Saturday, April 19, 2008, Kuiper Space Sciences Building, The University of Arizona

8:30-8:50 a.m. WELCOME AND INTRODUCTION: Room 308

Michael J. Drake, Director, Arizona Space Grant Consortium
Barron J. Orr, Associate Director, UA/NASA Space Grant Program

TIME	Session A: Aerospace and Related Engineering Moderator: Ronald A. Madler, ERAU Room 309	Session B1: NASA Technology in Education — Session B2: Education & Public Outreach Moderator: Barron J. Orr, UA Room 312	Session C1: Exploration Systems: Biological, Materials & Optical Engineering Moderator Michael J. Drake, UA Room 308	Session D1: Planetary Science Moderator: Thomas Sharp, ASU Room 330
9:00-9:10	A-1 *Human Robot Interaction Curriculum* Steven Shark	B1-1 *Encouraging Physical Activity with Technology: Assessing the Potential Role of GPS and GIS* Jamie Wise	C1-1 *Microstructural Analysis of Soft Tissues* Amanda Eskinazi	D1-1 *Lunar Reconnaissance Orbiter* Christian Alf
9:10-9:20	A-2 *SWE GPS Balloon Payload* Chelsea Dutenhoffer	B1-2 *Encouraging Physical Activity with Technology: Accuracy of Commercial GPS Energy Expenditure Products* Marceline Vance	C1-2 *Latex Immunoagglutination Assays for Mouse IgG and Contact Angle Measurements on a Superhydrophobic Surface* Anbar Najam	D1-2 *Wintertime CO2 Frost Formation Could be the Mechanism Behind H2O Ice Patches in the Martian Northern Hemisphere* Eric Beitia
9:20-9:30	A-3 *SWESat Debris Sensing Payload* Elizabeth Jesse	B1-3 *Encouraging Physical Activity with Technology: Integrating GPS and GIS in Education Programs* Krista Kinnard	C1-3 *MRSA Exposure Assessment in a Burn Center Environment* Cassandra Andrade	D1-3 *Thermal Emission Spectroscopy of Terrestrial Varnished and Fresh Rock Surfaces: Applications to Martian Surface Type II Mineralogy* Taylor Feiereisel
9:30-9:40	A-4 *SWE Imaging Payload - Command and Data Handling* Jordan Cluster	B1-4 *Enhancing the Arizona Regional Image Archive* Ivan Lizarraga	C1-4 *Effects of Spinal Cord Injury on Motor Neuron Morphology* Ashley Diamond	D1-4 *The Tyrrhena-Malea Volcanic Province* Leon Madfredi
9:40-9:50	A-5 *SWE Imaging Payload – Structure* Ashley Clark	B1-5 *Developing Best Practices for Geospatial Technology Adoption by Adolescent End-Users* Vanessa Valenzuela	C1-5 *Ultrasound as a Proposed Drug Release Mechanism in Biomedical Microrobots* Malcolm Gibson	D1-5 *Searching for New Surface Features on Mars* Sean Marshall

9:50-10:00	A-6 *Photo Detector Circuitry and Hardware Relating to PARCS* Rachelle Baker	B2-1 *Performance and User Experience Improvements to the ASU/NASA Space Grant Website* Sean Malley	C1-6 *Plant-Based Biopharmaceutical Production under Controlled Environments* Jessica Gamboa	D1-6 *Mineralogy of Siliceous Hot Springs Deposits: Comparing Earth and Mars* Vicki Mills
10:00-10:10	A-7 *Engineering Application of C and Perl to Data Analysis for the Phoenix Mars Lander* Clayton Chu and Patricia Wroblewski	B2-2 *EnterTraining* Ryan Furtado	C1-7 *Gas Adsorption in Carbon Nanotubes* Buddy Davis	D1-7 *Looking for Life on Mars* David Salkoff
10:10-10:30	**morning break**	**morning break**	**morning break**	**morning break**

