

Receptions

Come and meet the other participants and bring your spouse. Networking receptions will also be held on Monday, Tuesday and Wednesday on the hotel terrace.

Responsive Proceedings

Papers and presentations will be available online via a password for registered attendees. A password will be provided at check-in. CD's of the proceedings will be available for \$50 to registered attendees only and mailed one week after the conference. These can be purchased at the conference or at the time of pre-conference registration.

Past RS Conference Papers

All prior RS Conference papers and presentations (where they were provided) are available at no cost on the conference website, www.reinventingspace.org. You can search the full set of proceedings by author, organization, or word search. If you don't want to download individual papers, the complete proceedings of all prior conferences are available on CDs at www.astrobooks.com.

NASA/JPL Town Hall Meeting

Register for the NASA/JPL Town Hall Dinner and spend an evening with Dr. Elachi on The Renaissance of Space Technology, Thursday, May 5, 2011, 6:00–9:00 p.m. (immediately following the RS2011 Conference).

RS2011 Classified Annex

The Classified Annex is being held at the DoD Secret/NOFORN level in the A8 Conference Room at the Aerospace Corporation, 2310 East El Segundo Blvd., El Segundo, CA 90245 from 8:00 a.m.–5:00 p.m. on Friday, May 6, 2011. A separate registration and Security Clearance authorization are required. Seating is limited and available on a first-come, first-served basis. **U.S. Citizens Only.**

Is It Working? Is It Not Working?

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Information & Registration

You can register on-line via the website or download a registration form to FAX or mail. Want to talk to a real human being about the conference? Call **Julie Jackson** at:

310-219-2700 or FAX 310-219-2710.

Or send us an E-mail at: questions@responsivespace.com
For more information, visit the conference website at:
<http://www.reinventingspace.org>

Partial List of Speakers

Mr. Josh Hartman
Independent

Mr. Doug Loverro
*Executive Director, Space and Missile Systems Center,
Air Force Space Command*

Mr. Richard W. McKinney
Deputy Under Secretary of the Air Force for Space Program

Dr. James Reuther
*Director for Strategic Integration in the Office of the
Chief Technologist, NASA*

Dr. Pete Rustan
Director, Mission Support Directorate, NRO

Lt. Gen. Tom Sheridan
Commander, Space & Missile Systems Center

Dr. Mark Swinson
*SES, Director, Space & Cyberspace Technology Directorate,
USASMD/ARSTRAT*

Mr. Dave Thompson
*Chairman and Chief Executive Officer,
Orbital Sciences Corporation*

Dr. Peter Wegner
Director, Operationally Responsive Space Office (ORSO)

*For a complete list of senior level speakers, please visit the
Reinventing Space Conference website at:
www.reinventingspace.org.*

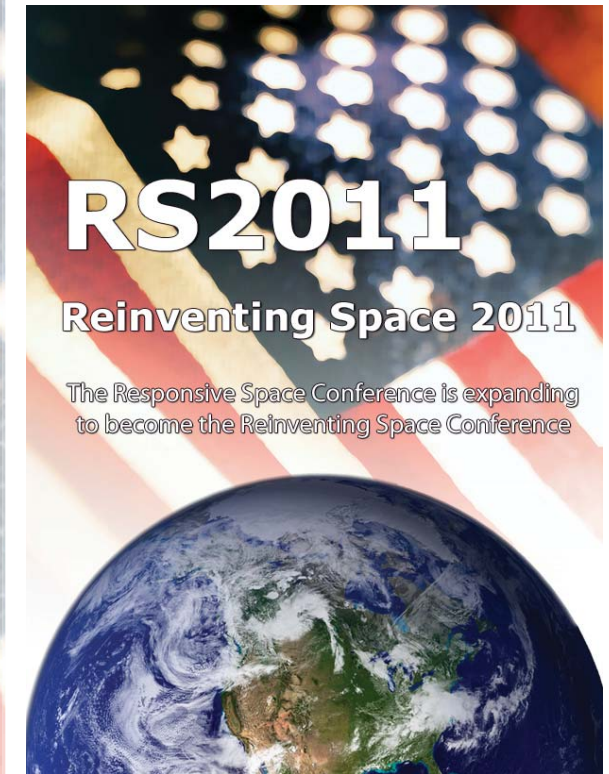
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Sponsorship POC:
Dr. Robert Conger
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FINAL PROGRAM

May 2–5, 2011
LAX Westin Hotel



*Sponsored by the
AIAA LA and Orange County Sections, and the
Space Systems Technical Committee*

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MONDAY, MAY 2, 2011

- 12:00 pm–5:00 pm **SSTC MEETING**
4:00 pm–7:00 pm **REGISTRATION OPENS**
4:00 pm–7:00 pm **EXHIBITS OPEN**
5:00 pm–7:00 pm **RECEPTION**, Sponsored by General Dynamics

