* Guidelines have been developed through a consensus making process iterating between a core team and the health informatics community. A set of 60 issues has been identified as relevant for planning, implementation and execution of any evaluation study in the health informatics domain. These issues cover all phases of an evaluation study. Issues of risk management and project control are also addressed. Through application of these guidelines, the general validity and generalisability of evaluation studies are likely to be increased, since these guidelines aim at avoiding a number of omissions, pitfalls and risks. The workshop will provide an important opportunity for validation and refinement of GEPHI. (106)

TUESDAY 14 SEPTEMBER 2010

08h30 – 10h00		***Semi Plenary***
Session 1	Audi 1	***Semi Plenary A*** Prof Nada Lavrac Prof Tania Douglas
	Audi 2	***Semi Plenary B*** **National and International Health IT Track** Prof Nancy Lorenzi, Track Chair "Translational strategies for introducing health IT and standards into developing countries" 673
10h00 – 10h30	Exhibition Hall 4	***Break***

TIME:	VENUE:	ACTIVITY:
10h30 − 12h15		*Parallel Session*
Session 2		*Papers*

	1.4.1 & 1.4.2	**Data Integration and Standards** **Chair: Olivier Bodenreider**

197: Building a Logical EHR architecture based on ISO 13606 standard and Semantic Web Technologies (MR Santos, MR Bax, D Kalra)

242: HL7 CDA Implementation Guide for Structured Anatomic Pathology Reports Methodology and Tools (H Kussaibi, F Macary, M Kennedy, D Booker, V Brodsky, T Schrader, M Garcia-rojo, C Daniel)

334: A Model-Driven Approach for Biomedical Data Integration (A Farkash, T John, C David)

346: Bridging the Template − Archetype Gap with Detailed Clinical Models (W Goossen, A Goossen-Baremans)

646: Reaching for the Cloud: On the Lessons Learned from Grid Computing Technology Transfer Process to the Biomedical Community (Y Mohammed, F Dickmann, U Sax, M Smith, G von Voigt, O Rienhoff)

	1.4.3 & 1.4.4	**Data Repositories and Research Infrastructure** **Chair: Jan Talmon**

700: The IT-Infrastructure of a Biobank for an Academic Medical Center (A Dangl, F Rakebrandt, S Demiroglu, K Helbing, U Sax, O Rienhoff)

187: Record Linkage System in a Complex Relational Database - MINPHIS Example (P Achimugu, A Soriyan, O Oluwagbemi, A Anu)

434: Achieving interoperability for metadata registries using comparative object modeling (JH Kim, YR Park)

874: The Impact of a Growing Minority Population on Identification of Duplicate Records in an Enterprise Data Warehouse (S DuVall, A Fraser, R Kerber, G Mineau, A Thomas)

600: Methodology of integration of a clinical data warehouse with a clinical information system: the HEGP case (E Zapletal, N Rodon, N Grabar, P Degoulet)

	1.6.1 & 1.6.2	**EHR Re-use of Data** **Chair: Knut Bernstein**

241: Steps towards Single Source - Collecting Data about Quality of Life within Clinical Information Systems (F Fritz, S Ständer, B Breil, M Dugas)

254: Medication Counceling: Analysis of Electronic Documentation Using the Clinical Care Classification System (K Saranto, J Moss, V Jylhä)

405: Facilitating secondary use of medical data by using openEHR archetypes (CD Kohl, S Garde, P Knaup)

409: Cognitive Evaluation of a Physician Data Query Tool for a National ICU Registry; Comparing Two Think Aloud Variants and Their Application in Redesign (L Peute, N de Keizer, M Jaspers)

524: The REUSE project: EHR as single datasource for biomedical research (A EL Fadly, C Daniel, PY Lastic)
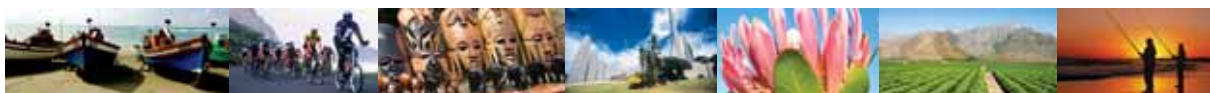
TUESDAY 14 SEPTEMBER 2010

1.6.3 & 1.6.4

Evaluation Methodology   **Chair: Elske Ammenwerth**

477: A Multi-method Approach to Evaluate Health Information Systems (P Yu)

156: Mini Stare-HI: Guidelines for reporting health informatics evaluations in conference papers (N de Keizer, J Talmon, E Ammenwerth, J Brender, P Nykanen, M Rigby)

353: Mapping stakeholders for system evaluation - the case of the Electronic Prescription Service in England (V Lichtner, D Petrakaki, R Hibberd, W Venters, T Cornford, N Barber)

431: Evaluation Methodology for Automatic Radiology Reporting Transcription Systems (V Salvador, L Assis Moura Jr.)

