



Matthew Cannella

University of Colorado at Boulder
Matthew.Cannella@Colorado.edu

Presentation:

Date: Mon Oct. 3-Fri. Oct 7

Time: 13:00-14:00

Room:

Research Title:

“The We Want Our Future Initiative, Providing an Educational Activity which Merges Artwork, Creativity and Space Exploration”

Biographical Sketch:

Matthew Cannella is a second year graduate student and National Science Foundation Fellow at the University of Colorado at Boulder. He has recently completed double degrees in Aerospace and Mechanical engineering from the University at Buffalo, the State University of New York. He has completed several internships, both with NASA and NewSpace start-up Masten Space Systems. His research area is primarily in chemical propulsion and rocket engine development. Spending one semester abroad in Toulouse, France, Matthew completed an international research project with the French Air Traffic Control authority, DSNA.

Research and Education Activities:

- 2010-Present; NASA GSRP Fellow, Marshall Space Flight Center
- 2010-Present; NASA Student Ambassador
- 2010; Operations Manager, NASA Propulsion Academy Program, Marshall Space Flight Center
- 2009; Research Associate, NASA Propulsion Academy Program, Marshall Space Flight Center
- 2007; Shuttle APU & Hydraulics intern, State Space Grant Intern Program, Kennedy Space Center



Kathryn Williamson Montana State
University
kwilliamson@physics.montana.edu

Presentation:

Date: October 6, 2011
Time: 3:00:00 PM
Room: TS-13

Research Title:

Successfully targeting a variety of populations and cultures in Montana with space education and outreach

Biographical Sketch:

Kathryn grew up in Marietta, Georgia and received her Bachelors of Science in Physics and Astronomy from the University of Georgia. Wanting a change of scenery, she moved to the mountain town of Bozeman, Montana to pursue a PhD in Physics at Montana State University (MSU). As a graduate student at MSU, Kathryn has been involved in a variety of science education and public outreach activities. In her free time, she enjoys painting, biking, and hanging out with friends.

Research and Education Activities:

- Doctoral research on student understanding of gravity: in the process of creating a multiple-choice assessment tool.
- Instructor (1 semester) and teaching assistant (2 semesters) for Introductory College Physics.
- Assistant manager to the Space Public Outreach Team (SPOT): co-wrote a NASA presentation for K-12 schools, trained undergraduate presenters, and traveled to schools around Montana.
- Graduate student representative for the NASA in the Northwest program: give NASA presentations to libraries in Montana.
- Designed a reference website for the science behind the Minority Serving Institution Projects (www.spacegrant.montana.edu/MSIPProject).
- Workshop instructor for Expanding Your Horizons, a program to give middle-school girls hands-on science experiences (3 years).
- Instructor for Peaks & Potentials, a week-long science summer camp for middle-school students (2 years).



Lisa Anderson-Antle, PhD Candidate, GCNS/BC, APNP, RN
University of Wisconsin-Milwaukee - NASA Ames Research Center
andersonantle.l@gmail.com

Presentation:

Date: October 7, 2011
Time: 9:00:00 PM
Room: TS-09

Research Title:

Effects of Photobiomodulation in Osteoclast Formation in vitro: a Pilot Study

Biographical Sketch:

Lisa Anderson-Antle received her Bachelors of Science in Nursing from the University of Wisconsin-Madison, Masters of Science in Nursing with an emphasis in gerontological research from St. Louis University, and is a nursing doctoral candidate at the University of Wisconsin-Milwaukee. She has academically taught various levels of nursing education and practiced as a Gerontological Advanced Practice Nurse for approximately 15 years. Currently, she is an Adjunct Professor of Nursing with George Williams College of Aurora University, Williams Bay, WI.

Research and Education Activities:

She received sequential summer internships at NASA Ames Research Center sponsored by the NASA Science Technology Institute, 2008, Exploration Space Mission Directorate, 2009, and is the recipient of the Wisconsin Space Grant Consortium Graduate Fellowship, 2009. Most recently, she completed her dissertation research with Dr. Ruth Globus NASA Ames co-director of the Bone and Signaling Laboratory, Radiation and Space Biotechnologies Branch/Space Biosciences Division investigating the effects of low energy photon irradiation in the far red to near infrared spectral range known to stimulate mitochondrial energy, metabolism, and promote cell repair. Further, her interests include investigating the role of oxidative stress and apoptosis in the progression of frailty in the older adult.



