

2003 Published Papers

Abramson, M.; Collins, B.; Kolitz, S.; Ricard, M.; Scheidler, P.; Strauss, C.

Automated Coordinated Mission Planning Across Constellations

Earth Science Technology Conference (ESTC), Adelphi, MD, June 23-26, 2003. Sponsored by: National Aeronautics and Space Administration (NASA)

Allred, C.; Borenstein, J.; Weinberg, M.; Xianglong Y.; Bazant, M.; Hobbs, L.

Defect-Induced Shifts in the Elastic Constants of Silicon
Nano- and Microelectromechanical Systems (NEMS and MEMS) and Molecular Machines Symposium, December 2-4, 2002, Boston, MA; *Mater. Res. Soc.*, Vol. 741, 2003, pp. 145-50

Andersson, K.; Hall, W.; Atkins, S.; Feron, E.

Optimization-Based Analysis of Collaborative Airport Arrival Planning

Transportation Science, Vol. 37, No. 4, November 2003, pp. 422-433

Angermueller, K.; Hattis, P.; Fill, T.; Wright, R.; Benney, R.; LeMoine, D.; King, D.

In-Flight Precision Airdrop Planner Follow-on Development Program

Aerodynamic Decelerator Systems Conference, Monterey, CA, May 19-22, 2003. Sponsored by: AIAA

Antkowiak, B.; Gorman, J.; Varghese, M.; Carter, D.; Duwel, A.

Design of a High-Q, Low-Impedance, GHz-Range Piezoelectric MEMS Resonator
Proceedings, 12th Solid-State Sensors, Actuators, and Microsystems (Transducers '03), Boston, MA, June 8-12, 2003. Sponsored by: Institute of Electrical & Electronics Engineers/Electronic Devices Society (IEEE/EDS)

Barbour, N.; Anderson, R.; Connelly, J.; Hanson, D.; Kourepenis, A.; Sitomer, J.; Ward, P.

Inertial MEMS System Applications

Advances in Navigation Sensors & Integration Technology, NATO/RTO Educational Notes, EN-SET-064, Oct. 2003

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Inertial Navigation Sensors

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Bedrossian, N.

ISS Russian GN&C Systems Flex Verification and Flight Experience

2003 American Astronautical Society (AAS) Astrodynamics Specialist Conference, Paper No: AAS-03-597, Big Sky, Montana, August 3-7, 2003

Bedrossian, N.; Pietz, J.

Momentum Dumping Using only CMGs

GNC Control Conference and Exhibit, Austin, TX, August 11-14, 2003. Sponsored by: AIAA

Boelitz, F.; Gatt, P.; Martin, A.

Launch Vehicle Wind Look Ahead Guidance for Ascent Load Management

Guidance, Navigation, and Control Conference, Austin, TX, August 11-14, 2003. Sponsored by: AIAA

Bonnell, J.; Ricard, M.; Moniz, D.

Command and Control of an Unmanned Undersea Vehicle to Perform Intelligence, Surveillance, and Reconnaissance
Unmanned Systems 2003 Conference, Baltimore, MD, July 15-17, 2003. Sponsored by: Association for Unmanned Vehicle Systems International (AUVSI)

Borenstein, J.; Cheung, W.; Hartman, L.; Kaazempur-Mofrad, M.; King, K.; Sevy, A.; Shin, M.; Weinberg, E.; Vacanti, J.

Living Three-Dimensional Microfabricated Constructs for the Replacement of Vital Organ Function
Proceedings, 12th Solid-State Sensors, Actuators, and Microsystems (Transducers '03), Boston, MA, June 8-12, 2003, pp. 1754-7

Borenstein, J.; Barnard, E.; Orrick, B.; Cheung, W.; Sundback, C.; Vacanti, J.

Microfabricated Biodegradable Scaffolds for Tissue Engineering of Vital Organs

Materials Research Society (MRS), Fall 2003, Boston, MA, December 1-5, 2003. Sponsored by: MRS

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Tissue Engineering of Microvascular Networks

Encyclopedia of Biomaterials and Bioengineering, November 2003

Brady, T.; Buckley, S.; Dennehy, C.; Gambino, J.; Maynard, A.

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26th Guidance and Control Conference, Breckenridge, CO, February 5-9, 2003. Sponsored by: AAS

Brand, T.; Phillips, R.

