Innovation with Impact

A Celebration of Graduate Student Projects, Research, Teaching and Service

Cross-Disciplinary Exhibition of Graduate Student Work
Awards Ceremony and Reception
Rangos Ballroom, University Center
April 5, 2012
Graduate Student Teaching Awards

David Bergman
Tepper School of Business

Alexis Teagarden
Honorable Mention
Department of English

Sergio Pequito
Honorable Mention
Department of Electrical and Computer Engineering

Graduate Student Service Awards

Anne-Sophie Charest
Department of Statistics

Ruth Poproski
Honorable Mention
Department of Philosophy
PRESENTATIONS

Carnegie Institute of Technology

Anupama Kuruvilla
Biomedical Engineering
Otitis media vocabulary and grammar

Michael McCann
Biomedical Engineering
Towards Automated Histology: Colitis Detection

Prahlad Menon
Biomedical Engineering
A quantitative physics-based framework for diagnosis of myocardial ischemia using first-pass perfusion cardiac MRI

Minhua Qiu
Biomedical Engineering
Nanometer Resolution Characterization of Tau Induced Axonal Transport Defects in Drosophila Larvae

Anthony Kotula
Chemical Engineering
A comparison of the quiescent stability and structural rearrangement of particle-stabilized and surfactant-stabilized 2D foams

Christopher Wirth
Chemical Engineering
Electrolyte dependent motion of a single particle normal to an AC electrode

Kamran Karimi
Civil and Environmental Engineering
Sheared athermal soft-particle suspensions near jamming: dependence of effective diffusion on packing density and system size

Yujie Ying
Civil and Environmental Engineering
Machine Learning for Pipeline Health Monitoring

Amy Nagengast
Civil and Environmental Engineering
Assessing the Environmental and Economic Effects from a Portfolio of Surface and Renewable Energy Technologies on Roof Real Estate

Jessica Wilson
Civil and Environmental Engineering
Source Water and Treatment Plant Operational Effects on Disinfection By-Product Speciation

Jason Marshall
Civil and Environmental Engineering
Multiscale Mechanics with Long-Range Electrostatic Interactions

Xiaohui Wang
Electrical and Computer Engineering
Estimating Obstacles in Vehicular Networks

Paul van der Boor
Engineering & Public Policy
Innovation by Users in Emerging Economies: Evidence from Mobile Banking Services

Jeremy Gernand
Engineering & Public Policy
Predictive models for carbon nanotube and nano-titanium dioxide pulmonary toxicity – how physical dimensions and impurities affect the toxicity of nanomaterials

Shira Horowitz
Engineering & Public Policy
Residential Demand Response for Synchronized Reserves

Shantanu Jathar
Engineering & Public Policy
Secondary particulate matter pollution from aircraft engines

Roger Lueken
Engineering & Public Policy
Economic Dispatch of Electric Power

Chia-Hsuan Yang
Engineering & Public Policy
Gains from Others’ Losses: The Technology Trajectories and the Global Division of Firms

Huseyin Ucar
Materials Science & Engineering
The Effect of Distributed Exchange Parameters on Magnetocaloric Refrigeration Capacity in Amorphous and Nanocomposite Materials
Lauren Jackson  
*Materials Science & Engineering*  
Determination of the Mechanisms of Photooxidation of CdSe/ZnS Quantum Dots/Shells

Nicholas Jones  
*Materials Science & Engineering*  
The Effect of Distributed Exchange Parameters on Magnetocaloric Refrigeration Capacity in Amorphous and Nanocomposite Materials

Li Li  
*Materials Science & Engineering*  
Hydrogen Synthesis from Heterostructured (Ba, Sr)TiO3/TiO2 Composite Photocatalysts

Erhan Arisoy  
*Mechanical Engineering*  
Approximate Surfacing of Curve Clouds for Conceptual Shape Creation and Evaluation

TsuWei Cherng  
*Mechanical Engineering*  
Residential Recharging Opportunities for Plug-In Vehicles in the U.S.