555: The Information Quality Triangle: a methodology to assess Clinical Information quality (R Choquet, S Qouiyd, D Ouagne, E Pasche, C Daniel, O Boussaid, MC Jaulent)

2.4.1 & 2.4.2

Information Retrieval   **Chair: William Hersh**

96: Clinical Task-Specific Query Expansion for the Retrieval of Scientifically Rigorous Research Documents (S Yoo, J Choi, S Choi)

343: Finding Knowledge Translation Articles in CINAHL (C Lokker, KA McKibbon, N Wilczynski, RB Haynes, D Ciliska, M Dobbins, D Davis, S Straus)

881: Retrieving Similar Cases from the Medical Literature –The ImageCLEF experience (J Kalpathy-Cramer, S Bedrick, S Radhouani, W Hersh, I Eggel, C Kahn, H Müller)

620: Auto-selection of DRG Codes from Discharge Summaries by Text Mining in Several Hospitals. - Analysis of Difference of Discharge Summaries - (T Suzuki, S Doi, G Shimada, M Takasahi, T Tamura, S Fujita, K Takabayashi)

2.6.1 & 2.6.2

Professional Education and Training   **Chair: John Mantas**

951: Medical Education & Health Informatics: Time to join the 21st Century? (N Shaw)

261: Impact of content-specific email reminders on provider participation in an online intervention: a Dental PBRN study (T Houston, H Coley, R Sadasivam, M Ray, J Williams, J Allison, G Gilbert, C Kiefe, C Kohler, DPRBN Collaborative Group)

256: Multidisciplinary Education in Medical Informatics – A course for medical and informatics students (B Breil, F Fritz, V Thiemann, M Dugas)

129: An approach to simulate and visualise intraoperative scattered radiation exposure to improve radiation protection training (M Wagner, C Duwenkamp, W Ludwig, K Dresing, OJ Bott)

609: Training Software Developers for Electronic Medical Records in Rwanda (R Seymour, A Tang, J DeRiggi, C Munyarburanga, R Cuckovitch, P Nyirishema, H Fraser)

2.6.4 & 2.6.5

Workflow   **Chair: Jos Aarts**

278: What effect does electronic ordering have on the organisational dynamics of a hospital pathology service? (A Georgiou, J Westbrook, J Braithwaite)

864: Exploring Control in Health Information Systems Implementation (M Aali, T Cornford, E Klecun)

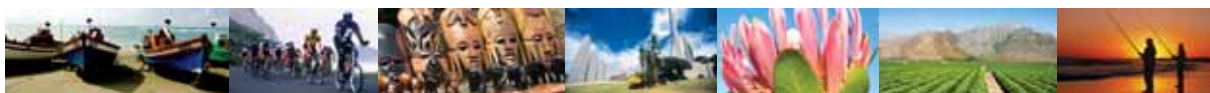| TIME:	VENUE:	ACTIVITY:
		350: Implementation of a Patient Data Management System – An evaluation study of workflow alterations (T Bürkle, I Castellanos, H Tech, HU Prokosch)
		427: Clinicians and information technology support services in practice settings - a pilot study (J Fernando)
		785: Complexities in securing sustainable IT infrastructures in Hospitals: The many faces of Local Technical Support (L Stub Petersen)
	2.6.6	**Mining Biomedical Literature** **Chair: James Hunter**
		941: The Trajectory of Scientific Discovery (T Cohen, R Schvaneveldt)
		612: Exploitation of linguistic indicators for automatic weighting of synonyms induced within three biomedical terminologies (N Grabar, T Hamon)
		751: Identification of relations between risk factors and their pathologies or health conditions by mining scientific literature (T Hamon, M Graña, V Raggio, N Grabar, H Naya)
		108: Towards Automating the Initial Screening Phase of a Systematic Review (T Bekhuis, D Demner-Fushman)
		950: Text Mining approaches for Automated Literature Knowledge Extraction and Representation (A Nuzzo, F Mulas, M Gabetta, E Arbustini, B Zupan, C Larizza, R Bellazzi)
		National and International Health IT Track
		Papers
	2.4.4 & 2.4.5	**Nationwide Implementation** **Chair: Antoine Geissbuhler**
		251: Interoperability prototype between hospitals and general practitioners in Switzerland (B Alves, H Müller, M Schumacher, D Godel, OA Khaled)
		285: eHealth in Thailand: the current status (B Kijsanayotin, N Kasitipradith, S Pannarunothai)
		348: Diffusion and use of Electronic Health Record Systems in Norway (V Heimly, A Grimsmo, A Faxvaag, TP Henningsen)
		406: A countrywide clinical informatics project in Uruguay. (A Margolis, L Bessonart, A Barbiel, P Pazos, J Gil, H Machado, A Vero)
		494: EHR Implementation in South Africa: How do we get it right? (P Yogeswaran, G Wright)
	2.4.6	**National and International H-IT I** **Chair: Nancy Lorenzi**
		626: Monitoring diseases across borders: African regional integrative information systems (T Simbini, P Nesara, C Cossio, R Foster)
		274: Experience Implementing Electronic Health Records in Three East African Countries (W Tierney, M Achieng, E Baker, A Bell, P Biondich, P Braitstein, D Kayiwa, S Kimaiyo, B Mamlin, B McKown, N Musinguzi, W Nyandiko, J Rotich, J Sidle, A Siika)
		754: A Socio-Technical Approach to Continuity of Care and Electronic Records in the South African Context (N Mostert, D Pottas, M Korpela)
		854: Implementing OpenMRS for patient monitoring in an HIV/AIDS care and