Ashley A. Chandler
Stanford University
achandlr@stanford.edu

Presentation:

Date:

Time:

Room: C4. Session 2, Presentation 8

Research Title:

“Visualization of the Liquid Layer Combustion of Paraffin Fuel”

Biographical Sketch:

Ashley is a 4th year Ph.D. Candidate at Stanford University. Her research is focused on hybrid rocket propulsion. She has held internships at both NASA Ames Research Center and the Jet Propulsion Laboratory (JPL). She continues to collaborate with JPL and her graduate studies are funded through their Strategic University Research Partnership. Ashley received her B.A. from the University of California, Berkeley majoring in Astrophysics, Physics and Political Science and her M.S. from Stanford University in Aeronautics & Astronautics.

Research and Education Activities:

- Hybrid Rockets for Solar System Exploration. Evaluating hybrid rockets as alternatives to solid and liquid options for a variety of in-space applications.
- Visualization of the Liquid Layer Combustion of Paraffin-based Hybrid Fuels. Designed a flow conditioning system and combustion chamber with windows to observe the mechanism responsible for the high burning rate of paraffin-based hybrid fuels. It is currently being fabricated and tests expected to begin in Summer 2011.
- Hybrid Propulsion for a Mars Sample Return Mission. Worked with Profs. Brian Cantwell and Scott Hubbard to design a two-stage hybrid Mars Ascent Vehicle to deliver a sample of Martian rock to an awaiting spacecraft orbiting Mars.
- Advanced Rocket Propulsion Design Lab. AA 284 B, C. Course Assistant. (2010)



Miraida Pagan

University of Puerto Rico-Rio Piedras Campus

Miraida.pagan@gmail.com

Presentation:

Date: October 4-6, 2011

Time: 13:00-14:00

Room: Poster section

Research Title:

Development of a Lactate Biosensor for Monitoring the Physical Fitness of Astronauts

Biographical Sketch:

Miraida Pagan received a B.S. degree in Industrial Chemistry from the University of Puerto Rico (UPR)-Humacao Campus. Miraida completed a M.S. degree from the UPR- Rio Piedras Campus with a thesis project named *Investigating the role of protein conformational dynamics in regulating the catalytic mechanism of Subtilisin-like proteases*. Currently, Miraida is a Ph.D. candidate in the biochemistry field at the UPR in collaboration with NASA AMES Research Center. The objective of this project is to develop a lactate biosensor to monitor astronauts' health during long space missions.

Research and Education Activities:

- Graduate Student Internship at NASA Ames Research Center. NASA Ames Research Center. Moffett Field, California. Jun/11-Ago/11 and Jun/10-Ago/10
- 2011 Scientist Mentoring & Diversity Program Minority Program. Washington, DC. Jun 21/11- Jun 28/11
- Graduate Student Internship at NASA Ames Research Center. NASA Ames Research Center. Moffett Field, California. Jun/10-Ago/10
- 2010 Summer Internship Poster Presentation at NASA Ames Research Center. Carbon Nanofibers as Principal Support Material for the Development of Robust Electrodes for Biosensor Applications. NASA Ames Research Center, Moffett Field, California. July 2010.
- 2010 Experimental Biology. Chemical Protein Glycosylation: Method to Prevent Protein Instabilities in Biosensor Applications. Anaheim, California. April 2010.
- 2009 Protein Stability Conference. Chemical Protein Glycosylation: Method to Prevent Protein Instabilities in Biosensor Applications. Breckenridge, Colorado. July 2009.
- 33rd FEBS Congress & 11th IUBMB Conference: Biochemistry of Cell Regulation. On the Role of Protein Structural Dynamics in the Catalytic Activity and Thermostability of Serine Protease Subtilisin Carlsberg. Athens, Greece. June 2008.



Christopher Skipwith
University of Pennsylvania
gemil@mail.med.upenn.edu

Presentation:

Date: October 7, 2011
Time: 9 AM
Room: TS-09

Research Title:

Analysis of Thrombus Formation Dynamics in Adamts13^{-/-} Mice After Endothelial Injury

Biographical Sketch:

Mr. Christopher Gemil Skipwith is currently a 4th year Ph.D. student at the University Of Pennsylvania Perelman School of Medicine. He conducts research at the Children's Hospital of Philadelphia, Division of Hematology, Dept of Pathology and Laboratory Medicine. Christopher did his undergraduate studies in Atlanta, GA at Morehouse College and Georgia Tech, completing a program in Chemistry and Materials Science.