Foot to Foot Range Measurement as an Aid to Personal Navigation

59th Institute of Navigation Annual Meeting (ION), Albuquerque, NM, June 23-25, 2003. Sponsored by: ION

Brand, T.; Tao, Y.; Norris, L.

MARS Airplane Guidance and Navigation

Unmanned Unlimited Systems, Technologies & Operations Conference, San Diego, CA, September 15-18, 2003. Sponsored by: AIAA

Carrasquillo, K.; Ricker, J.; Rigas, I.; Miller, J.; Gragoudas, E.; Adamis, A.

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Investigative Ophthalmology & Visual Science, Vol. 44, No. 1, January 2003, pp. 290-299

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Semiconductor Silicon as a Selective Emitter

American Institute of Physics (AIP) Conference Proceedings, Vol. 653, No. 1, January 25, 2003

Cleary, M.; Kolitz, S.

Variable Initiative in Optimization-Based Planning and Control Systems

American Association for Artificial Intelligence (AAAI) Spring Symposium, Palo Alto, CA, March 24-26, 2003. Sponsored by: AAAI

Davis, C.; Zapata, A.; Borenstein, J.; Callahan M.; Gelfand, J.; Sonenshein A.; Nazarov E.; Miller R.

Biological Sample Analysis Using Differential Mobility Spectrometry

Proceedings 12th International Symposium on Ion Mobility Spectrometry, Vol 1; Umeå, Sweden, 2003

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SPORE Biomarker Detection Using a MEMS Differential Mobility Spectrometer

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Swelling-Activated Ion Currents and Volume Regulation in Embryonic Kidney Cells: Effects of Phospholemman Expression

Neurochemical Research, Vol. 29, No. 1, 2003, pp. 177-187

Desai, M.; Shu, L.; Mangoubi, R.

Average Connectivity Properties of Wireless Ad Hoc Networks

Wireless Communications and Networking Conference (WCNC), New Orleans, LA, March 16-20, 2003. Sponsored by: IEEE

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IEEE Transactions on Signal Processing, Vol. 51, No. 12, December 2003, pp. 3115-3127

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Subspace Learning and Innovation Characterization in Generalized Gaussian Noise

37th ASILOMAR Conference on Signals, Systems, and Computers, Monterey, CA, November 9-12, 2003. Sponsored by: IEEE

Dever, C.; Mettler, B.; Feron, E.

Scaling Effects and Dynamic Characteristics of Miniature Rotorcraft

Journal of Guidance, Control, and Dynamics, AIAA, January 2003

DiMatteo, R.; Greiff, P.; Finberg, S.; Young-Waithe, K.; Choy, H.; Masaki, M.; Fonstad, C.

Micron-Gap Thermophotovoltaics (MTPV)

5th Thermophotovoltaic Generation of Electricity, September 16-19, 2002, Rome, Italy, Sponsored by U.S. Army (CECOM), Army Res. Office, Nat. Renewable Energy Lab., U.S. Department of Energy, et al.; *American Institute of Physics (AIP) Conference Proceedings*, No. 653, 2003, pp. 232-40

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Micron-Gap ThermoPhotoVoltaics (MTPV)

Direct Energy Conversion, Kickoff Meeting & Workshop, Las Vegas, NV, December 9-11, 2003. Sponsored by: DARPA, Office of Naval Research (ONR), Naval Sea Systems Command (NAVSEA), NASA

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Sensors and Actuators A, Vol. 103, No. 1, January 15, 2003, pp. 70-75

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MEMS Development at Draper Laboratory
 Society of Experimental Mechanics (SEM) Annual Conference, Charlotte, NC, June 2-4, 2003. Sponsored by: SEM

Duwel, A.; Barbour, N.
MEMS Development at Draper Laboratory
 Nanotechnology Conference, McLean, VA, March 15-17, 2003. Sponsored by: Federal Highway Administration (FHWA)

Flannery, E.; Novotny, J.; Karpov, I.; Zhang, C.; Bedrossian, N.
XNsim Extensible Network Simulation
 AIAA Modeling and Simulation Technologies Conference and Exhibit, Austin, TX, August 11-14, 2003. Sponsored by: AIAA

Ghorbel, F.; Hall, R.; Lowry, N.
Three-Pulse Minimal Fuel Rotations of Axisymmetric Spacecraft Using Reaction Control Thrusters
Proceedings of the American Control Conference, Vol. 2, Denver, CO, June 4-6, 2003, pp. 1128-1133.