TIME:	VENUE:	ACTIVITY:
		treatment programme in rural Mozambique (EJ Manders, E José, M Solis, J Burlison, JL Nhampossa, T Moon, Moon, s Vermund)
		940: A Business case for HIT Adoption: effects of "meaningful use" EHR financial incentives on clinic revenue (N Behkami, D Dorr, S Morrice)
12h15 – 13h30	Exhibition Hall 4	**Lunch** Poster Session & Poster Tour 3
13h30 – 15h00		**Parallel Session**
Session 3		**Papers**
	1.4.3 & 1.4.4	**e-Learning** Chair: Peter Murray 17: Investigating the potential of e-learning in healthcare postgraduate curricula: A structural equation model (M Katharaki, S Daskalakis, J Mantas) 109: An open repositories network development for medical teaching resources (G Soula, S Darmoni, P Le beux, Jm Renard, B Dahamna, M Fieschi) 374: Teaching During a Pandemic Event: Are Universities Prepared? (J Gordon, E Weiner, R McNew, P Trangenstein) 815: Earnings in e-learning: Knowledge, CME credits or both? Hints From Analysis of Attendance Dynamics and Users' Behaviour (MC Mazzoleni, C Rognoni, e Finozzi, M Landro, E Capodaglio, M Imbriani, I Giorgi)
	1.6.1 & 1.6.2	**Social Networking and Virtual Reality** Chair: Warner Slack 436: The Influence of Crowds on Consumer Health Decisions: An Online Prospective Study (A Lau, T Kwok, E Coiera) 349: Using the Virtual Reality World of Second Life to Teach Nursing Faculty Simulation Management (E Weiner, R McNew, P Trangenstein, J Gordon) 607: An Analysis of Nursing Education's Immersion into Second Life, a Multi-user Virtual Environment (MUVE) (P Trangenstein, E Weiner, J Gordon, R McNew)
		Panels
	1.6.3 & 1.6.4	733: Documentation of care: transition from paper to digital communication in clinical workflow (J Aarts, J Brixey, R Koppel, A Moen)
	2.4.1 & 2.4.2	402: Monitoring the effects of health information systems (C Nøhr, A Faxvaag, F Lau)
	2.4.3	132: Doctors, Patients and computers: Evaluating a relationship in evolution (C Pearce, S DeLusignan, A Schackak, A Kushniruk)
	1.4.1 & 1.4.2	995: Towards a Global Dimension in Grid Computing for Biomedical Research: Perspectives and Challenges (G Mihalas, R Haux, YCJ Li, JC Silverstein, Y Legre, F Quiros)
	2.6.4 & 2.6.5	792: Global Insights on the Implementation and Evaluation of Medication-related Decision Support (S Phansalkar, R Beuscart, A Sheikh, D Bates)
		National and International Health IT Track – Panels Chair: Beatriz De Faria Leao
	2.4.6	75: International efforts towards cost effective High quality health care-Leverging Telemedicine for Improved Access (J Srini, A Elgoni, J Mulcahy)
	2.6.6	556: Large Scale EHR- Implementations: The Other Side of the Story Social,

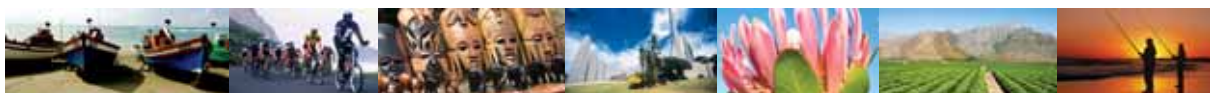| TIME:	VENUE:	ACTIVITY:
	Roof Terrace	*Organisational & Cultural Aspects (A Kouroubali, L Esterle, G De Moor, M Bruun-Rasmussen)* *442: Singapore's National EHR − Informing the Road to 2010 & Beyond (S Muttitt, S McKinnon, C Brooks, S Rainey)*
15h00 − 15h30	Exhibition Hall 4	**Break**
15h30 − 17h15		**Parallel Session**
Session 4		**Papers**
	Audi 1	**Terminologies at Use** **Chair: James Cimino** *901: Using the Abstraction Network in Complement to Description Logics for Quality Assurance in Biomedical Terminologies - A Case Study in SNOMED CT (D Wei, O Bodenreider)* *252: Evaluation of a French Medical Multi-Terminology Indexer for the Manual Annotation of Natural Language Medical Reports of Healthcare-Associated Infections (S Sakji, Q Gicquel, S Pereira, I Kergourlay, D Proux, S Darmoni, MH Metzger)* *389: Implementing rules to improve the quality of post-co-ordination terms with SNOMED CT (H Navas, A Lopez Osornio, L Gambarte, G Elias Leguizamon, S Wasserman, N Orrego, D Luna, F Bernaldo de Quiros)* *572: Enhancing a Taxonomy for Health Information Technology: An Exploratory Study of User Input Towards Folksonomy (B Dixon, J McGowan)* *948: Exploiting UMLS Semantics for Quality Assurance Purposes (H Erdogan, E Erdem, O Bodenreider)*
	1.4.1 & 1.4.2	**Information Needs and Teleconsultation** **Chair: Sabine Koch** *642: Information needs in home-based healthcare in South Africa (R de la Harpe, J Barnes, M Korpela)* *680: Barriers of Obtaining Health Information Among Diabetes Patients (M James, Y Chen)* *678: Web-Based Asynchronous Teleconsulting for Consumers in Colombia: A 2-year Follow Up. (JI Valenzuela, C Lopez, Y Guzman)* *295: The Role of Patients in Transiting Personal Health Information: A Field Study (Y Chen)* *504: A Mobile Phone Based Telemonitoring Concept for the Simultanous Acquisition of Biosignals and Physiological Parameters (H Kumpusch, D Hayn, K Kreiner, M Falgenhauer, J Morak, G Schreier)*
	1.4.3 & 1.4.4	**Advances in Medical Informatics** **Chair: Abdul Roudsari** *916: 10 Years Experience with Pioneering Open Access Publishing in Health Informatics: The Journal of Medical Internet Research (JMIR) (G Eysenbach)* *308: Evaluation of the use of an "ask-the-expert" e-consultation service for support on health-related requests (N Nijland, L Van Gemert-Pijnen, S Kelders,*

