



2002 NASA Space Communications Symposium



SEPTEMBER 17 - 19, 2002 • CLEVELAND AIRPORT SHERATON

Space Communications Project

in the Computing, Information and Communications Technologies Program

| Agenda - September 17, 2002 | | | | | |
|---------------------------------------|---------------------|---|--------------------|----------------------------|------|
| Session | Schedule | Item | Presenter | Affiliation | Time |
| | 7:15 AM - 8:30 AM | Registration | | | 75 |
| Session 1 - Programmatic Overview | 8:30 AM - 8:45 AM | Glenn Welcome | Earls, Julian | GRC Deputy Center Director | 15 |
| | 8:45 AM - 9:05 AM | Pioneering Revolutionary Technologies | TBD | NASA HQ | 20 |
| | 9:05 AM - 9:25 AM | CICT Program Presentation | Eugene Tu | NASA CICT Program Manager | 20 |
| | 9:25 AM - 9:45 AM | Space Communications Project | Bhasin, Kul | Space Comm Project Manager | 20 |
| | 9:45 AM - 10:00 AM | Break | | | 15 |
| Session 2 - Intelligent Architectures | 10:00 AM - 10:20 AM | Cluster and Constellation Architectures | Butts, Norm | Lockheed Martin | 20 |
| | 10:20 AM - 10:40 AM | Advanced Systems, Communications Architecture and Technology Assessment | Enlow, David | Lockheed Martin | 20 |
| | 10:40 AM - 11:00 AM | CAMEL Project - LEO Direct to User | Chethik, Frank | Lockheed Martin | 20 |
| | 11:00 AM - 11:20 AM | Proximity Network Study | Salo, Tim | Architecture Technology | 20 |
| | 11:20 AM - 11:35 AM | Visualization Design Tools for Spacecomm Architecture Development | Horowitz, Jay | GRC | 15 |
| | 11:35 AM - 11:50 AM | Distributed Space Communications Systems - Large Scale Emulation | Putt, Charles | GRC | 15 |
| | 11:50 AM - 12:50 PM | Lunch | | | 60 |
| Session 3 - InterSpace-Craft Networks | 12:50 PM - 1:20 PM | High-Throughput Distributed Spacecraft Communications | Bergamo, Marcos | BBN Technologies | 30 |
| | 1:20 PM - 1:50 PM | Ad Hoc Networks in Space and Surface | Johnson, David | Rice University | 30 |
| | 1:50 PM - 2:20 PM | Space Communications at JPL | Yan, Tsun-Yee | JPL | 30 |
| | 2:20 PM - 2:40 PM | Application Layer for Multispacecraft | Johnson, Jeffrey | University of Toledo | 20 |
| | 2:40 PM - 3:00 PM | Break | | | 20 |
| | 3:00 PM - 3:20 PM | Distributed Communications for Inter-Spacecraft Networks | Konangi, Vijaya | Cleveland State University | 20 |
| Session 4 - Access Networks | 3:20 PM - 3:50 PM | Reconfigurable Antennas | Bernhard, Jennifer | University of Illinois | 30 |
| | 3:20 PM - 3:50 PM | Ferroelectric Reflectarray | Romanofsky, Robert | GRC | 30 |
| | 3:50 PM - 4:20 PM | Hi Efficiency Ka-Band MHEMT MMIC | Smith, Phillip | BAE Systems | 30 |
| | 4:20 PM - 4:50 PM | RF Microphotonics (0597) | Levi, Anthony | Univ of Southern Cal | 30 |
| | 4:50 PM - 5:10 PM | Onboard Agile Comm for Access Networks | Kifle, Muli | GRC | 20 |

