

20	Vaishali Nandy	Using case studies to teach engineers real world skills
21	Paramjeet Pati	"Measuring" Sustainability: Life Cycle Assessment of Nanoparticle Synthesis Processes
22	Siddhartha Roy	Multi-track research endeavors in LEWAS lab – A novel approach to analyze real-time water and weather data
23	Ali Sahari	Effect of body shape on the motile behavior of bacteria-powered microrobots (Bacteriabots)
24	Kathleen Short	Working in inter-disciplinary, multi-cultural teams: Lessons from the field
25	Shuaiwen Song	System-level power-performance efficiency modeling for emergent GPU architectures
26	Quentin Stoeffler	Interactions between farmers and traders in Burkina Faso: Why market conditions matter
27	Jonathan Waldron	The relationship between early abuse experiences and adult immune functioning
28	Bryce Whited	Dynamic, nondestructive imaging of bioengineered vascular grafts
29	Xu Yang	Peptide fragmentation prediction algorithm for the analysis of cancerous cells
30	Hang Zhang	Global epigenetic state network governs cellular pluripotent reprogramming and transdifferentiation

We'd like to thank our sponsors:

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Thanks also to the poster competition judges and to the members of IDR who organized the symposium.



2ND INTERDISCIPLINARY RESEARCH SYMPOSIUM

November 2nd, 2012
GLC Multipurpose Room
8:30am - 3:00pm

Schedule:

- 8:30 – 9:00 Registration
- 9:00 – 9:15 *Opening Remarks:* Dr. Michael Hochella, Jr (University Distinguished Professor)
- 9:15 - 10:30 *Keynote:* Dr. William Newell, “The Value of Integration in Interdisciplinary Research”
- 10:30 – 10:45 Coffee Break
- 10:45 – 11:15 *Invited Speaker:* Dr. John Tyson, “Adventures in Interdisciplinary Science Education for Undergraduates”
- 11:20 – 11:50 *Invited Speaker:* Dr. Jake Socha, “What can insects teach us about how to move fluids at the microscale?”
- 12:00 – 12:30 Lunch
- 12:30 – 1:30 *Panel Discussion:* Dr. Brenda Davy, Dr. Michael Moehler, Dr. Rolf Müller, Dr. Bill Newell, Dr. Stephen Prisley, Dr. Tomalei Vess – IDR in the “Hard” and “Soft” Sciences
- 1:30 – 3:00 *Poster Session & Competition; Awards*

Invited Speakers:

Dr. William (Bill) Newell is a Professor of Interdisciplinary Studies at Miami University in Oxford Ohio, and long-time Executive Director of the Association for Integrative Studies (the U.S.-based international professional organization devoted to interdisciplinarity).

Dr. John Tyson is a computational cell biologist interested in the molecular mechanisms underlying the control of cell growth, division and death. He is a University Distinguished Professor of Biological Sciences at Virginia Tech.

Dr. Jake Socha is an organismal biomechanist studying the relationship between form and function in animals, with a broad range of projects involving locomotion, breathing and feeding. He is an Assistant Professor in the Department of Engineering Science and Mechanics at Virginia Tech.

Panel Discussion:

Moderated by **Dr. Newell**

Dr. Brenda Davy – Associate Professor in *Human Nutrition, Foods & Exercise*,
PI of Water INTERface IGEP

Dr. Michael Moehler – Assistant Professor in *Philosophy*; ASPECT

Dr. Rolf Müller – Associate Professor in *Mechanical Engineering*

Dr. Stephen Prisley – Associate Professor in *Forest Resources and Environmental Conservation*

Dr. Tomalei Vess – Director of the *Office of Undergraduate Research*



Poster Session – List of Presenting Authors

#	Presenter Name	Poster Title
1	Sherif Abdelhamid	Protein 3D structure classification using image based alpha carbon matrices
2	Khaled Adjerid	Dynamic characterization of a tunable magneto-rheological fluid-elastic mount in squeeze mode
3	Seda Arat	A mathematical model of denitrification metabolic network in <i>Pseudomonas aeruginosa</i>
4	Vahid Balali	Segmentation and recognition of highway assets using Image-based 3D point clouds and semantic texton forests
5	Madison Brandon	A discrete model of the iron regulatory network in <i>Aspergillus fumigatus</i>
6	Cara Buchanan	Tissue-engineered tumor microvessels to study shear stress-mediated angiogenesis
7	Adria Carbo	PPAR α activation drives Th17 cells into a Treg phenotype
8	Liz Dymond	Human and environmental variables as predictors of the spatial pattern of Lyme disease emergence in Virginia
9	Elizabeth Elvington	Quantifying the effect of sphingolipid bioactive metabolites on ovarian cancer cell electrical properties
10	Pegah Ghanbari	Application of carbonaceous nanoparticles for anti-counterfeiting industry
11	Anthony Giuffre	Controls of polysaccharide chemistry on the thermodynamics of calcium carbonate nucleation
12	Danya Hakky	Design for sustainable behavior in interior settings
13	Hari Harikrisna	Nanoscale heat transport through solid-liquid interfaces
14	Carol Johnson	The importance of multi-scale interdisciplinary field studies for understanding nanoparticle behavior
15	Claus Kadelka	Understanding the robustness of gene regulation via derrida values
16	Nimisha Khanduja	Carcinoma cell dynamics: Processive acceleration of invadopodia assembly by NWASP
17	Georgianna Mann	Effects of mineral content in bovine drinking water: Does iron content affect milk quality?
18	Neda Mohammadi	SMATS: Sketch-based Modeling and Analysis of Truss Systems
19	Elizabeth Moore	Refugee and host country national agroforestry preferences, identity and social collaboration