TIME:	VENUE:	ACTIVITY:
		B Brandenburg, E Seydel)
		709: Strengthening Health Systems through training of Health Care Providers in the conduct of Routine Waiting Time and System Efficiency Surveys (G Reagon, E Igumbor)
		706: Access Control in Healthcare: the methodology from legislation to practice (A Ferreira, R Cruz-Correia, D Chadwick, L Antunes)
	1.6.1 & 1.6.2	**CPOE** **Chair: Alvaro Margolis** *140: Optimising Medication Reminders Using a Decision-Theoretic Framework (M Pavel, H Jimison, T Hayes, N Larimer, S Hagler, Y Vimegnon, T Leen, U Ozertem)* *330: Case Study: Analysis of End-User Requests on Electronic Medical Record and Computerised Physician Order Entry System of Seoul National University Hospital in Korea (YA Kim, SY Shin, EM Jo, CH Park, MA Hwang, KH Kim, CK Chung)* *650: Method for testing a CPOE system in the medication process in a cardiology ward (C Nøhr, M Sørensen, A Kushniruk)* *787: Discuss Now, Document Later: CIS/CPOE Perceived to be a 'Shift Behind' in the ICU (S Collins, S Bakken, D Vawdrey, E Coiera, L Currie)*
	1.6.3 & 1.6.4	**Electronic Guidelines and Protocols** **Chair: Mor Peleg** *305: Supporting Human Interaction and Human Resources Co-ordination in Distributed Clinical Guidelines (A Bottrighi, M Torchio, S Montani, G Molino, P Terenziani)* *79: Goal-based design pattern for delegation of work in health care teams (A Grando, M Peleg, D Glasspool)* *627: Data mining techniques for analysing stroke care processes (S Panzarasa, S Quaglini, L Sacchi, C Anna, G Micieli, M Stefanelli)* *629: Design of a continuous multifaceted guideline-implementation strategy based on computerised decision support (M van Engen-Verheul, N de Keizer, I Hellemans, R Kraaijenhagen, A Hasman, N Peek)* *225: Analysing effects of providing decision support feedback at ward rounds on guideline adherence − The importance of feedback usage analysis and statistical control charts (A Abu-Hanna, S Eslami, M Schultz, E de Jonge, N Keizer)*
	2.4.1 & 2.4.2	**Imaging** **Chair: Anthony Maeder** *239: Indexing the medical open access literature for textual and content-based visual retrieval (I Eggel, H Müller)* *355: Evaluation of Methods for Bolus Arrival Time Determination using a Four-dimensional MRA Flow Phantom (D Säring, ND Forkert, T Illies, J Fiehler, H Handels)* *543: Automatic Analysis of the Anatomy of Arteriovenous Malformations using 3D and 4D MRA Image Sequences (ND Forkert, D Säring, H Handels)* *354: A Block-matching based technique for the analysis of 2D gel images*

(A Freire, JA Seoane, Á Rodríguez, C Ruiz-Romero, G López-Campos, J Dorado)

22: A Web Service for enabling Medical Image Retrieval Integrated into a Social Medical Image Sharing Platform (M Niinimaki, X Zhou, E de la Vega, M Cabrer, H Müller)

2.4.4 & 2.4.5 | **Regional/National Information Systems** | **Chair: Moura Lincoln**

674: The Evolution and Uptake of a Drug Information System: the Case of a Small Canadian Province (N Mensink, G Paterson)

327: Towards a National Health Information System Evaluation (H Hyppönen, P Doupi, P Hämäläinen, J Komulainen, R Suomi, P Nykänen)

421: CEDRIC: A Computerised Chronic Disease Management System for Urban, Safety Net Clinics (O Ogunyemi, S Mukherjee, C Ani, D Hindman, S George, R Ilapakurthi, M Verma, M Dayrit)

663: Experience Implementing a Point-of-Care Electronic Medical Record System for Primary Care in Malawi (E Waters, J Rafter, G Douglas, M Bwanali, D Jazayeri, H Fraser)

771: LuMiR: The region-wide EHR-S in Basilicata (M Contenti, G Mercurio, FL Ricci, LD Serbanati)

2.6.1 & 2.6.2 | **Public Health Informatics II** | **Chair: Sedick Isaacs**

110: A full-text information retrieval system for an epidemiological registry (M Cuggia, S Bayat, N Garcelon, L Sanders, F Rouget, A Coursin, P Pladys)

616: Using a File Audit to Evaluate Retention in Care and Patient Outcomes in a Programme to Decentralise Antiretroviral Treatment to Primary Health Care Facilities in a High Prevalence Setting in KwaZulu-Natal, South Africa. (C Searle, A Ramkissoon, T Govender)

783: CEMARA an information system for rare diseases (P Landais, C Messiaen, A Rath, L Le Mignot, E Dufour, M Ben Saïd, JP Jaïs, L Toubiana, G Baujat, E Bourdon-Lanoy, M Gerard-Blanluet, C Bodemer, S Aymé, M Le Merrer, A Verloes)

