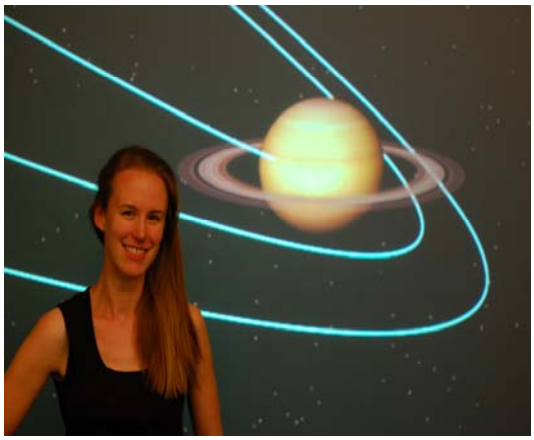


Diane Craig Davis
Purdue University
decraig@purdue.edu

Presentation: Mon., Sept 27, 3:15 pm, North Hall, Presenter #7

Research Title: Trajectory Evolution in Multi-Body Regimes with Application in the Saturnian System

Biographical Sketch

Diane Craig Davis graduated with a B.S. in Physics from Texas A&M University in 1999. In May 2001, she received her M.S. in Aerospace Engineering from the University of Texas at Austin, where she focused her studies on orbital mechanics. Her research there investigated nongravitational forces acting on the GPS satellites. She then spent a year in Metz, France studying Mechanical Engineering at Georgia Tech Lorraine. In July 2002, she moved to California, where she spent three years working in the Inner Planet Navigation group at JPL in Pasadena. In August 2005, she commenced work on a PhD at Purdue University. Her interests include multi-body dynamics and spacecraft navigation.

NASA Research and Education Activities

July 2002-August 2005: Navigation Engineer at the Jet Propulsion Laboratory: Inner Planet Navigation Group. Spacecraft Flight Operations Experience: Deep Impact, Genesis, Rosetta launch, and Mars Express. Orbit Determination Planning and Development Experience: Phoenix Mars Lander, Rosetta, Mars Express, Mars Premier Netlander Mission, Mars Telecommunications Orbiter.

Andrew Maxwell
Georgia Institute of Technology
amaxwell9@gatech.edu

Presentation: Fri., Oct. 1, 2 pm, Terrace 1, Presenter #5

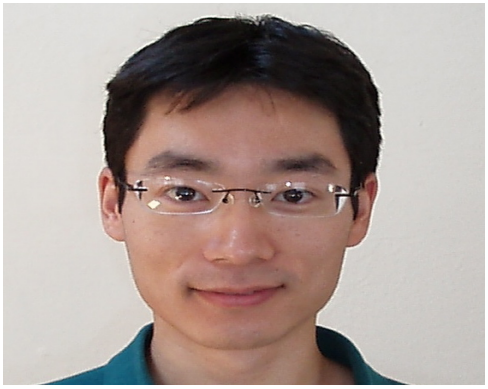
Research Title: A Value Proposition for Revolutionary Technologies Applied to Crewed Mars Missions

Biographical Sketch

Andrew Maxwell is a Ph.D. candidate at the Georgia Institute of Technology in the School of Aerospace Engineering and is advised by Dr. Alan Wilhite. He is in residence at the National Institute of Aerospace in Hampton, VA as a graduate research assistant for NASA Langley Research Center's affordable human exploration Revolutionary Technical Challenge. He received his B.S. in mechanical engineering from Rose-Hulman Institute of Technology and his M.S. in aerospace engineering from the Georgia Institute of Technology. His research focus is on the impacts of advanced technologies on cost and safety of crewed exploration architectures for Mars. His interests extend to fundamental research into disruptive technologies and effective roadmapping of low TRL technologies and systems.

NASA Research and Education Activities

June 2008 to present: Graduate Research Assistantship funded under NASA Langley's Revolutionary Technical Challenge program



Yuki Takahasi
University of California, Berkeley
yukimoon@berkeley.edu

Presentation: Wed., Sept. 29, 10:15 am, Room: Chamber, Presenter #5

Research Title: Novel Concepts for Affordable Space Transport and Travel: Microlaunchers and PD Aerospace

Biographical Sketch

I became inspired to travel to outer space at age 12 when I learned about the American space program. With a dream of joining NASA I went to the US for high school, away from family in Japan. I studied physics at Caltech, where I led the SEDS group. Using a Fulbright Grant, I completed a master's project in the UK proposing a Moon-based observatory concept, leading to my involvement in a NASA study on lunar telescope construction. In 2003, I participated in the International Space University summer program in Strasbourg, France. Currently I'm completing a PhD project at UC Berkeley in experimental astrophysics in which our team built a telescope at the South Pole to study the Big Bang. I like snorkeling/diving and intend to continue learning paragliding. Still pursuing the dream of traveling to outer space, I would like to do hands-on work to develop vehicles that enable space travel for many people.