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Deeply Integrated Code Tracking: Comparative Performance Analysis
 Institute of Navigation GPS/Global Navigation Satellite System (GNSS), Portland, OR, September 9-12, 2003. Sponsored by: ION

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Nearly-Isentropic Energy Conversion with Quantum Excitation Transfer
 Research Lab for Electronics (RLE) Progress Report, N145, September 5, 2003, pp. 29-1 to 29-4. Sponsored by: MIT RLE

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Achieving 10⁻⁹ Dependability with Drive-by-Wire Systems
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Hammett, R.
Fault-Tolerant Avionics Systems
 Digital Avionics Systems Conference, Indianapolis, IN, October 12, 2003. Sponsored by: IEEE

Hammett, R.
Flight-Critical Distributed Systems - Design Considerations
Aerospace and Electronic Systems Magazine, Vol. 18, No. 6, June 2003, pp. 30-36

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Preventing Data Pollution in the Space Shuttle Cockpit
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A Collaborative Modeling and Simulation Structure
 2003 Software Virtual Product Development Conference, Dearborn, MI, October 13-15, 2003. Sponsored by: MSC Software

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A Quantitative Approach for Determining the Level and Sophistication of Automation in Unmanned Vehicles
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Houston, K.; McGaffigan, D.
Spectrum Analysis Techniques for Personnel Detection Using Seismic Sensors
 5th Unattended Ground Sensor Technologies and Applications, Orlando, FL, April 21-25, 2003, pp. 162-173. Sponsored by: International Society for Optical Engineering (SPIE)

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A Web-Enabled Space Station Simulation Development & Analysis Tool (eSim)
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Proceedings, American Control Conference (ACC), Vol. 6, Denver, CO, June 4-6, 2003 pp. 5363-5368. Sponsored by: IEEE

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Multivariable Flex Model Reduction

Astrodynamics Specialist Conference, Big Sky, MT, August 3-7, 2003. Sponsored by: AAS/AIAA

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Tissue Engineering: Multiscaled Representation of Tissue Architecture and Function

Complex Systems Science in Biomedicine, Kluwer Academic, Plenum Publishers, New York, 2003

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2nd Computational Fluid and Solid Mechanics, Cambridge, MA, June 17-20, 2003. Sponsored by: MIT

Kondoleon, A.

Development of Alternate Sources of Hemispherical Wheels for the 16 PIGA MOD-G (Interim Findings)

28th Joint Navigation Conference (JNC), Las Vegas, NV, April 14-17, 2003

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Biodegradable Microfluidics

Advanced Materials, November, 2003

Kumar, K.

The Centrality of Materials Development in the Design of Advanced Inertial Instruments

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Electric Field Screening by Injected Charge in Polymer Light-Emitting Diodes

Applied Physics Letters, Vol. 83, No. 17, October 27, 2003, p. 3611-3613

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Electric Field Screening in Polymer Light-Emitting Diodes

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A High-Mobility Tactical Micro-Robot System

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An Improved Three-Pulse Algorithm for Axisymmetric RCS Control

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36th International Symposium on Microelectronics, Boston, MA, November 18-20, 2003. Sponsored by: International Microelectronics and Packaging Society (IMAPS)/SPIE

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A Flyer in a Can

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Guidance, Navigation, and Control Conference, Austin, TX, August 11-14, 2003. Sponsored by: AIAA

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4th Collaborative Technologies and Systems (CTS), Orlando, FL, January 19-24, 2003

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Material Issues of Low-Temperature Co-Fired Ceramic (LTCC) Fine Pitch Chip-Scale Package (CSP) Designs

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A State Estimator Supporting Command and Control of Multiple Types of Aircraft Missions

Unmanned Systems, Technologies, and Operations, San Diego, CA, September 15-18, 2003. Sponsored by: AIAA

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Underwater Intervention Conference, New Orleans, LA, February 10-12, 2003.

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INS/GPS Integration

January 2003

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Guidance, Navigation, and Control Conference and Exhibit, August 11-14, 2003. Sponsored by: AIAA

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An Approach to Custom CSP Package Fabrication

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Physics World, March 2003, pp. 24-25

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Photonics West, San Jose, CA, January 25-31, 2003. Sponsored by: SPIE

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