971: The Emergence of Mobile-Supported National Health Information Systems in Developing Countries (I Asangansi, K Braa)

918: Design and Assessment of a Common, Multi-National Public Health Informatics Infrastructure to Enable H1N1 Influenza Surveillance (A Advani, A Turuvekere, C Liu, K Rubin, C Lamer, T Cullen)

2.6.4 & 2.6.5 | **Security and Privacy** | **Chair: Henry Feldman**

237: HIPAA Compliance and Patient Privacy Protection (T Grandison, R Bhatti)

81: Deployment of a Highly Secure Clinical Data Repository in an Insecure International Environment (H Feldman, S Reti, E Kaldany, C Safran)

265: Healthcare System Evolution towards SOA: A Security Perspective (V Koufi, F Malamateniou, G Vassilacopoulos, D Papakonstantinou)

366: Trust - can it be controlled (D Box, D Pottas)

273: Healthcare Chains – Enabling Application and Data Privacy Controls for Healthcare Information System (E Omran, T Grandison, S Abu Almaati)
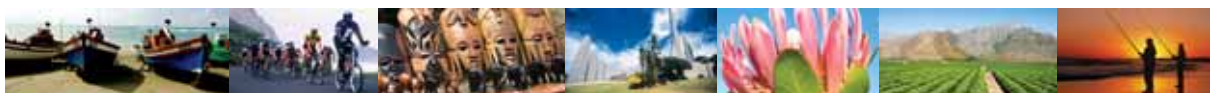
TUESDAY 14 SEPTEMBER 2010

TIME:	VENUE:	ACTIVITY:
		National and International Health IT Track - Papers
	2.4.3	**National and International Health IT I** Chair: Beatriz De Faria Leao *370: eHealth Vision Towards Cooperative Patient Care – Domain Fields and Architectural Challenges of Regional Health Care Networks (N Gusew, A Gerlach)* *723: Evolution of Hospital Information Systems and the Role of Electronic Patient Records: from the Italian Scenario to a Real Case (P Locatelli, N Restifo, L Gastaldi, E Sini)* *734: Learning lessons from electronic prescribing implementations in secondary care (T Cornford, I Savage, Y Jani, B Dean Franklin, N Barber, A Slee, A Jacklin)* *378: Empirical Analysis of the Reduction of Medical Expenditures by eHealth (Y Akematsu, M Tsuji)* *790: A Conceptual Framework for Analysing How Canadian Physicians are Using Electronic Medical Records in Clinical Care (G Paterson, N Shaw, A Grant, K Leonard, E Delisle, S Mitchell, M McCarrey, B Pascal, N Kraetschmer)*
17h15 – 18h45		***Parallel Session***
		Poster Session & Poster Tour 4
Session 5		***Workshops***
	2.6.1 & 2.6.2	**STARE Evaluation** *238: Guidelines for the reporting of Health Informatics evaluation studies: Their rationale and application (J Talmon, E ammenwerth, J Brender, M Rigby, P Nykanen, N de Keizer)* *STARE-HI (Statement on the reporting of evaluation studies in health informatics) provides authors, reviewers and editors with guidelines on what to include in a report on a health informatics evaluation study. This guideline is endorsed by IMIA. The objective of this workshop is to present the principles behind the guideline as well as to address how it can be used in practice. (62)*
	2.6.4 & 2.6.5	**Personal Health Information Systems** *1014: Personal Health Information Management Systems: Tools and Strategies for Citizens' Engagement (H Strachan, P Murray, S Bakken, W Goossen, L Currie)* *PHIMS encompass a broad range of information processing tools and strategies, computerised or not, that assist individuals in managing their engagement with healthcare services and in executing health actions. The first generation PHIMS focused on acquiring and storing health data. Next generation PHIMS solutions effectively use data to guide lay people in taking health actions. The move for PHIMS to support the management of health and not just health information has a number of challenges for nurses. These challenges were explored at the IMIA 10th World Congress on Nursing Informatics Post Congress Workshop in June 2009. The resulting publication provides guidelines for creating and using information technologies in support of an informed, engaged population.* *The objectives of this workshop are to bring together section authors to share the key issues highlighted during the previous workshop, and the resulting guidelines and recommendations, and to discuss with participants the challenges of using these guidelines and recommendations in their organisations and countries. (159)*

| | 2.4.6 | **Sensor-Bases Falls Detection** |

689: Workshop: Sensor-based fall detection and prediction (M Marschollek, M Goevercin, J Spehr, S Redmond)

Falls are among the predominant causes for morbidity and mortality. Recent developments in sensor technology and algorithms allow for the assessment of mobility-associated parameters using small mobile or home-based devices. The data gathered can be used both for detecting fall events and for predicting future falls.

