

8-29-2017

# State of the College Address, 2017: College of Sciences

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# State of the College of Sciences

Old Dominion University

August 29, 2017



# A Year of Transition ...

**Chris Platsoucas**

10 years of service as our Dean!

**Thank you!**



Reception this fall – stay tuned

# External Awards and Honors



Jim Bliss named a fellow to the Human Factors Ergonomics Society in 2016



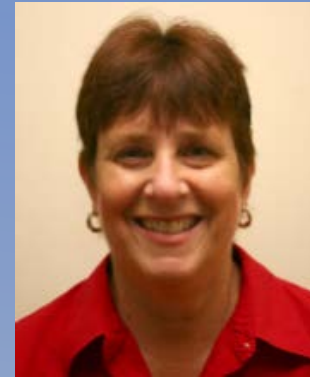
David Burdige named a Fellow of the Association for the Sciences of Limnology and Oceanography



Rodger Harvey named a Fellow & Fulbright Distinguished Arctic Chair



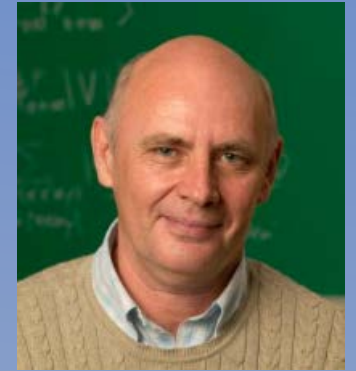
Cynthia Jones, named a Fellow of the American Fisheries Society



Robin Lewis selected as a Fellow in Division 35 (Psychology of Women) of APA and a Fellow in the Association for Psychological Science.



Dr. Mark Scerbo named Fellow in the Society for Simulation in Healthcare.

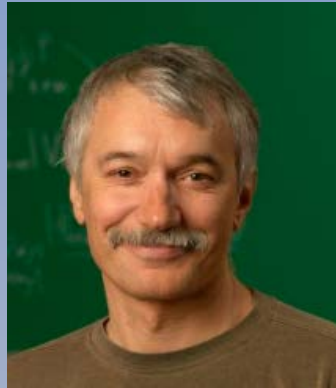


Anatoly Radyushkin recipient of the SCHEV Outstanding Faculty Award

# University Awards and Honors



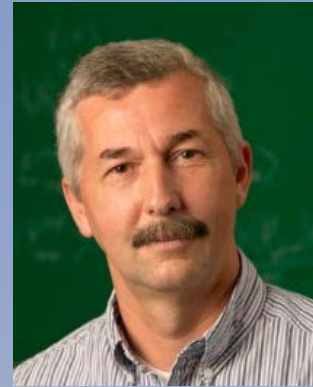
Kent Carpenter received the University Distinguished Research Award



Ian Balitsky, named Eminent Scholar



Michelle Kelley, named Eminent Scholar



Alex Godunov named University Professor



Robert Strozak received the Teaching with Technology Award.



Colm Whelan awarded the Provost's Award for Leadership in International Education