Grace Heckmann  
*Mechanical Engineering*  
Robust Design for Profit Maximization Under Uncertainty of Consumer Choice Model Parameters Using the Delta Method

Katherine Hess  
*Mechanical Engineering*  
In-situ measurements of potential, current and charging rate across an ultracapacitor electrode

Martin Marinack Jr.  
*Mechanical Engineering*  
An Eulerian, Lattice-based Cellular Automata Approach for Modeling Multiphase Flow Tribology

Samarth Raut  
*Mechanical Engineering*  
Effects of shape versus material model variations on AAA wall mechanics

Gagan Srivastava  
*Mechanical Engineering*  
Chemical Mechanical Polishing of Bit Patterned Media

Elizabeth Traut  
*Mechanical Engineering*  
Optimal Design and Allocation of Electrified Vehicles and Dedicated Charging Infrastructure for Minimum Life Cycle Cost and Greenhouse Gas Emissions

Matthew Woodward  
*Mechanical Engineering*  
Integrated Multi-Modal Locomotion

Mehmet Yumer  
*Mechanical Engineering*  
Surface Creation on Unstructured Point Sets with Neural Networks

Iryna Zenyuk  
*Mechanical Engineering*  
Modeling ion transport in fuel cell electrodes including water|electrolyte interfaces and electric double layers.

**College of Fine Arts**

Eleni Katrini  
*Architecture*  
ThermoNastic Tropism

Huaishu Peng  
*Architecture*  
SENSEable Shoes: Hands-free and Eyes-free Mobile Interaction

Agnes Bolt  
*Art*  
Dealing: An artist intervenes into the lives of 2 art collectors

Wesley Johnson  
*Design*  
Exploring the Complexities of A Machine For Sitting

Miso Kim  
*Design*  
Understanding Perceived Control: Principles & A Framework for Service Designers

Jessamyn Miller  
*Design*  
Lady Business: Self service health care in the women’s restroom

Priscilla Mok  
*Design*  
The Future of the News
Dietrich College of Humanities & Social Sciences

**Daniel Leeds**
*Center for Neural Basis of Cognition*
Uncovering the Visual Components of Cortical Object Representation

**Kubra Komek**
*Center for the Neural Basis of Cognition/Program in Neural Computation*
Computational Study of Dopamine Effects on Cortical Circuit Gamma Band Synchrony

**Kevin Brown**
*History*
The Labor of Valuing the Forest: Timber Estimating and the American Lumber Industry, 1890-1920

**Robert Hutchings**
*History*
Industrializing the Orange: Florida’s Orange Juice Revolution

**Cassie Miller**
*History*
Saving the Neighborhood “for those who built it”: Irish and African American Confrontations on Chicago’s South Side, 1900-1940

**Andrew Ramey**
*History*
Cliffhanger: The Chesapeake Bay Foundation and the Calvert Cliffs Controversy

**Andrew Simpson**
*History*
A Charity Hospital or a Charitable Mission? Methodist Hospital and the Politics of Indigent Care in the Age of Profitable Not-for-Profit Health Systems

**Jonathan Stepp**
*History*
Censorship and Cultural Policy in the German Democratic Republic 1950-1960
John Weigel  
*History*  
The Illusion of Development: West German Village Development Projects in West Africa

Dawn Winters  
*History*  
Liquor Laws and Women’s Campaign Against Liquor in 1850s Indiana

Ashlie Henery  
*Modern Languages*  
The role of social interaction in pragmatic development: A synthesis of pragmatic development research in the study abroad context of learning

Ryan Miller  
*Modern Languages*  
The role of second language morphological awareness in lexical inferencing in English

Yun Zhao  
*Modern Languages*  
Explicitness and Cue Competition: A Cognitive Tutorial System to Teach English Article Usage

Hailin Liu  
*Philosophy*  
Rationalizability under Uncertainty in Games

Crista Crittenden  
*Psychology*  
Early Life Socioeconomic Status and Diurnal Cortisol Among Mid-life Adults: Adolescence as a Critical Period for HPA Programming

Crista Crittenden  
*Psychology*  
Social Integration in 4th and 5th Graders

Peter Kriss  
*Social and Decision Sciences*  
Does Valuation Disclosure Help or Hurt the Economy? An Experimental Study