TIME	**Session A: Aerospace Technology (continued)** **Moderator: Ray Bedard, ERAU** **Space Sciences Room 309**	**Session B2: Education and Public Outreach (continued)** **Moderator: Barron Orr** **—** **Session F: ASCEND!** **Moderator: Jack Crabtree, ANSR** **Space Sciences Room 312**	**Session C1: Exploration Systems: Biological, Materials & Optical Engineering (continued)** **Moderator: Michael J. Drake, UA** **—** **Session C2: Chemical & Environmental Engineering** **Moderator: Robert G. Arnold, UA** **Space Sciences Room 308**	**Session D1: Planetary Science (continued)** **Moderator: Nadine Barlow, NAU** **—** **D2: Astronomy/Space Physics** **Moderator: Lisa Prato, Lowell Observatory** **Space Sciences Room 330**
10:30-10:40	A-8 *Lunar Surface Return Mission and Thruster Configuration Analysis for Lunar Landers* Joseph Farrell	B2-3 *Public Affairs at the Phoenix Mars Mission* Chelsea Hodson	C1-8 *Growing High Temperature Microbes in Geochemically Designed Media* Selisa Rollins	D1-8 *Age Estimates of Zunil and Tooting Based on Crater Counts* Layne Trinkley
10:40-10:50	A-9 Gesture-Based Interactive Beam-Bending Justin Gigliotti	B2-4 Lunar and Planetary Lab Computer Technical Support Intern Maribel Hudson	C1-9 *Chemical and Physical Investigation of Two Naturally-Occurring Antibacterial Clays* Amanda Turner	D1-9 *Small-Scale Morphologic Properties of Martian Gullies: Insights from analysis of HiRISE Images* Carrie Welty
10:50-11:00	A-10 *Student Radio Telescope* Michelle Ho	B2-5 *The Business of Science* Laticia Murphy	C1-10 *Effect of Chemosynthetic Metabolism on Dissolved Organic Carbon in Yellowstone National Park* Kathryn Mayer	D1-10 *A Paleogeographic Reconstruction of Impact Craters* Catherine Juranek

11:00-11:10	A-11 *Support Structure for Phoenix Mission Science Operations Center* Hamza Kolaghsi	B2-6 *The Space Grant Intern Experience* Cassandra Nicholson	C1-11 *Development of Simulation Models and Biosensors to Detect Biological Agents in Water* Melissa Bui	D2-1 *Mapping Young Stellar Objects in the Galactic Mid-Plane* Andrew Britton
11:10-11:20	A-12 *Lunar Lander* Andrew Levine	B2-7 *Newspaper Science Writing* Eric Schwartz	C2-1 *Noise Reduction Techniques* Christine Bradley	D2-2 *BESSEL: A High-Strehl Low-Resolution Optical Imager* Mary Anne Peters
11:20-11:30	A-13 *Hardware Implementation of a Computed Topography Imaging Spectroscopy (CTIS) Reconstruction Algorithm* Jonathan Nation	B2-8 *Media Relations* Roxanne Smith	C2-2 *The Role of Water on the Petrogenesis of Mantle Andesite* Kayla Iacovino	D2-3 *Performance of Phase Apodization Coronagraphs at the MMT* Michael Gaj
11:30-11:40	A-14 *Feedback Stability Control* Patrick Samaniego	B2-9 *ASU NASA Space Grant Outreach Facilitator* Rebecca Jarnagin	C2-3 *Synthesis Of 7-D-Cycloheptatrienyl-Cyclopentadienyl-Titanium* Tristan Day	D2-4 *Identifying the Key Factors in the Planet Formation Process* Tracy Heran
11:40-11:50	A-15 *Energy in Space* Astrid Raisanen	B2-10 *The New Content Management System for ASU/NASA Space Grant* Sean Johnson	C2-4 A *Method For Measuring Phosphorus Nutrient Limitation Using The Oxygen Isotopic Composition Of Phosphates* Joseph Murray	D2-5 *Debris Disk Candidates Around Nearby Stars* Heidi Larson
11:50-12:00	A-16 *Lunar Landing Attenuation Systems Analysis* Christopher Rogers	F-1 *ERAU ASCEND! Project Overview* John Clouse	C2-5 *Ultrafiltration of Arsenic Using Regenerated Cellulose Membranes* Kyle Heckel	D2-6 *Spontaneous Lorentz-Symmetry Breaking in Gravity* Eric Lentz
12:00-12:10	A-17 *Hardware Accelerator Test Bench for Error-Correcting Algorithms* Mike Thomson	F-2 *ERAU ASCEND! Thermal and Structural Design* Kyle Box and Erik Nishida	C2-6 *Microbial Conversion of Arsenic in Anoxic Environments* Lily Milner	D2-7 *Mass Ratios for Young Double-Lined Spectroscopic Binaries* Gregory Mace
12:10-12:20	A-18 *Electron Holography and the Lau Interferometer* Daniel Wanegar	F-3 *Project Data Acquisition & Interpretation of ERAU ASCEND! Payload Flight Data* Matthew Pomeroy and Adam Ritchie	C2-7 *Catalytic Destruction of Gaseous Freon* Disiree Polson	D2-8 *Holding the World Still: An Inexpensive and Reliable Method for Telescope Guiding* Jason Sanborn