# Promotion and Tenure

## Award of Tenure

### Promotion to Professor



Ian Bartol  
Department of  
Biological Sciences



Jing He  
Department of  
Computer Science



Alvin Holder  
Department of  
Chemistry & Biochemistry



James Paulson  
Department of  
Psychology



James Lee  
Department of  
Chemistry & Biochemistry

### Promotion to Associate Professor with Tenure



Eric Walters  
Department of  
Biological Sciences

# Promotion

## Promotion to Senior Lecturer



Ayman Elmeselami  
Department of  
Computer Science



Amy Landers  
Department of  
Psychology



Katherine Smith  
Department of  
Mathematics &  
Statistics



Shannon Wells  
Department of OEAS

## Promotion to Master Lecturer



Shari Davis  
Department of  
Mathematics &  
Statistics



# Department Chairs AY 2016-17



**Dayle Daines**  
Interim Chair  
Biological  
Sciences



**John Cooper**  
Interim Chair  
Chemistry &  
Biochemistry



**Ravi Mukkamala**  
Interim Chair  
Computer  
Science



**Hideaki Kaneko**  
Chair  
Mathematics &  
Statistics



**Rodger Harvey**  
Chair  
Ocean, Earth &  
Atmospheric  
Sciences



**Charles Sukenik**  
Chair  
Physics



**Michelle Kelley**  
Chair  
Psychology





# Department Chairs AY 2017-18



**Dayle Daines**  
Interim Chair  
Biological  
Sciences



**John Cooper**  
Interim Chair  
Chemistry &  
Biochemistry



**Ravi Mukkamala**  
Interim Chair  
Computer  
Science



**Hideaki Kaneko**  
Chair  
Mathematics &  
Statistics



**Fred Dobbs**  
Chair  
Ocean, Earth &  
Atmospheric  
Sciences



**Charles Hyde**  
Chair  
Physics



**Michelle Kelley**  
Chair  
Psychology



# New Faculty

## Department of Mathematics & Statistics

BS – Mathematics:  
Big Data Analytics Major

Carl A. Schulz Memorial  
Scholarship



Dr. Yuesheng Xu  
Professor

Data Science, Medical  
Imaging, Image and  
Signal Processing,  
Wavelet Analysis,  
Machine Learning,  
Boundary Integral Eqs



Dr. He Huang  
Lecturer

Condensed Matter  
Physics  
Photoacoustic Image  
Reconstruction

# Department of Ocean, Earth & Atmospheric Sciences

Zuzy Abdala—NSF Graduate Research Fellowship Program

Amanda Laverty—NOAA Knauss Fellowship, Marine Debris Program

Rodger Harvey—Fellow, Fulbright Distinguished Arctic Chair

David Burdige—Fellow, Assoc. for the Sciences of Limnology and Oceanography

Cynthia Jones—Fellow, American Fisheries Society

Three cruises to the Southern Ocean (Dreux Chappell, David Burdige, Pete Sedwick)

Ben Hamlington—Team Lead, NASA Sea Level Change Team

## New Faculty



Richard (Rip) Hale  
Assistant Professor

Marine Geology

Coastal Processes

Sediment Transport

Delta Dynamics

# Department of Physics

Assistant Professor Ted Rogers just received a CAREERS grant from Dep't of Energy

Dr. Raúl Briceño received the Kenneth Wilson Award (named for a Nobel Laureate) for excellence in Lattice Field Theory, June 2017

Prof. Ian Balitski named Eminent Scholar, bringing the number in Physics to ten

Delicia Malin named the May 2017 ODU Employee of the Month

Prof. Alex Godunov named University Professor

Prof. Anatoly Radyushkin 2017 SCHEV Outstanding Faculty award (the 4<sup>th</sup> for Physics)

Shout out to Planetarium Director Justin Mason for Eclipse2017!

# New Faculty



Dr. Raúl Briceño  
Assistant Professor

Nuclear & Particle  
Theory

Lattice Quantum Chromo  
Dynamics



# Department of Biological Sciences

## New Faculty



Dr. Lisa Wallace  
Associate Professor

J. Robert Stiffler  
Distinguished  
Professorship in Botany

Plant systematics  
Biogeography  
Ethnobotany



Dr. Lisa Byrum  
Lecturer

Biological Sciences  
*and*  
School of Nursing

Genetics,  
Pathophysiology,  
Advanced Physiology

Name	Description
Daniel Barshis	Program for Undergraduate Research and Scholarship Award
Jessica Beard	College of Sciences Distinguished Teaching Award – Adjunct Faculty
Kent Carpenter	ODU Faculty Research Achievement Award
Holly Gaff	2017 University Women’s Caucus Recognition Award
Lisa Horth	College of Sciences Distinguished Teaching Award
Lisa Horth	John R. Broderick Diversity Champion Award
Piotr Kraj	ODU Faculty Preparation Proposal Program (FP3) Award
Tatyana Lobova	ODU Faculty Development Award
Sara Maxwell	2016 Sloan Research Fellow Award
Douglas Mills	Shining Star Faculty Award
Douglas Mills	College of Sciences Outstanding Undergraduate Advising Award
Girish Neelakanta	Early Career Distinguished Research Award - Pre-tenured Faculty
Hameeda Sultana	Early Career Distinguished Research Award - Pre-tenured Faculty
Eric Walters	Alumni Association New Faculty Award

# Department of Computer Science

## New Faculty



Dr. Shubham Jain  
Assistant Professor

Networks, Systems  
and Security

Machine  
Intelligence and  
Data Analytics



Dr. Cong Wang  
Assistant Professor

Networks, Systems  
and Security



Dr. Soad Ibrahim  
Lecturer

# Department of Chemistry & Biochemistry

Design phase of the new Chemistry & Biochemistry building – 110,000 sq ft – move-in Summer/Fall 2020