TUESDAY, MAY 3, 2011

- 7:00 am–5:00 pm **REGISTRATION**
7:00 am–8:00 am **CONTINENTAL BREAKFAST**, Sponsored by Lockheed Martin
7:00 am–7:00 pm **EXHIBITS OPEN**
8:00 am–8:45 am **WELCOME AND INTRODUCTIONS**
Dr. James Wertz, *Microcosm, Inc.*
8:45 am–9:25 am Keynote Address: **DUSEC AF Richard McKinney**
9:25 am–9:55 am **BREAK**, Sponsored by Comtech/AeroAstro
9:55 am–11:20 am Panel: **WHY—The Need to Reinvent Space**
11:20 am–11:55 am Speaker: **Josh Hartman**, *Principal, Center for Strategic Space Studies*
11:55 am–1:20 pm LUNCH, Speaker: **LtGen Tom Sheridan**, *Commander, Space & Missile Systems Center*
Sponsored by Sierra Nevada Corporation
1:20 pm–1:30 pm **BREAK**
1:30 pm–2:05 pm Speaker: **Colonel Arnold H. “Arnie” Streland**, *Commander, Space Superiority Systems Wing, Los Angeles Air Force Base*
2:05 pm–3:50 pm **SESSION I—MISSION & SYSTEMS ENGINEERING**
Chair: **Richard Van Allen**; Co-Chair: **Stan Dubyn**
2:10 pm 1001: Army Nanosatellite Technology Demonstrations for the Tactical Land Warfighter — **Richard White**, SMDC
2:30 pm 1002: USAFA Astronautics Capstone Programs—Educating Our Future Operationally Responsive Space Leaders — **Col. Martin EB France**, US Air Force Academy
2:50 pm 1003: STP: SIV: Real World Responsiveness of Spacecraft Interface Standardization — **David Kaufman**, Ball Aerospace
3:10 pm 5001: An Operationally Responsive Architecture — **Stuart Eves**, Surrey Satellite Technology, LTD
3:30 pm 1005: Demonstrating Responsive Spacecraft Integration Processes Using the Cubesat Standard — **Jordi Puig-Sari**, Cal Poly, San Luis Obispo
3:50 pm–4:20 pm **BREAK**
4:20 pm–5:45 pm **SESSION II—PLUG & PLAY**
Chair: **Jeff Puschell**; Co-Chair: **Carl Schueler**
4:25 pm 2001: Cell-based Architecture for Adaptive Wiring Panels: A First Approach — **Victor Murray**, University of New Mexico
4:45 pm 2002: Improving Fault Tolerance/Reliability in Space Plug and (PnP) Architectures — **Steven Schenk**, Comtech/AeroAstro
5:05 pm 2003: Plug-and-Play Space Weather Sensor for a CubeSat — **Geoff Crowley**, ASTRA LLC
5:25 pm 2004: AFRL, Plug-and-Play Spacecraft Avionics Experiment (SAE) and Associated Cost Savings of Using Plug-and-Play Interfaces — **Maurice Martin**, AFRL Space Vehicle Directorate
5:45 pm–7:30 pm **RECEPTION**, Sponsored by Orbital Sciences Corp.

WEDNESDAY, MAY 4, 2011

- 7:00 am–5:00 pm **REGISTRATION**
7:00 am–8:00 am **CONTINENTAL BREAKFAST**, Sponsored by Boeing
7:00 am–6:30 pm **EXHIBITS OPEN**
8:00 am–8:05 am **CALL TO ORDER/ANNOUNCEMENTS**
8:05 am–9:05 am Speaker: **Doug Loverro**, *Executive Director, Space and Missile Systems Center, Air Force Space Command*
9:05 am–10:20 am Panel: **WHAT—System Architectures**
10:20 am–10:50 am **BREAK**
10:50 am–12:05 pm Panel: **WHAT—Business Practices**
12:05 pm–1:35 pm LUNCH, Speaker: **Dr. Mark Swinson**, *SES, Director, Space & Cyberspace Technology Directorate, USASMD/ARSTRAT*
Sponsored by Raytheon
1:35 pm–1:45 pm **BREAK**, Sponsored by Harris Corporation
1:45 pm–3:30 pm **SESSION III—SPACECRAFT TECHNOLOGY**
Chair: **Shahzad Khaligh**; Co-Chair: **Scott Jensen**
1:50 pm 3001: High-Power Deployable Solar Panel Arrays for NanoSats and MicroSats — **Edmund Burke**, Space Information Labs
2:10 pm 3002: A Modular, Low Cost Software Defined Radar for Responsive Space Payloads — **Jim Faist**, Trident Systems, Inc.
2:30 pm 1006: NanoEye — A Multi Mission Low Cost Spacecraft — **Richard Van Allen**, Microcosm, Inc.
2:50 pm 3004: Using Thermoelectric Generators for Additional Power Generation Onboard Small LEO Satellites — **Toshiaki Iwata**, void inc., Japan
3:10 pm 3005: A Novel Modular Satellite Bus Design — **Jin Kang**, Drexel University
3:30 pm–4:00 pm **BREAK**, Sponsored by Millennium Engineering
4:00 pm–5:45 pm **SESSION IV—LAUNCH**
Chair: **Robert Conger**; Co-Chair: **Dan Levack**
4:05 pm 4001: Initial Look at the Rocketback Flight Envelope for a Reusable Booster System — **Barry Hellman**, AFRL/RBSI
4:25 pm 5005: Failing to Communicate the Cost of Space Communication — **Assi Friedman**, Innoflight, Inc.
4:45 pm 4003: Responsive Space Launch — **Randa Milliron**, Interorbital Systems
5:05 pm 4004: Space Rapid Transit for Rapid Spacecraft Deployment — **Paul Griesemer**, Princeton Satellite Systems
5:25 pm 3007: Enabling Responsive Missions via Multi-Axis Vibration Testing — **Norman Fitz-Coy**, University of Florida
5:45 pm–6:30 pm **RECEPTION**, Sponsored by Boeing
6:30 pm–8:30 pm **CONFERENCE BANQUET**, Sponsored by ATK
Speaker: **Mr. Dave Thompson**, *Chairman and Chief Executive Officer, Orbital Sciences Corp.*

