

WEDNESDAY, April 18, 2012

- 7:30 AM Registration & Breakfast
- 9:00 AM Opening Comments - Dr. Jordi Puig-Suari, CubeSat; Dean of the College of Engineering
- 9:10 AM Event Sponsor Welcome - Raytheon
- 9:25 AM Keynote Presentation - NRO
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- 9:45 AM The Future of CubeSats - Dr. Jordi Puig-Suari, Cal Poly

Session 1: Science Missions

- 10:00 AM The QB50 Project - Ruedeger Reinhard, Von Karman Institute
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- 10:15 AM Applications of NanoSatellites to Small-Body Exploration - Andrew Klesh, NASA JPL
- 10:30 AM --Break--
- 11:00 AM Interplanetary CubeSat Architecture Missions - Rob Staehle, NASA JPL
- 11:15 AM SENSE: The USAF SMC/XR Program for Space Environmental Monitoring - Capt. Paul LaTour, USAF SMC/XR
- 11:30 AM CubeSat for Proximity Operations - Scott MacGillivray, Tyvak Nano-Satellite Systems LLC
- 11:45 AM A Role for Cubesats in a Multi-Tier Exploration / Reconnaissance Architecture - Jeremy Straub, University of North Dakota
- 12:00 PM On-orbit Performance of the RAX-2 Satellite - John Springmann, University of Michigan
- 12:15 PM --Lunch / Poster Session--

Session 2: University Missions

- 1:45 PM Valley Christian High School International Space Station NanoRacks NanoLab Project - Dan Saldana, Valley Christian High School of San Jose
- 2:00 PM Global Educational Network for Satellite Operations (GENSO) - Craig Kief, COSMIAC & Cal Poly
- 2:15 PM PolySat: The Growth of a CubeSat Organization - Brian Tubb, Cal Poly
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- 2:30 PM Design, Mathematical Modeling and Simulation of Attitude Determination and Control system of ICUBE - Naqvi Najam Abbas, Northwestern Polytechnical University
- 2:45 PM Libertad 2: Towards the Consolidation of the Colombian Aerospace Age - Gustavo Puerto, Universidad Sergio Arboleda
- 3:00 PM --Break--
- 3:30 PM UNICubeSAT-GG-The First CubeSat from the University of Roma - Chantal Cappelletti, GAUSS
- 3:45 PM The M-Cubed/Cove Mission: From Launched to Docked? - K. Scott Tripp, James Cutler, University of Michigan
- 4:00 PM The On-Orbit Performance of HRBE (Explorer-1 [Prime]) - David M. Klumpar, Montana State University
- 4:15 PM The Cosmic X-Ray Background NanoSat Pre-Flight - Tyler Rose, Morehead State University
- 4:30 PM --Closing Remarks--
- 6:30 PM --Banquet at the Embassy Suites--

THURSDAY, April 19, 2012

- 8:00 AM Registration & Breakfast

Session 3: Education, Design Philosophy

- 9:00 AM AFRL University Nanosat Program (UNP) - Lt. Kelly Alexander, AFRL
- 9:15 AM Virtual Course: Design of Low Cost Earth Station for Public South American University Nanosatellite - Dane Cachi, Universidad Nacional de Ingenieria
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- 9:30 AM Achieving Educational Outcomes Through CubeSat Curriculum Incorporation - Jeremy Straub, University of North Dakota
- 9:45 AM PhoneSat - A Smart Phone Based Satellite - Elwood F. Agasid, NASA Ames
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- 10:00 AM The First Individual Satellite Launching of a CubeSat, Hojun Song, Open Source Satellite Initiative
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- 10:15 AM --Break--
- 10:45 AM Cost Metrics, Design Reusability and Probabilistic Risk Analysis of a 3U CubeSat - Katharine Brumbaugh, The University of Texas at Austin
- 11:00 AM Highly Integrated Design Approach for High Performance CubeSats - Austin Williams, Tyvak Nano-Satellite Systems LLC
- 11:15 AM The Ecosystem of Nanosatellites - a novel approach to identifying business opportunities in the Nanosatellite space. - Peter Platzter, International Space University
- 11:30 AM Designers Gone Wild -- CubeSat Bus Evolution - Andrew Kalman, PUMPKIN, Inc.
- 11:45 AM --Lunch / Poster Session--