External grant funding and IDC reached its highest level in the department's history

Alumni Donations reached highest level in department's history

41 Chemistry PhD students and 3 Biomedical PhD students

Over 17,000 credit hours of instruction

First online courses developed and taught

## New Faculty



Dr. Kalpana Mahadevan  
Lecturer

Large Organic Chemistry Lectures

Supervision of Organic Chemistry Labs

Developing New Online Organic Chemistry Program

Summer UG Research Project Supervision



Dr. David Courson  
Lecturer/SSRP

Microscopist and molecular biologist

Large General Chemistry Lectures

Supervision of College Chemistry Labs

PURS Award winner

Summer UG Research Project Supervision

# Department of Psychology

## New Faculty



Dr. Jing Chen  
Assistant Professor

Human Factors

Semi-Autonomous  
Driving Systems

Phishing Detection  
in Cyber Space



Dr. Alan Meca  
Assistant Professor

Developmental

Identity Development  
and Acculturation

Health Risk Behaviors



Dr. Violet Xu  
Assistant Professor

Industrial/  
Organizational

Organizational  
Climate

Measurement and  
Psychometrics



# College of Sciences

## Major Instrumentation Cluster (COSMIC)

### Mass Spectrometer

High resolution FTICR-MS  
(Bruker Apex-Qe)

### NMR

NMR spectrometer (Bruker  
Avance III / 400 MHz)

NMR spectrometer (Bruker  
Avance II / 400MHz)

Capable of high resolution  
analysis of solids, liquids and  
semi-solids.