Mellon College of Science

Ashrifia Adomako-Ankomah  
*Biological Sciences*  
Continuous VEGF Signaling is Essential for Skeletogenesis in the Sea Urchin Embryo

Jigar Desai  
*Biological Sciences*  
Function of RHR2-specified glycerol-3-phosphatase in C. albicans biofilm formation

Jeanne Morin-Leisk  
*Biological Sciences*  
GTP binding, but not hydrolysis, is required for the atlastin ‘pre-fusion’ to ‘post-fusion’ transition

Olivia Molinar  
*Biological Sciences*  
The genomic regulatory control of skeletal morphogenesis in the sea urchin

Kiran Rafiq  
*Biological Sciences*  
The genomic regulatory control of skeletal morphogenesis in the sea urchin

Arnie de Leon  
*Chemistry*  
Charge Transfer through Non-Modified and Ligand-Modified PNAs

Alper Nese  
*Chemistry*  
Synthesis of pH Responsive Fluorescent Molecular Brushes Prepared by Atom Transfer Radical Polymerization

Chin Ming Hui  
*Chemistry*  
Enthalpy Interaction Driven Uniform Distribution of Inorganic Particles in a Polymer Matrix

Andrea Elsen  
*Chemistry*  
Active Ligards for Low PPM Cu (Mini) emulsion ATRP

Hongkun He  
*Chemistry*  
Polymer-Functionalized Materials for Reversible CO2 Capture Display

Katlyn Meier  
*Chemistry*  
Spectroscopic Studies of Novel FeV=O Centers

Saumya Saurabh  
*Chemistry*  
Fluorogen Activating Peptides That Enhance Photostability Through Encapsulation of the Fluorogen
Heinz College

Kadam Sayali
Biotechnology and Management
National Black MBA Association Annual Conference

Ben Towne, Jie Cheng, Haiyan Huang, Lingling Zhu
Public Policy & Management
KeyOSK: Providing a Key Opportunity for Situational Knowledge / Healthcare Knowledge When You Need It: Leveraging Modern Technology & Available Resources

Dana Bernard
Public Policy & Management
The Future of the American Dream: The Greenlining Institute’s 18th Annual Economic Summit

Julia Bernier
Public Policy & Management
Social Enterprise Conference

Daegon Cho
Public Policy & Management
Live Show Everywhere: Distribution Dynamics and Internet Influence on Concert Location

David McCoy
Public Policy & Management
Attending the Creating Change Conference in Baltimore, Maryland

Marteen Garay
Public Policy & Management
The Future of the American Dream

Yan Huang
Public Policy & Management
Crowdsourcing New Product Ideas under Consumer Learning

Paula Levin
Public Policy & Management
Saving Civilization As We Know It

Heidi Baumbach
Creative Enterprise: Public Policy & Management
A Third Place and Creative Writing Space
National Arts Marketing Project Conference

Kate Piatt-Eckert
Creative Enterprise: Public Policy & Management
Performing Arts Managers Conference 2012

Andrea Wood
Creative Enterprise: Public Policy & Management
Americans for the Arts Convention

School of Computer Science

Kevin Killourhy
Computer Science Department
Should Security Researchers Experiment More?

Brian Lim
Human-Computer Interaction
Toolkit to Support Intelligibility in Context-Aware Applications

Madalina Fiterau-Brostean
Machine Learning
Trade-offs in Explanatory Model Learning

Tepper School of Business

Lily Morse
Organizational Behavior and Theory
Cheating for the Good of the Group

Ishani Aggarwal
Tepper School of Business
The Effects of Cognitive Diversity on Collective Intelligence and Team Learning.

Antonio Andres Bellofatto
Tepper School of Business
Selfish Parents and Intergenerational Taxation

Hyeunjung (Elina) Hwang
Tepper School of Business
Learning to Cross Boundaries in Online Knowledge Communities

Sang Luo
Creative Enterprise: Public Policy & Management
National Arts Marketing Project Conference
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