NASA Research and Education Activities

(1993: Space Academy Level 1, US Space & Rocket Center.)
(1995: Space Academy Level 2, US Space & Rocket Center.)
2000: SIRTF proposal w/ Dr. Beichman, NASA Origins Program, JPL.
2001: NASA Reduced Gravity Student Flight Opportunity, JSC.
2002: NASA RASC study on "Astronaut-Aided Construction of a Large Lunar Telescope"
2006: NASA Planetary Science Summer School, JPL.
2006, 2008, 2009: NASA Student Ambassador to International Astronautical Congress.

Michael Vergalla
Florida Institute of Technology
mvergalla@gmail.com

Presentation: Wed., Sept. 29, 3:15 pm, Club B, Presenter #4

Research Title: Investigation of Slosh Events using Existing Spheres Hardware on ISS Platform

Biographical Sketch

Born in New Jersey to a family of artisans I grew up seeing beauty in the world around me. From a young age I worked all sorts of odd jobs, from landscaping to driving a delivery truck in NYC. It is always the quest for new adventure that drives me. I love exploration, and like many I hope to enjoy space as an astronaut (commercial or otherwise). Presently I am interested in fluid dynamics. I completed an internship with CD-Adapco (CFD), and at von Karman Institute for Fluid Dynamics (Pressure Sensitive Paint), in Brussels. My current graduate school project at Florida Institute of Technology has taken me for 100 parabolas aboard the "ZeroG" aircraft. I am also in charge of designing experiment plans for our tests on board the ISS in collaboration with MIT's Spheres guest scientist program. In May of this year, I earned a Master's degree in Aerospace Engineering. I like to live my life with passion in both my work and play. I love sailing. I have competed in numerous offshore races, some being as long as 408nm. It is a perfect example of balancing forces, and sometimes you are humbled by the wind.

NASA Research and Education Activities

- NASA Student Ambassador
- Presented a technical paper at the 2008 IAC in Glasgow, Scotland

Geoffrey Wawrzyniak
Purdue University
gwawrzyn@purdue.edu

Presentation: Tues., Sept. 28, 10:15 am, Room: North Hall, Presenter #3

Research Title: Trajectory Control for a Solar Sail Spacecraft in an Offset Lunar Orbit

Biographical Sketch

Geoffrey Wawrzyniak received the degree of Bachelor of Science in Mechanical Engineering from the University of Wisconsin--Madison in May 1999. He then entered the Graduate School at The University of Texas at Austin where he earned a Masters degree in Aerospace Engineering in May of 2001. He was employed at the Jet Propulsion Laboratory in Pasadena, California, in the Navigation and Mission Design Section until 2005, when he departed to pursue his Ph.D. at Purdue University in West Lafayette, Indiana. His interests include dynamics, guidance, navigation and control. His research is on the dynamics and control of solar sail spacecraft in the Earth--Moon system.

NASA Research and Education Activities

- Masters research at Johnson Space Center working on relative navigation using pseudolites at the Navigation Systems & Technology Laboratory.

- Employed at JPL. Worked on the Navigation teams for Mars Odyssey, Mars Global Surveyor, Mars Exploration Rovers, Genesis, Stardust, and Mars Science Laboratory. Received group and individual awards recognizing contributions to those missions. Software contributions to MarsLS and IPANEMA/IMAN written up in NASA Tech Briefs.

- Presented technical paper at the 2008 IAC in Glasgow, Scotland.

Danielle Wood
Massachusetts Institute of Technology
dradams@mit.edu

Presentation: Tues., Sept. 28, 10:15 am, Room: Club H, Presenter #1

Research Title: Building Technological Capability within Satellite Programs in Developing Countries

Biographical Sketch

Danielle Wood is a doctoral student in the Engineering Systems Division at MIT, where she studies aerospace engineering, international development and technology policy. Her research focus is the use of satellite-based technology in developing countries. She is particularly interested in the policies and technical projects of developing countries that start new satellite programs. In 2008, Danielle received two Master of Science degrees from MIT: one in Aerospace Engineering; a second in Technology Policy. Danielle also received her Bachelor of Science degree from MIT in Aeronautics and Astronautics in 2005. As an undergraduate, Danielle studied abroad at the Center for Cross-Cultural studies in Spain. She also traveled several times to Kenya to volunteer with homeless children. Since starting her university career Danielle has held several research positions at MIT, the United Nations and NASA centers. She married Jonathan Wood in 2007.

NASA Research and Education Activities

NASA Student Ambassador, 2009 - Present
NASA Harriet G. Jenkins Predoctoral Fellow, 2005
NASA Student Participant at 2008 IAC in Scotland and 2009 IAC in South Korea
2007, Guest Researcher, Goddard Space Flight Center (GSFC) Systems Engineering Branch
Summer Intern 2004 & 2005, NASA Academy Internship Program, GSFC
Summer Intern 1999, NASA Summer High School Apprenticeship Research Program