| Agenda - September 18, 2002 | | | | | |
|---------------------------------------|---------------------|---|--------------------------------|---------------------------------|-------------|
| Session | Schedule | Item | Presenter | Affiliation | Time |
| | 7:45 AM - 8:30 AM | Registration | | | 45 |
| Session 4 - Access Networks Continued | 8:30 AM - 9:00 AM | SiGE RF SSPA | Ponchak, George | GRC | 30 |
| | 9:00 AM - 9:20 AM | Low Loss SOC | Ponchak, George | GRC | 20 |
| | 9:20 AM - 9:50 AM | Optical Communications Based Sensor Webs | Hemmati, Hamid | JPL | 30 |
| | 9:50 AM - 10:20 AM | Liquid Crystal Based Beam Steering | Bos, Philip | Kent State University | 30 |
| | 10:20 AM - 10:35 AM | Break | | | 15 |
| | 10:35 AM - 11:05 AM | Spacecraft Network Devices | Lazbin, Jennifer | Spectrum Astro | 30 |
| | 11:05 AM - 11:35 AM | IP Infrastructure for Space System | Fox, Armondo | Stanford University | 30 |
| | 11:35 AM - 12:05 PM | Interlayer Interaction | Modiano, Eytan | MIT | 30 |
| | 12:05 PM - 1:05 PM | Lunch | | | 60 |
| | 1:05 PM - 1:25 PM | Multibeam Antenna - Direct Radiating PET Dual-Beam Phased Array | Rodenbeck, Chris | Texas A&M | 20 |
| | 1:25 PM - 1:45 PM | Multibeam Antenna - Space-Fed Dual-Beam Lens Phased Array | Popovic, Zoya | University of Colorado | 20 |
| | 1:45 PM - 2:05 PM | MEMS Antennas | Zaman, Afroz | GRC | 20 |
| Session 5 - Proximity Networks | 2:05 PM - 2:25 PM | Space Communications and Proximity Networks for Human/Robotic Planetary | Seibert, Marc | GRC | 20 |
| | 2:25 PM - 2:55 PM | Low-Power SOI CMOS Transceiver | Dogan, Numan | North Carolina A&T University | 30 |
| | 2:55 PM - 3:10 PM | Break | | | 15 |
| | 3:10 PM - 3:25 PM | Miniature Tunable Antennas for Power-Efficient Wireless Communications | Young, Darrin | Case Western Reserve University | 15 |
| | 3:25 PM - 3:40 PM | Active MEMS for Wireless and Optical Space Communications | Phillips, Stephen | Case Western Reserve University | 15 |
| | 3:40 PM - 3:55 PM | Reconfigurable Communications Processor | Papachristou, Chris | Case Western Reserve University | 15 |
| | 3:55 PM - 4:10 PM | Semantic-Based Data Compression for Mobile Environments | Sahinalp, S. C. and Ozsoyoglu, | Case Western Reserve University | 15 |
| | 4:10 PM - 4:25 PM | Remote Interaction with Machines | Liberatore, Vincenzo | Case Western Reserve University | 15 |
| | 4:25 PM - 4:40 PM | Protocols & Systems for Agile, Interactive and Intelligent Routers | Malakooti, Behnam | Case Western Reserve University | 15 |
| | 4:40 PM - 4:55 PM | Biosensor Networks | Merat, Frank | Case Western Reserve University | 15 |

| Agenda - September 19, 2002 | | | | | |
|--|---------------------|---|--------------------------------|-------------------------------|-------------|
| Session | Schedule | Item | Presenter | Affiliation | Time |
| | 7:45 AM - 8:30 AM | Registration | | | 45 |
| Session 5 - Proximity Networks Continued | 8:30 AM - 9:00 AM | Micro-Surface Wireless Instrumentation System | Kiefer, Karl and Palmer, David | Invocon | 30 |
| | 9:00 AM - 9:20 AM | Local Area Network for Space Based Instrument Control | Krasowski, Michael | GRC | 20 |
| Session 6 - Backbone Networks | 9:20 AM - 9:50 AM | Efficient Deep-space Lasercom | Jones, D. Cris | HRL | 30 |
| | 9:50 AM - 10:20 AM | Fine Pointing Laser Tracker | Halderson, Connie | Lockheed Martin | 30 |
| | 10:20 AM - 10:35 AM | Break | | | 15 |
| | 10:35 AM - 11:05 AM | Pioneering Revolutionary Technologies | Andrucyk, Dennis | PRT Program Director, NASA HQ | 30 |
| | 11:05 AM - 11:35 AM | Power and Bandwidth Efficient Coded Modulation for Very High Data Rates | Divsalar, Dariush | JPL | 30 |
| | 11:35 AM - 12:05 PM | High Power Transmitting Sources | Wilson, Jeff | GRC | 30 |
| | 12:05 PM - 1:05 PM | Lunch | | | 60 |
| | 1:05 PM - 1:35 PM | High Efficiency Miniaturized TWT | Wintucky, Edwin | GRC | 30 |
| | 1:35 PM - 2:05 PM | 100 Watt Traveling Wave Tube | Krawczyk, Richard | GRC | 30 |