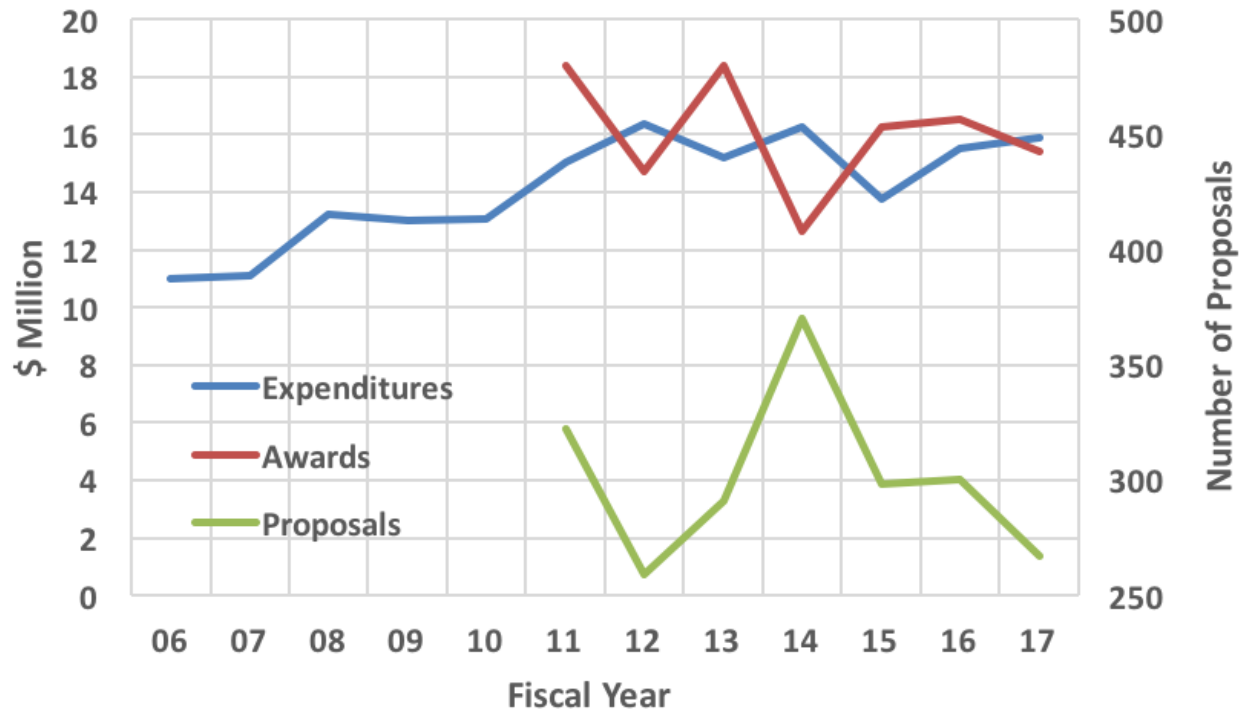
**Isaiah Ruhl**  
Interim Manager

## New Faculty



**Dr. Ravi Garimella**  
NMR expert

# Research



- Expenditures close to \$16 million – will go higher!
- ODU signed an MOU with other VA universities: All “core facilities” that function as cost centers will be available to all signatory institutions at internal user rates

# Research: Going Forward

- Strategic planning! Every faculty position is precious.
  - Support new faculty: mentoring; timely start-up, clear expectations
- Expand in cybersecurity, data science, health and well-being, condensed matter physics, ecology, biomedical sciences, computational oceanography
- Establish a Research Council, with elected faculty from each department
  - Address research infrastructure needs
  - Promote faculty and student research
  - Recruit excellent graduate students

# New Building (Sciences Phase I)

- Located in parking lot across from OCNPS on Elkhorn
- On track for completion in 2020
- Schematic design underway
- All Chemistry faculty will relocate to the new building, including those in PSB and OCNPS
- Digital theater (Planetarium)

Sciences Phase II needed very soon  
for Biology and Psychology



# Teaching

- New degrees/majors
  - Big Data Analytics Major (as part of B.S. in Math)
  - B.S. in Interdisciplinary Studies with Cybersecurity started in Fall 2016
- Innovation in all departments
  - Reduced DFWI rate in Chem 121
  - Course capture
  - New courses offered

Chem 121	Number of students	DFWI rate	Average course grade
Fall 2013	843	51%	1.9
Fall 2014	841	46%	2.2
Fall 2015	590	35%	2.3
Fall 2016	654	36%	2.3

Chem 121 Fall 2016	Number of students	Avg. Grade	Math SAT	DFWI rate
All Students	654	2.3	536	36%
Watched course capture video	302	2.6	528	26%
Did not watch course capture video	352	2.1	543	45%

# Monarch Teach

- Training high school STEM teachers
- Biology, Chemistry, Math, Physics, OEAS, Technology Education
- 140 students now in the program
- First three graduated in May 2017



# First Year Experience - Greece

Shannon Wells in the Department of OEAS led 16 new First Year students to Greece for 10 days this summer as part of the University's FYE Greece program.



# Math Science Resource Center

Math 103 Fall 2016	DFWI rate	Avg Math Grade	Avg Math SAT
Never attended SI sessions N=71	94%	0.43	439
Attended 1- 3 sessions N=94	86%	0.65	439
Attended 4-6 sessions N=137	73%	0.99	431
Attended 7-9 sessions N=180	63%	1.4	432
Attended 10 or more sessions N=636	31%	2.1	433



Supplemental Instruction (SI) works if you can get the students to attend.



# Outreach

2000 people watched the eclipse at Kaufman Mall



Pictures by Justin Mason, Rick Voight, Chuck Thomas



# Outreach



20 computer science and engineering students from India spent 8 weeks at ODU this summer (led by Ajay Gupta)



Peter Bernhardt at the ODU Child Study Center

Psychology Ph.D. students participate in relay for life



# Research Experience for Undergraduates

## Nuclear and Accelerator Physics



Next year: Chemistry will also have an REU program!



OEAS: focusing on climate change and sea level rise in a coastal urban environment

# BLAST

80 rising high school freshman and sophomores spend 3 nights at ODU experiencing the excitement of science and engineering (funded by the Virginia Space Grant Consortium and SCHEV)

Led by Cindy Tomovic and Vukica Jovanovic



Changing Oceans: Exploring Acidification and Albedo: Dr. Victoria Hill



Building Resilience to Climate Change and Sea Level Rise: Michelle Covi and David Burdige

Our Home Planet and its Place in the Cosmos: Balsa Terzic, and Justin Mason



# University News

- ODU has announced a \$200 million fundraising initiative. Goals are student scholarships, faculty enhancements, athletics
  - Bridge the gap: On average ODU students are \$1700 short in any given year – this affects their likelihood of success
- ODU was ranked in the top 15 in the nation for success of African American students by the Education Trust
- Online Virginia Network (OVN) – provide online courses so Virginians can finish their degrees; in collaboration with George Mason University (<http://onlinevirginia.net>)
- The new freshman class is the largest in our history.