Following an introduction to the clinical problem area of falls, fall-related consequences and established clinical fall risk assessment tests, the aim of this workshop is to provide and in-depth introduction to current research in the field of sensor-based fall detection and prediction. Different technical approaches as well as possibilities for evaluating these approaches in realistic settings will be discussed. (105)

17h15 – 18h15 — *Scientific Demonstrations*

| | Audi 2 | **Applications in Data Management**   Chair: Jana Zvarova |

103: A Web-based, Searchable Database of Orthodontic Case Files for Patient Care, Education, and Research (P Kroth, H Edgar, E Harris, S Kalishman)

891: REDCap (Research Electronic Data Capture): Informatics Support for the Clinical And Translational Research Enterprise (P Harris, R Taylor, J Wang)

619: REST Based Services and Storage Interfaces for openEHR Implementations (E Sundvall, M Nyström, M Eneling, D Karlsson, H Åhlfeldt)

| | 1.4.1 & 1.4.2 | **Public Health Application**   Chair: Sedick Isaacs |

124: Climate, Satellites, and Public Health (F Grant, G Higgins, J Schindler)

739: ETR.Net and EDRWeb: Surveillance Tools for Standard and Drug-Resistant Tuberculosis (P Maree, M Naicker, J Ferguson)

801: RFID enabled cell-phones used for rapid diagnosis of pneumonia by health workers and laypersons using IMCI guidelines in low-resource, low-literacy settings (A Habib, A Abdul-Karim, J Irani, A Khan)

| | 1.4.3 & 1.4.4 | **Communication & Patient management**   Chair: Isabella Scandurra |

564: Data Are Faster Than Patients - Improving Interhospital Communication During Emergency Transfers (P Neuhaus, M Ataian, C Juhra, T Weber, B Fritzen, S Hentsch, F Ueckert)

943: Care Management Plus: A hands on, tech-driven solution for older patients (N Behkami, D Dorr, C Brunker)

414: Facilitating Communication With Junior Doctors to Improve Patient Safety (A Young, E Miles, J Bloor)

| | 1.6.1 & 1.6.2 | **Educational Applications**   Chair: Maria Cristina Mazzoleni |

983: The e-Bug project – teaching children hygiene and antibiotic resistance using Web games (D Farrell, P Kostkova, D Lecky, C McNulty)

76: Practical Resources for Health Informatics Professionals (B Dixon, C Cusack, A Zafar, E Whipple, J McGowan)

TUESDAY 14 SEPTEMBER 2010

TIME:	VENUE:	ACTIVITY:
		382: Second Life®: Educating in the Virtual Environment (J Brixey, WS Erdley, M Hansen, S Stewart)
	1.6.3 & 1.6.4	**Visualisation** **Chair: Milos Hauskrecht** 897: MediVis: A Physics-Enhanced visualisation Tool for Review of Medication Data (J Duke) 810: SequenceViewer: visualisation of genes sequences (A Sallaberry, N Pecheur, S Bringay, M Roche, M Teisseire) 485: Integrated information visualisation for enhanced decision making during antibiotic treatment in intensive care (J Forsman, M Falkenhav, N Anani, S Koch)
	2.4.1 & 2.4.2	**Innovations in Information Retrieval** **Chair: Niels Peek** 657: Web-Based Medical Image Retrieval Systems: a demonstration of the utility of text, images, and user input in retrieving relevant images (J Kalpathy-Cramer, S Bedrick, S Radhouani, W Hersh, I Eggel, H Müller) 141: Automatic Summarisation of Neonatal ICU Data in Natural Language: A Demonstration of the BabyTalk Systems (J Hunter, Y Freer, A Gatt, S Mahamood, N McIntosh, W Moncur, F Portet, E Reiter, C Sykes, S Sripada, D Westwater) 14: A Web Interface to 3D Case—Based Information Retrieval (F Gaillard, A Depeursinge, H Müller)
	2.4.4 & 2.4.5	**Innovation in Telemedicine and Mobile Phone Applications Chair: Cristiana Larizza** *245: Investigating the Effectiveness of Wiping Movements on a Single-Touch Screen for Information Input of Users with Impaired Motor Skills (A Mertens, P Przybysz, N Behnke, C Nick)* *276: Telematic Support of Dispatch in Trauma Care (C Juhra, T Vordemvenne, R Hartensuer, F Ückert, T Weber, M Ataian, S Hentsch, M Raschke)*
19h30	Ballroom	***Gala Dinner***

WEDNESDAY 15 SEPTEMBER 2010

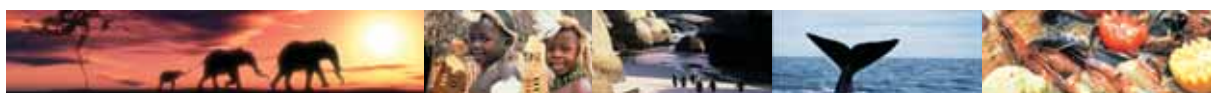| TIME:	VENUE:	ACTIVITY:
08h30 – 10h00		**Semi Plenary**
Session 1	**Audi 1**	Semi Plenary A 994 Nursing Informatics across Continents: the IMIA NI SIG (H Marin, P Abbott, P Weber, H Park, G Wright)
	Audi 2	**Semi Plenary B** **Panel** Health Information System Implications of Large Sale Healthcare Reform
10h00 – 10h30	Exhibition Hall 4	**Break**
10h30 – 12h15		**Parallel Session**
Session 2		**Papers**
	1.4.1 & 1.4.2	**Decision Support in Clinical Practice II** **Chair: Dean Sittig** *134: MET3-AE System to Support Management of Pediatric Asthma Exacerbation in the Emergency Department (S Wilk, W Michalowski, K Farion, J Sayyad Shirabad)* *182: AALIM: A Cardiac Clinical Decision Support System Powered By Advanced Multi-modal Analytics (D Gruhl, A Amir, D Beymer, G Julia, G Hayit, A Hobbs, K Pohl, T Syeda-Mahmood, J Terdiman, F Wang)* *233: Integration of Workflow and Rule Engines for Clinical Decision Support Services (L JaeHoon, K JeongAh, C InSook, K Yoon)* *727: Using a Business Rule Management System to Improve Disposition of Traumatized Patients (P Neuhaus, O Noack, TA Majchrzak, F Ückert)* *938: Implementation of a Clinical Decision Support System using a Service Model: Results of a Feasibility Study (D Borbolla, C Otero, DF Lobach, K Kawamoto, AM Gomez Saldaño, G Staccia, G Lopez, D Luna, F Gonzalez Bernaldo de Quiros)*
	1.4.3 & 1.4.4	**DSS in Pharmacovigilance and Adverse Drug Reaction Chair: Casimir Kulikowski** *691: Modeling, building and evaluating an ontology for the automatic characterization of adverse drug effects during pharmacovigilance (C Duclos, LF Soualmia, S Krivine, A Jamet, A Lillo Louet)* *360: Documentation in Pharmacovigilance: using an ontology to extend and normalize Pubmed queries (D Delamarre, A Lillo-Le Louët, L Guillot, A Jamet, E Sadou, T Ouazine, A Burgun, MC Jaulent)* *638: Can F-MTI semantic-mined drug codes be used for Adverse Drug Events detection when no CPOE is available? (B Merlin, E Chazard, S Pereira, E Serrot, S Sakji, R Beuscart, S Darmoni)* *309: A Qualitative Approach to Signal Mining in Pharmacovigilance using Formal Concept Analysis (A Lillo-Le Louët, Y Toussaint, J Villerd)* *284: Extraction of Adverse Drug Effects from Clinical Records (E Aramaki, Y Miura, M Tonoike, T Ohkuma, H Mashuichi, K Waki, K Ohe)*

