

VSU S.T.E.A.M. - H. SEMINAR

Science, Technology, Engineering, Agriculture, Mathematics, Health

Main contact: Dr. Bourama Toni

Professor of Mathematics

Department of Mathematics & Computer Science

Email: toni@vsu.edu Phone: (804) 524 5486

Fall 2013-Spring 2014 Series

September 6, 2013 – April 25, 2014

Friday. Room HM-150

Plenary Talk: 12:00-12:50

Student Poster Session: 11:00-11:50

Discussions: 01:00-02:00pm

(With Refreshments/Pizzas)

All talks are given by invited only researchers, experts in their field, and are made accessible to a multidisciplinary audience of faculty and students with the objective of fostering student interest and participation in the STEAM-H disciplines and a genuine interdisciplinary collaborative research.

Students are also invited to contribute a poster prior to the plenary talk.

All presentations are videotaped. The plenary talk is followed by a post-presentation one hour discussion on research collaboration and visit, mentorships, internships, grant proposal. To ensure a thematic continuation the Proceedings are peer-reviewed and published in a book format by Springer.

Book 1



Book 2



Upcoming Book 3: New Frontiers of Multidisciplinary Research in STEAM-H

[Science, Technology, Engineering, Agriculture, Mathematics and Health]

Publisher: Springer. (Spring 2014)

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Fall 2013 Series

Friday, September 6: Dr. Stefan van Zwam. (Math/Combinatorics)

Title: Connectivity in Graphs and Matroids

Department of Mathematics

Princeton University, Princeton, NJ

Friday, September 13: Drs. J. Wang, M. Tabanjeh, T. Qazi. (Computer Science/Math)

Title: Unmanned Aerial Vehicle: Its Dynamics and Control from Theory to Practice.

Student Poster Session: A.J. Conklin, D. Harris, C.J. Perham

Title: State Estimation of Quadcopter Using Kalman Filtering

Virginia State University, VA

Friday, September 20: Dr. Raymond Fletcher (Mathematics)

Title: Group Circle Systems on Conics

Professor, Department of Mathematics and Computer Science

Virginia State University, VA

Friday, September 27: Dr. Mikhail Noginov. (Physics/Material Sciences)

Title: Materials with Hyperbolic Dispersion

Professor, Department of Physics and Center for Materials Research.

Norfolk State University, Norfolk, VA

Friday, October 4: Dr. Sally Hunnicutt. (Chemistry)

Title: Process Oriented Guided Inquiry Learning: What, Why, How

Department of Chemistry

Virginia Commonwealth University (VCU), Richmond, VA

Friday, October 11: Dr. Shaundra Daily. (Human-centered Computing).

Title: Dancing in Virtual Environments: Alternative Pathways to Interest in Computing

School of Computing, **Clemson University, Clemson, SC.**

Friday, October 18: Dr. Jianzhi Li. (Manufacturing Engineering/Reverse Logistics)

Title: Sustainable Manufacturing: Strategies, Research, and Case Studies
Manufacturing Engineering Department.

The University of Texas – Pan American, Edinburg, TX

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- Friday, October 25:** Dr. Norou Diawara (Statistics/Biostatistics/Probability)
Title: Bootstrap Smoothing with Application to Parameter Estimation in Non-linear Time Series Models
Department of Mathematics and Statistics
Old Dominion University, Norfolk, VA
- Friday, November 1:** Dr. Daniel Wood. (Game Theory/Behavioral Economics)
Title: Peter Singer and Charles Dickens: Evaluating the Optimal Scope of Altruism for Imperfect Altruists
Department of Economics,
Clemson University, Clemson, SC.
- Friday, November 8:** Dr. Gabriel Lopez (Biomedical/Mechanical Engineering)
Title: Robust Biomimetic and Bioinspired Hybrid Materials for Biosensing, Controlled Delivery and Separations
Professor, Biomedical & Mechanical Engineering and Materials Science
Duke University, Durham, NC
- Friday, November 15:** Dr. Benjamin Ortiz. (Biology/Gene Regulation/Genetic Engineering)
Title: Recent advances in approaches to the study of gene locus control regions
Department of Biological Sciences
City University of New York, Hunter College, NYC
- Student Poster Session:** D. Johnson, K. Day, L. Duckett
Title: Towards Smart Sol-Gel based Biosensors for Specific, Sensitive and Fast Detection of DNA and Protein Biomarkers
Virginia State University, VA
- Friday, November 22:** Dr. Jin Wang. (Applied Math/Fluid Dynamics/Marine Engineering)
Title: Computation and Analysis of Multiphase Fluid Flows with Moving Interfaces
Department of Mathematics and Statistics
Old Dominion University, Norfolk, VA.
- Friday, November 29: Thanksgiving. No Talk**
- Friday, December 6:** Dr. Laban Rutto (Agriculture/Specialty Crops/Plant Nutrition)
Title: Genetic Vulnerability and Food Security: The Case for Alternative Crop Research
Agriculture Research Station, **Virginia State University, VA**