# COS Fund Raising

- We have almost 20,000 alumni, 600 (3%) of whom gave money to ODU last year. **Goal: 4%**
- Our endowment is \$34.3 million
- Each department will produce a newsletter twice per year. We must do a better job of maintaining contact with our alumni
- Major gift priorities:
  1. Support undergraduate research
  2. Graduate student stipend enhancements; recruiting
  3. Endowed chairs; faculty support



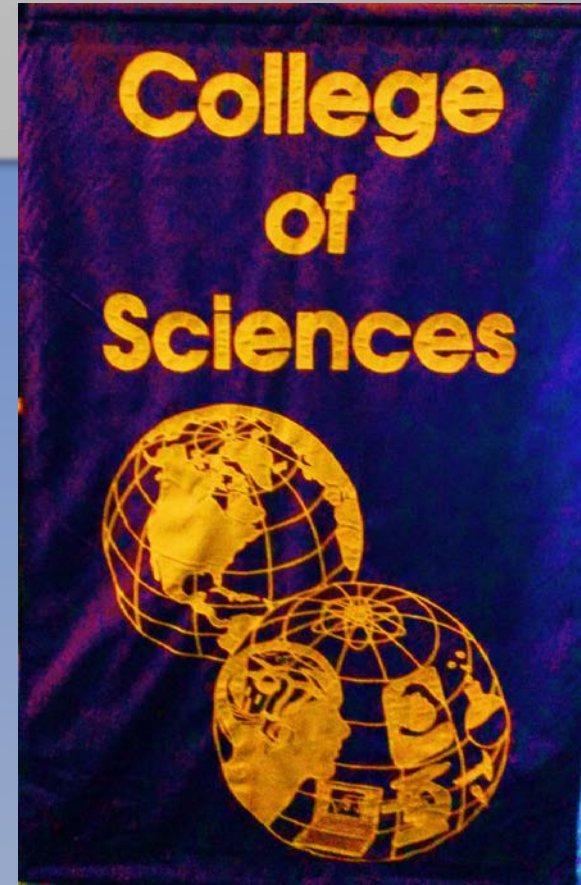
Denise Milisitz is our major gift officer

# Administration

- Appoint permanent chairs in Biology, Chemistry, and Computer Science
- Hire office manager for the Dean's office. This position exists but is vacant
- Review staff needs in the departments
- Increase transparency
  - Monthly meetings of fiscal techs, GPDs, and others with similar jobs (graduate program assistants, office managers, etc.)

# Telling Our Story

- Web Pages must be updated and inviting!
  - Support is available: Tilghman Williams, ITS team
- Keep track of news worthy items; inform ODU and community
- Short videos of faculty and students in action
  - research
- Brochures and promotional materials
- Social media



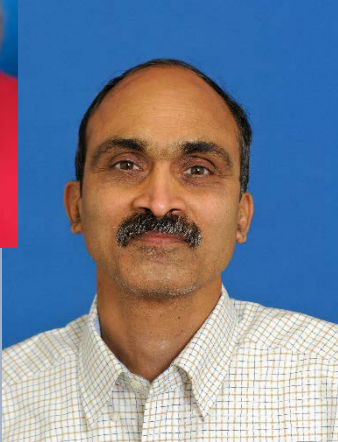
Student contest to design a better banner - TBA



# Thank you!



Terri Mathews



Ravi Mukkamala



Rick Waters



Gabriel Franke



Andrea Stephen



Tilghman Williams



Suzanne Brodeur

Refreshments are available. The College of Sciences always has the best food!

# College of Sciences Overview

## Faculty

Tenured/Tenure-track: 149

Lecturers: 55

**Total Full-time: 204**

Research faculty: 19

Adjunct faculty: 72

(AY 2016-17)

## Students

### Fall 2016 Total Student Majors/Headcounts

Undergraduate	3,759
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Graduate	450
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<b>Total</b>	<b>4,209</b>
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### Fall 2016 Total Degrees Conferred

Bachelor's	650
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Master's	91
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Doctorate	34
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<b>Total</b>	<b>794</b>
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