WEDNESDAY 15 SEPTEMBER 2010

TIME:	VENUE:	ACTIVITY:

<table>
<tr><td>1.6.1 & 1.6.2</td><td>

EHR Architectures   **Chair: Patrice Degoulet**

593: Balancing centralised and decentralised EHR approaches to manage standardisation (KH Rosenbeck, AR Rasmussen, P Elberg, SK Andersen)

636: A Scheme for Assuring Lifelong Readability in Computer Based Medical Records (Y Matsumura, N Kurabayashi, T Iwasaki, S Sugaya, K Ueda, T Mineno, H Takeda)

698: Patient's Needs Assessment Documentation in Multidisciplinary Electronic Health Record (K Häyrinen, K Saranto)

978: A Lab-EMR Interoperability Profile as an eHealth Architecture Component for Resource-Constrained Settings (W Lober, D Revere, R Hills)

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<tr><td>1.6.3 & 1.6.4</td><td>

Nursing Documentation and Terminology   **Chair: Evelyn Hovenga**

301: Ontology Based Modeling and Execution of Nursing Care Plans and Practice Guidelines (M Din, R Abidi, B Jafarpour)

664: Mapping ICNP Version 1 Concepts to SNOMED CT (HA Park, C Lundberg, A Coenen, D Konicek)

236: The Need for Standardised Documents in Continuity of Care: Results of Standardising the eNursing Summary (U Hübner, D Flemming, KU Heitmann, F Oemig, S Thun, A Dickerson, M Veenstra)

297: Electronic System for Clinical Documentation of Structured Nursing Diagnosis, Results, and Intervention (HHC Peres, DdALMd Cruz, AFC Lima, RR Gaidzinski, DCF Ortiz, MMe Trindade, R Tsukamoto, NBd Oliveira)

461: Adopting the National Structure of Nursing Documentation is Consequential in the Development of Care (E Häyrinen, K Lemmetty, T Ala-Hiiro, S Pitkänen)

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<tr><td>2.4.1 & 2.4.2</td><td>

Organisational issues   **Chair: Andrew Georgiou**

331: MEDAL: Measuring of Emergency Departments Adaptive Load (E Vitkin, B Carmeli, Y Marmor, O Greenshpan, D Baras)

816: Theories, Models and Frameworks for Diagnosing Technology-Induced Error? (E Borycki, A Kushniruk, J Brender)

662: Process-Aware EHR BPM Systems: Two Prototypes and a Conceptual Framework (C Webster, M Copenhaver)

712: Advancing the State-of-the-Art for Virtual Autopsies – Initial Forensic Workflow Study (I Scandurra, C Forsell, A Ynnerman, P Ljung, C Lundström, A Persson)

721: Why do People Want a Paper Copy of Their Electronic Patient Record? (T Wibe, M Ekstedt, R Hellesø, L Slaughter)

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<tr><td>2.4.4 & 2.4.5</td><td>

Primary and Home Care   **Chair: Gunther Eysenbach**

257: A Home-centered ICT Architecture for Health-enabling Technologies (B Song, M Marschollek, KH Wolf, M Gietzelt, T Franken, R Haux)

937: Development and Implementation of an Integrated EHR for Homecare Service: A South American Experience (J Aguilera Díaz, AE Arias, CM Budalich, SE Benítez, G López, D Borbolla, F Plazzotta, D Luna, F González Bernaldo de Quirós)

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514: The need for a new care model: Getting to grips with collaborative home care (M Winge, LÅ Johansson, M Nyström, E Lindh-Waterworth, B Wangler)

470: Understanding Resistance towards Electronic Patient Health Data in South Australian Family Practice (J Knight, M Patrickson, B Gurd)

2.6.1 & 2.6.2

Systems for Reasoning and Representing Biomedical Knowledge   Chair: Enrico Coiera