THURSDAY, MAY 5, 2011

- 7:00 am–8:00 am **CONTINENTAL BREAKFAST**
7:00 am–2:00 pm **EXHIBITS OPEN**
8:00 am–8:05 am **CALL TO ORDER/ANNOUNCEMENTS**
8:05 am–8:35 am **ORS OFFICE UPDATE**
Speaker: **Dr. Peter Wegner**, *Director, Operationally Responsive Space Office (ORSO)*
8:35 am–9:10 am Speaker: **CAPT Rodney E. Hutton**, *Chief, Global ISR and Space Division (JB4), U.S. Strategic Command*
9:10 am–10:25 am Panel: **HOW—The View from Industry**
10:25 am–10:55 am **BREAK**
10:55 pm–12:00 pm **SESSION VI-A—CONOPS**
Chair: **Stan Kennedy**; Co-Chair: **Vince Deno**
10:55 am 6005: The Need for Responsive Communications and Intelligence for Fighting Wildfires Transitioning Military Capabilities for Civil Benefit — **Richard Galindez**, L-3 Communications, CSW
11:15 am 6001: A Decision Support Framework for On-Orbit Reconfiguration of Space Assets — **Joseph Mueller**, Princeton Satellite Systems, Inc.
11:35 am 6002: Low Cost Mobile Ground Stations — **Charley Rhodes**, Libration Systems Management
12:00 pm–1:30 pm LUNCH, Speaker: **Dr. Pete Rustan**, *Director, Mission Support Directorate, NRO*
Sponsored by SpaceX
1:30 pm–1:40 pm **BREAK**
1:40 pm–3:05 pm **SESSION V—ARCHITECTURE**
Chair: **Amy Lo**; Co-Chair: **Dan Levack**
1:45 pm 3006: Employing Onboard Video for Cost-Effective Situational Awareness — **Rex Ridenoure**, Ecliptic Enterprises Corp.
2:05 pm 5002: Methods for Achieving Dramatic Reductions in Space Mission Cost — **James Wertz**, Microcosm, Inc.
2:25 pm 5006: Use of Model-Driven Architectures to Increase Responsiveness and Reduce Cost — **Russ Dewey**, Technology Service Corp.
2:45 pm 5004: Dichotomous Spacecraft: Simplified Fractionation (Student Award)— **Alexander Finch**, Purdue University
3:05 pm–3:35 pm **BREAK**
3:35 pm–4:20 pm **SESSION VI-B—CONOPS**
Chair: **Stan Kennedy**; Co-Chair: **Vince Deno**
3:40 pm 6003: Affordable Tactical Space Using Microsatellites and Aerial Launch for Lone Range BMD Applications — **Yoram Ilan-Lipovsky**, Fisher Institute for Air & Space Strategic Studies
4:00 pm 6004: Operationally Responsive Space: An Operational Squadron’s Tactical Perspective — **Capt. James Massey**, 7th Space Operations Squadron
4:20 pm–4:55 pm **Dr. James Reuther**, Director for Strategic Integration in the Office of the Chief Technologist, NASA
4:55 pm–5:25 pm **WRAP-UP AND DISCUSSION**
5:25 pm–6:30 pm **RECEPTION NASA TOWN HALL**
6:30 pm–9:00 pm **NASA TOWN HALL DINNER**

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