12:20-1:40	**Lunch Break Hall of Champions**			

TIME	**Session A: Aerospace Technology (continued)** **—** **Session E-Earth Science & NASA Technology** **Moderator: Chuck Hutchinson, UA** **Room 309**	**Session F: ASCEND! (continued)** **Moderator: Jack Crabtree, ANSR** **Space Sciences Room 312**	**Session C2: Chemical & Environmental Engineering (continued)** **Moderator: Robert G. Arnold, UA** **Space Sciences Room 308**	**Session D2 Astronomy and Space Physics (continued)** **Moderator: Anthony Pitucco, PCC** **Space Sciences Room 330**
1:40-1:50	A-19 *Ion Mass Spectrometry and Remote Sensing in Space Exploration* Gerardo Cornejo	F-4 *ASU ASCEND: Knowledge Transfer and Retention* Sonya Pursehouse	C2-8 *Electrocoagulation of Industrial and Municipal Water Contaminants* Jake Davis	D2-9 *Cosmic Rays and Manned Interplanetary Travel* Isaac Shaffer
1:50-2:00	E-1 *The Impact of Fire on surface Albedo in Southwestern Ponderosa Pine Forest* Isaac Bickford	F-5 *ASU ASCEND: Designing a Glider Fuselage* Eric Chen	C2-9 *Impact of Fluoride on Anaerobic Microorganisms in Wastewater Treatment Plants* Chandra Khatri	D2-10 *Positron Thermal Rocket* Robert Slaughter
2:00-2:10	E-2 *Effects of Deforestation using MODIS* Harish Anandhanarayanan	F-6 *Glider Structural Design and Analysis* Keenan Valentine	C2-10 *HF/Vapor Reactor Automation for the Study of Semiconductors* Genevieve Max	D2-11 *Tidal Debris in Galaxy Cluster Cores* Allison Strom
2:10-2:20	E-3 *The Global Precipitation Measurement Mission* Michael Hwang	F-7 *ASU ASCEND Airfoil Selection and Tail Design* Jose Pedrego	C2-11 *Nitrification and the Removal of Endocrine Disrupting Compounds from Wastewater* David Newman	D2-12 *Convective Energy Transport Boundary in Field Stars* Dillon Foight
2:20-2:30	E-4 *Using GIS for Community based Environmental Management* Erica Koltenuk	F-8 *Sizing and Stability for the ASU ASCEND High Altitude Glider* Thomas Martig	C2-12 *Catalytic Destruction of Chlorinated Solvents* Jagoda Vojvodic	
2:30-2:40	E-5 Changing Landscapes: Lot Splits and Losses in Cochise County Stephanie Kopplin	F-9 *ASU ASCEND: Control System Hardware* Seth Bourn	C2-13 *Controlled Release of Encapsulated Salt through a Polymer Matrix* Kathryn Cook	

2:40-2:50	E-6 *TCP/IP Communications over Iridium Satellite Modems* Nicholas Spera	F-10 *ASU ASCEND: Design Process of a UAV and Team Management* Alex Negrete	C2-14 *Modeling of Cohesionless Granular Flows* Liz Uribe	
2:50-3:00	E-7 *Are Fire and Grazing a Solution to the Invasive Non-Native Lehmann Lovegrass?* Tahlia Bragg	F-11 *Pima College ASCEND Team* Ross (Roscoe) Vertein	C2-15 *Temporal Changes in Dissolved Organic Carbon Composition in an Urban Lake* Megan Kelly	
3:00-3:10	E-8 *Geologic Influences on Ecological Sites Along Mountain Fronts* Elizabeth Desser	F-12 *Pima College ASCEND Team* Daniel Jerrim	C2-16 *Atmospheric Aerosols* Laura Lund	
3:10-3:20	E-9 *The Affects of Urbanization on Semi-Arid Regions and Water Resources* Jessica Kashian	F-13 *South Mountain Community College ASCEND Team* Sean Fernandez, Anh Hoang, Yesenia Neri Romo, Gabriela Acosta, Faycel Kouteib, Matt Granillo,		
3:20-3:30	**Refreshments in the atrium!**			