



Undergraduate Research Conference at Missouri S&T

Apr 11th, 2007

3rd Annual Undergraduate Research Conference Winners

Missouri University of Science and Technology

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UMR Undergraduate Research Conference Awards Ceremony, April 11, 2007

Oral Session Awards

Engineering Oral Session:

3rd Place- Terry Yu – Mining & Nuclear Engineering – *Prototype Computer Based Procedure Implementation at University of Missouri-Rolla Reactor*, Dr. Shoaib Usman

2nd Place- Mahsa Dornajafi – Electrical and Computer Engineering – *Performance of a Quaternary Logic Design*, Dr. Steve Watkins

1st Place- Lisa Smith – Electrical & Computer Engineering – *Comparison of Particle Swarm Optimization and Greedy Search for Collective Robotic Search in a Complex Environment*, Dr. G. K. Venayagamoorthy

Humanities/Social Sciences Oral Session:

1st Place- Rob Huerta & Adam Helton – Psychology – *Non-cognitive Predictors of Students' Achievement*, Dr. James Martin

Natural Sciences Oral Session:

3rd Place- Matthew Austin – Computer Science – *Stochastic Sequential Dynamical Systems*, Dr. Mayur Thakur

2nd Place- Katherine Stockstill – Biological Sciences – *Cytokinesis Defects in Budding Yeast*, Dr. Katie Shannon

1st Place- Michael Hoffman - Physics Department - *Directing Gamma-rays with Quantum Dots*, Dr. Massimo Bertino & Dr. Ralph Alexander

Management & Information Systems Oral Session:

1st Place- Benjamin Stauffer – Computer Science – *SonicData: An Open-Source Instrumental Data Acquisition Program*, Dr. Bruce McMillin, Mr. Joseph A. Council

Poster Session Awards

Engineering Poster Session:

3rd Place- Ashlee Abbott – Materials Science and Engineering – *Rapid Freeze Spraying of Graded Laminar Composites*, Dr. Fatih Dogan

2nd Place- Nathaniel Wilke – Mechanical and Aerospace Engineering – *Dynamic thin film measurement data analysis method*, Dr James Drallmeier

1st Place- Josh Eads – Computer Science – *Self-Adaptive Semi-Autonomous Democratic Parent Selection*, Dr. Daniel Tauritz

Humanities/Social Sciences Poster Session:

3rd Place- Donald Joseph Mueller – Psychology – *Using Personality Scores to Predict GPA*, Dr. James Martin

2nd Place- Stuart Salvador – Mechanical & Aerospace Engineering – *The Sutro Tunnel: An engineering feat in the West, a global legacy*, Dr. Diana Ahmad

1st Place- Natalie Shanklin – Psychology – *Parental Trust and Links to Adult Relationships*, Dr. Julie A. Patock-Peckham

Natural Sciences Poster Session:

3rd Place- Mark Herrera – Physics – *The Slow Light Effect in Dual-Periodic Photonic Crystals*, Dr. Alexey Yamilov, Physics

2nd Place- Lauren Rich – Physics – *Quantum Dot Photolithography*, Dr. Massimo Bertino, Physics

1st Place- Wesley Glick – Biological Sciences – *Assessment of in vivo bone formation using porous, glass scaffolds seeded with mesenchymal stem cells*, Dr. Roger Brown, Biological Sciences

Management & Information Systems Poster Session:

3rd Place- Kristen Duvall –Business Administration – *Feasibility of Opening a Coffee and Tea House in Rolla, Missouri*, Dr. Bih-Ru Lea

2nd Place- Dan Nieters & David Trupiano – Electrical & Computer Engineering – *Computer Network Attack, Defense, and Forensics in Two Scenarios*, Dr. Ann Miller

1st Place- Ryan Andrews with Duane Alexander, Mitchell Diebold, & Ariel Hernandez – Computer Science – *Innovative Secure eVoting System*, Dr. Tom Sager, Dr. Waleed Al-Assadi, & Matt Buechler.

Research Proposals Poster Session:

2nd Place- Evan Stevens- Geological Sciences & Engineering- *Investigation of Jointing and Joint Formation in the Roubidoux Sandstone, Rolla, Missouri-*, Dr. John Hogan & Dr. Derek Apel

1st Place- Jason Kaiser- Geological Sciences & Engineering- *Formation of Rapakivi Textures in Granite of the Deer Island Pluton, Maine,* Dr. John Hogan

OURE Fellows Research Proposal Award Recipients:

- Nicholas Grither– *Real-Time Remote Monitoring of Bridge Scouring with Distributed Thermal Sensors* - Dr. Sahra Sedigh-Ali, Department of Electrical and Computer Engineering
- Josh Eads – *Deriving Gas-Phase Exposure History through Computationally Evolved Inverse Diffusion Analysis* - Dr. Daniel Tauritz, Computer Science and Dr. Glenn Morrison, Environmental Engineering
- Lauren Garten – *Epitaxial Electrodeposition of Pure and Doped Zinc Oxide* - Dr. Jay Switzer, Chemistry
- First Responder Design Competition Team (Brian Magaha, Paul Robinette, Paul Drews, Nick Lessley, Dr. Fathi Finaish) – *Development of An Aerial Robot for Surveillance Missions around Buildings* - Dr. Fathi Finaish, Mechanical and Aerospace Engineering
- Brian Payne – *Monitoring Dechlorination of PCE using Poplar Trees* – Dr. Joel Burken, Civil, Architectural & Environmental Engineering
- Jenna Tune – *Field Analyses for the Detection and Enumeration of Coliform Bacteria in Drinking Water in Rural Guatemala* – Dr. Curt Elmore, Geological Sciences and Engineering & Dr. Melanie Mormile, Biological Sciences
- Cory Cheatham – *Constructing a Biological Breathalyzer* – Dr. David Westenberg, Biological Sciences