829: Bridging the semantics gap between terminologies, ontologies, and information models (S Schulz, D Schober, C Daniel, MC Jaulent)

258: Towards an implicit treatment of periodically-repeated medical data (B Stantic, P Terenziani, A Sattar, A Bottrighi, G Governatori)

497: Towards iconic language for patient records, drug monographs, guidelines and medical search engines (JB Lamy, C Duclos, S Hamek, MC Beuscart, G Kerdelhué, S Darmoni, M Favre, H Falcoff, C Simon, S Pereira, E Serrot, T Mitouard, E Hardouin, Y Kergosien, A Venot)

871: Combining Relevance Assignment with Quality of the Evidence to Support Guideline Development (M Fiszman, B Bray, D Shin, H Kilicoglu, G Bennett, O Bodenreider, T Rindflesch)

872: Semantic Reasoning with XML-based Biomedical Information Models (M O'Connor, A Das)

2.6.4 & 2.6.5

Terminology Linking   Chair: Barry Smith

136: Linking UniProt and MeSH – A Case Study on Human Protein Terms (E Beisswanger, J Wermter, U Hahn)

264: Querying the National Drug File Reference Terminology (NDFRT) to Assign Drugs to Decision Support Categories (L Simonaitis, G Schadow)

324: Visualisation of disease distribution with SNOMED CT and ICD-10 (M Nyström, A Vikström, G Nilsson, H Örman, H Åhlfeldt)

344: Using SNOMED CT to identify a Crossmap between two Classification Systems: A Comparison with an Expert-Based and a Data-Driven Strategy (F Bakhshi-Raiez, R Cornet, R Bosman, H Joore, N de Keizer)

356: An Automated Approach to map a French terminology to UMLS (T Merabti, P Massari, M Joubert, E Sadou, T Lecroq, H Abdoune, JM Rodrigues, SJ Darmoni)

2.4.3

User Satisfaction   Chair: Marie-Catherine Beuscart-Zéphir

30: Computerisation of a Preanesthetic Evaluation and User satisfaction evaluation (A Arias, S Benitez, D Canosa, D Borbolla, F Plazzotta, M Casais, H Michelangelo, D Luna, F González Bernaldo de Quiróz)

38: User Perceptions of Benefits of an Electronic Medical Record on a Latin American Medical Portal (D Flichtentrei, F Braga, D Garcia, J Jamsech, C Otero, M Waldhorn, D Luna, F Gonzalez Bernaldo de Quiros)

219: Evaluating the importance level of different aspects of electronic blood transfusion system form the end user's point of view (K Goddard, O Shabestari, J Kay, A Roudsari)

522: Can Signalling Theory and the Semaphoric Nature of Information Systems Explain Clinicians' Ambivalence to Informatics? (D Meyer, B Cox)

982: Factors associated with health information system success: Results of a survey of hospitals in South Africa (L Hanmer, S Isaacs, JD Roode)

WEDNESDAY 15 SEPTEMBER 2010

TIME:	VENUE:	ACTIVITY:
12h15 – 13h30	Exhibition Hall 4	**Lunch**
13h30 – 15h00		**Parallel Session**
Session 3		**Papers**
	Roof Terrace	**Consumer Terminology** **Chair: Suzanne Bakken** 23: A Usability Study of Patient-friendly Terminology in an EMR System (Y Hong, K Ehlers, R Gillis) 661: Characterizing Consumer Health Terminology in the Breast Cancer Field (R Messai, M Simonet, N Souf-Bricon, M Mousseau) 803: Can Multilingual Machine Translation Help Make Medical Record Content More Comprehensible to Patients? (Q Zeng-Treitler, H Kim, G Rosemblat, A Keselman) 876: Exploring Relations among Semantic Groups: A Comparison of Concept Co-occurrence in Biomedical Sources (S Kandula, Q Zeng-Treitler)
		Panels
	1.4.1 & 1.4.2	319: The Need to develop Health Informatics to become an Evidence-based Health Science, and the Role of the Global ACE Initiative (M Rigby, J Talmon, M Khaled)
	1.4.3 & 1.4.4	78: Global Efforts for eHealth Interoperability: The Case of SNOMED CT (J Zelmer, J Srini, K Hannah, S Muttitt)
	1.6.1 & 1.6.2	121: Sharing guidelines knowledge: can the dream come true? (M Peleg, J Fox, R Greenes, S Rafaeli)
	1.6.3 & 1.6.4	413: The Future of Clinical Decision Support: Leveraging the Promise of Molecular Medicine (R Jenders, KP Adlassnig, S Muttitt, F Quirós)
	2.4.1 & 2.4.2	164: eHealth – nurturing patient empowerment? State of the art and reflections from four continents (S Koch, T Hasvold, A Kushniruk, A Marcelo, GB Kouematchoua Tchuitcheue)
	2.4.4 & 2.4.5	189: Health Information Systems; 30 years of evolution (A Bakker, M Ball, L Christian, R Otto)
	2.6.1 & 2.6.2	223: Anticipating and Addressing the Unintended Consequences of Health Information Technology and Policy (J Starren, D Bates, N Lorenzi, V Patel, E Shortliffe)
	2.6.4 & 2.6.5	1017: Pioneering Streams in Medical Informatics History: I M Gelfand and others beyond the Mainstream (C Kulikowski, M Shifrin)
15h00 – 15h30	Exhibition Hall 4	**Break**
15h30 – 17h15	Audi 1	**Closing IMIA Plenary and Awards**
19h30		**Theme Dinner**