Session 4: Launch Capabilities, Testing, and Simulation

- 1:15 PM ELaN - "Making it Happen!" - Garrett Skrobot, NASA KSC
- 1:30 PM Interorbital's N9 Rocket: Test Program, Schedule, and Launch Manifest Update - Randa Milliron, Interorbital Systems
- 1:45 PM Status on the First Flight of the ULA Aft Bulkhead Carrier with the NPSCuL PPOD Deployer on the NROL-36 Mission - Jake Szatkowski, United Launch Alliance
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- 2:00 PM CubeStack: Improved Access to Space for CubeSats - Joe Maly, Moog CSA Engineering
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- 2:15 PM Suborbital Flight Opportunities for CubeSat-class Experiments Aboard NLV Test Flights - Christopher Bostwick, Garvey Spacecraft Corporation
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- 2:30 PM EDDE: Custom CubeSat Orbit Delivery--Without Dedicated Launch - Joe Carroll, Tether Applications Inc.
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- 2:45 PM --Break--
- 3:15 PM Low-Energy Transfers for Expanding the Orbital Regime of CubeSat Missions - Eric Tran, Drexel University
- 3:30 PM Affordable radiation screening for low-cost space applications. - Chijioke (CJ) Nwosa, Heliocentric Technologies, ZA
- 3:45 PM Access to Space - Joost Elstak, ISIS
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- 4:00 PM Modeling Active Attitude Control using the Smart Nanosatellite Attitude Propagator (SNAP) - Samir Rawashdeh, University of Kentucky
- 4:15 PM Off-the-Shelf Deployable Solar Panels for CubeSats - Craig Clark, Clyde Space
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- 4:30 PM Panel Discussion: CubeSat Operations - Bruce Yost, NASA Ames
- 5:30 PM --Closing Remarks--
- 6:00 PM NSF CubeSat High-speed Downlink Communications group meeting

FRIDAY, April 20, 2012

8:00 AM Registration & Breakfast

9:00 AM OUTSat Status - Major Travis Wilcox, NRO

Session 5: Communications and Power

9:15 AM Making CubeSat Communications Mission Flexible and Provide Schedule Relief - Kevin Brown, AstroDev

9:30 AM Improved Communications Using a Monopole Antenna - Danny L. Smith, University of Alabama in Huntsville

9:45 AM Software Defined Radio (SDR) Based Communication Downlinks for CubeSats - Nestor Voronka, Tethers Unlimited, Inc.

10:00 AM Innovative Plug-and-Play Battery Charging System to Maximize Overall Electrical Power System Efficiency in 1U and 2U CubeSats - Matt Rodencal, University of Alabama in Huntsville

10:15 AM --Break--

10:45 AM Enhanced Power System for CubeSats - Andrew Kalman, PUMPKIN, Inc.

11:00 AM Simulation of CubeSat energy systems for evaluation of power interfaces - Jesus Gonzalez, Universidad Sergio Arboleda

11:15 AM Next Generation Power Systems - Joost Elstak, ISIS

11:30 AM Jorge Freyer, AAC Microtec

11:45 AM CubeSat Frequency Allocation - Bryan Klofas

12:00 PM --Lunch / Poster Session--

Session 6: Subsystems/Payloads/Deployables

1:30 PM Low Power Magnetic Attitude Control System for a CubeSat - Jesse Frey, Alaska Space Grant Program

1:45 PM Photodiode Placement & Algorithms for CubeSat Attitude Determination - John Springmann, University of Michigan

2:00 PM The Development of a 6 Degree-of-Freedom Guidance Navigation and Control Module for CubeSats - Henri C. Kjellberg, University of Texas at Austin

2:15 PM USAFA FalconSat-7: Deployable Membrane Optics - Samantha Latch, United States Air Force Academy

2:30 PM Electric Propulsion System for CubeSats - Hardware, Test Results and Current Development Activities - Craig Clark, Clyde Space

2:45 PM --Break--

3:15 PM Re-Entry Platform for In-Flight Demonstration and In-Situ Measurement - Gilles Bailet, Von Karman Institute

3:30 PM The Drag-Free CubeSat - John W. Conklin, Stanford University

3:45 PM Aerodynamic Package for a CubeSat - Jason Carroll, Drexel University

4:00 PM --Closing Remarks--