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Spring 2014 Series

- Friday, January 24:** Dr. Webster Santos (Chemistry/Chemical Biology)
Title: Combating Human Immunodeficiency Virus: Inhibiting RNA Function Using Chemistry
Department of Chemistry
Virginia Institute of Technology, Blacksburg, VA
- Friday, January 31:** Dr. Mahlet Tadesse. (Statistics/Bioinformatics)
Title: Identifying Cluster Structures and Relevant Features in High-Dimensional Data
Department of Mathematics & Statistics
Georgetown University, Washington DC
And Department of Epidemiology,
Harvard University, Boston MA
- Friday, February 7:** Dr. Milind Tambe (Systems Engineering/Computer Science)
Title: Security and Game Theory: Key Algorithmic Principles, Deployed Applications, Research Challenges
Professor, Computer Science & Industrial, Systems Engineering Department.
Director, Teamcore Research Group on Agents and Multiagent Systems
University of Southern California. CA
- Friday, February 14:** Dr. Rene Renteria (Health Sciences/Retinal Research) (**CANCELED**)
Title: TBA
Department of Physiology
University of Texas Health Science Center, San Antonio, TX
- Friday, February 21:** Dr. Vernessa Clark (Psychology/Behavioral Science)
Title: Obesity: Pears and Apples
Department of Psychology
Virginia State University, VA
- Friday, February 28 and March 7: Spring Break: No Talk**
- Friday, March 14:** Dr. Omar Quintero. (Cell Biology/Cytoskeleton/Molecular Motors)
Title: Cellular Powerhouses on the move: using imaging approaches to answer questions about actin-based mitochondrial dynamics.
Department of Biology
University of Richmond, Richmond, VA

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- Friday, March 21:** Dr. Juan Gilbert. (Automotive Engineering)
Title: Making A Difference in Society Through Research and Innovation
Professor, Department of Automotive Engineering
Chair, Human-Centered Computing Lab
Clemson University, Clemson, SC.
- Friday, March 28:** Dr. Kimberly Sellers. (Statistics/Biostatistics)
Title: Don't Count on Poisson: Introducing a Generalized Count
Distribution for Dispersed Count Data
Department of Mathematics & Statistics
Georgetown University, Washington, DC
- Wednesday, April 2:** Dr. Colin Christopher (Math/Applied Math)
Title: Centers and Limit Cycles
School of Computing and Mathematics
Faculty of Science & Environment
Plymouth University, Plymouth, UK
- Friday, April 4: (HBCU-UP undergraduate conference. No talk)*
- Friday, April 11:** Dr. Benjamin Schwartz (Physical Chemistry/Nanoscience Materials)
Title: Avoiding the Kinetics of the Bulk Heterojunction: Sequential
Processing and Self-assembled Nanomaterials for Organic Photovoltaics
Professor, Department of Chemistry & Biochemistry
University of California Los Angeles (UCLA), CA
- Friday, April 18:** Dr. Brent Hickman. (Game Theory/Economics) **(CANCELED)**
Title: TBA
Economics Department
University of Chicago, Chicago, IL
- Friday, April 25:** Dr. Tessema Astatkie, (Statistics/Agriculture)
Title: Design and Analysis of Experiments for Value Addition of
Agricultural products: Interdisciplinary collaborative research on essential
oil from herbal plants
Professor, Faculty of Agriculture,
Dalhousie University, Halifax, Canada