Chris has presented at various hematology conferences and has published his research in many scientific journals, which include: Blood, the Journal of Thrombosis and Hemostasis, Nature Molecular Therapy, and the Journal of Biological Chemistry.

Research and Education Activities:

- Laboratory Focus: Molecular and cellular mechanisms of blood coagulation, hemostasis, and thrombosis.
- Techniques: Scanning electron microscopy (secondary electron and backscattered), transmission electron microscopy (rotary-shadowing and negative staining), scanning-transmission electron microscopy (STEM), rheometer/viscometer measurement of fluid shear stress, von Willebrand Factor multimer analysis, ELISA, platelet aggregation assays, protein purification (His-tag/Ni-NTA, gel filtration, affinity chromatography), x-ray crystallography screening, atomic force microscopy
- Thesis Topic: Biochemical and Biophysical Analysis of ADAMTS13 structure/function.



62nd INTERNATIONAL ASTRONAUTICAL CONGRESS

Cape Town, South Africa • October 3 - 7, 2011 • Sponsored Student Researcher



Anita Lewis

Texas Southern University

Nita_alewis@yahoo.com

Presentation:

Date: October 7, 2011

Time: 9am

Room: TS-09

Research Title:

Role of Curcumin Against Modeled Microgravity- Induced Inflammatory Pathways

Biographical Sketch:

Anita Lewis is a graduate student at Texas Southern University working under Dr. Shishir Shishodia. She is originally from Copperas Cove, Texas and moved to Houston to pursue her education. Currently she is completing her master's degree in Biology. In 2005, she received her B.S. in Biology from the Texas Southern University. Her research interests include the use of natural products against pro-inflammatory pathways. Ms. Lewis is a Fellow with the NASA Center for Bio-Nanotechnology and Environmental Research at Texas Southern University.

Research and Education Activities:

- NASA C-BER Fellow 2010- present



Nicole Herrmann

Space Policy Institute, George Washington University
nherrmann418@gmail.com

Presentation:

Date: October 3, 2011
Time: 3pm
Room: TS-05

Research Title:

Addressing Transnational Security Requirements through a Commercial SAR Consortium.

Biographical Sketch:

Nicole Herrmann graduated from the University of Maryland, College Park. She received a Bachelor of Arts in History and a minor in Astronomy. Nicole began her graduate study at George Washington University's Elliot School of International Affairs where she is studying International Science and Technology Policy with a concentration on Space Policy. Since May 2008, Nicole has been the Strategic Analysis Intern within NASA's Exploration Systems Mission Directorate Integration Office at NASA Headquarters. From August 2007 – May 2008, Nicole was an intern in NASA's History Division within the Office of External Relations.

Research and Education Activities:

- NASA's Graduate Student Researchers Program (July 2010 – June 2011)



Quincy Fitzgerald Johnson
Prairie View A&M University
qjohnson3@pvamu.edu

Presentation:

Date: October 5, 2011
Time: 3pm
Room: TS-09

Research Title:

Radiation Shielding of Lunar Regolith/Polyethylene Composites and Lunar Regolith/Water Mixtures.

Biographical Sketch:

Quincy was born in Lufkin, TX, graduated in 2003 from Lufkin High School, then attended Prairie View A&M University (PVAMU) where he received his B.S. in Mechanical Engineering. Quincy is currently working on his M.S. in Mechanical Engineering at PVAMU. There he works as a researcher for the Center of Radiation Engineering and Science for Space Explorations Center (CRESSE), one of NASA's University Research Centers. His thesis work focuses on the radiation effects on lunar regolith/polyethylene composites, and how moisture content in the moon's southern polar region might alter the radiation shielding properties of potential in situ building materials.

Research and Education Activities:

- Radiation effects on shielding and mechanical properties of lunar building materials
- Correlation of radiation shielding materials and biological response of human fibroblast cells
- Tutoring various undergraduate advanced mathematics and engineering courses
- Mentoring students and judging science fairs at STEM related high schools