

Conferences, Workshops and Short Courses of Interest

Battlespace Engineering

March 1998 - March 1999

Prepared by

**NAWCWPNS Technical Library Staff
Code 4BL000D**

24 February 1998

This is not intended to be a comprehensive listing of upcoming conferences, workshops and short courses, but rather a guide to those that may be of interest to NAWCWPNS personnel supporting the Center's strategic thrusts and initiatives.

MARCH 1998

1998 IEEE Aerospace Conference, 21-28 March 1998, Aspen, CO

- A. Conference Tracks
 - 1. Global Virtual Presence
 - a. Hyperspectral Remote Sensing for GVP
 - b. Space Laser Technology
 - c. Lightweight Structures for Remote Sensing and Surveillance
 - d. High Accuracy Pointing, Control, Tracking and Stabilization Technologies
 - e. Knowledge on Demand and Data Fusion Panel
 - f. Payload Support Technologies
 - g. Protection Technologies
 - 2. 21st Century Space Mission Management & Design
 - a. Autonomous Systems for 21st Century Space Missions
 - b. 21st Century Space Missions, Technologies, and Management
 - c. Space Mission Design Processes in the 21st Century
 - 3. Flight Systems Technologies
 - a. Spacecraft Attitude Determination and Control
 - b. Space Power Systems
 - c. Smart Structures Dynamics & Control
 - d. Computer-Aided Engineering of Future Avionics Systems
 - e. Military Avionics
 - f. Manufacturing and Assembly of High Density Interconnect Boards
 - g. Electronic Packaging for Aerospace Applications
 - h. MEMS
 - 4. Air/Space Flight Systems
 - a. Aircraft Flight Testing
 - b. Aerospace Test & Evaluation
 - c. Small Satellites & Enabling Technologies
 - d. System Design Optimization
 - e. Advanced Launch Vehicles II
 - f. GPS Applications & Technology
 - 5. Antenna & Radar
 - a. Antennas
 - b. Antennas for Wireless Comm
 - c. SBR and Remote Sensing-Multi Sensor

- d. Reflector Antennas
 - e. SBR Antennas, Processing Systems for Target Detection
- 6. Remote Sensing/Opto-Electronics
 - a. Target Tracking Applications
 - b. Remote Sensing I-II
 - c. Advanced Sensors
 - d. Advanced IR Sensors
 - e. Opto-Electronics I
- 7. Software and Systems Engineering
 - a. Real-Time Fault-Tolerant Computing Systems
 - b. Software Engineering
 - c. Computations for Complex Systems
 - d. Systems Engineering for Software-Intensive Systems
 - e. Securing Messages and Information
 - f. Scalable Systems
- 8. Communications
 - a. Broadband Communications Technologies & Applications
 - b. Protocols, Network Management, and Security
 - c. Data Communications
 - d. Data Communications/Networking; Wireless Comm
- 9. Policies, Plans & Partnerships
 - a. Industry/Government/University Partnerships
- 10. Aerospace Missions
 - a. Implementing Missions Faster, Better, Cheaper I-II
- B. For technical questions, contact: Ed Bryan (Program Chair),
581 Paseo Miramar, Pacific Palisades, CA 90272; Phone: (310) 454-9461;
Fax: (310) 454-6617; e-mail: edbryan@alum.ni.caltech.edu
- C. For general questions, contact: J. Michael Johnson or Elizabeth Leitereg,
2225 Roscomare Road, Los Angeles, CA 90077-2222;
Phone: (310) 472-8019; e-mail: johnson@ee.ucla.edu
- D. For information, see Internet website: <http://www.aeroconf.org/>

ITEA Workshop, Test Instrumentation: New Architectures for a New Era, 23-26 March 1998, Lancaster, CA

- A. Short Courses
 - 1. Airborne Instrumentation System Architecture
 - 2. Open Ground-Based Test Support Systems

B. Workshop Sessions

1. Test Instrumentation Systems
 - a. Instrumentation XXI
 - b. Airborne Instrumentation: How Will it Play in the Future?
 - c. Portable Instrumentation System
 - d. Cockpit Display Systems
 - e. Highly Robust Automotive Data Acquisition System
 - f. Non-Intrusive Techniques for Monitoring Soldier Combat System Activities During Field Studies
 - g. Digital Instrumentation Recorder
2. Ground Support and Data Processing
 - a. Real-Time Test Support at the Air Force Flight Test Center: Looking Back, Looking Forward
 - b. Arnold Engineering and Development Center Integrated Test Information System
 - c. Test Instrumentation Management System
 - d. Advances in Software Architecture for Test and Training Range Displays
 - e. **March 24, New Software Development Paradigm for T&E Ranges, presented by Jeff Schwab, Naval Air Warfare Center Weapons Division, China Lake; Rick Long, TYBRIN Corporation, Edwards A.F.B., CA.**
3. Sensors, Transducers, and Special Systems
 - a. "Smart Transducer" Developments at Boeing Commercial Aircraft
 - b. New IEEE 1451.2 Enables Plug-and-Play Smart Transducers
 - c. Test Friendly Transducer Conditioning Amplifier
 - d. Seismic, Acoustic, and Magnetic (SAM) Capability
 - e. Enhanced Imagery Through Laser Illumination
 - f. Advanced Stand-Alone Miniature Data Acquisition Modules for Blast Effects, Impact and Seismic/Meteorologic Event Monitoring
4. Telemetry
 - a. Spectrum Encroachment: An Update on Recent Developments
 - b. Data Cycle Map Efficiency Study
 - c. Advanced Range Telemetry and the Existing DOD Test Range Infrastructure
 - d. Wide Band Radio Frequency Source Surveillance
 - e. Telemetry Tracking System Upgrade for Pacific Missile Range Facility
5. Range and Special Facility Systems

- a. Self-Orienting and Locating Optical Trackers
 - b. Synchronization of RAJPO, ACMI, Audio, and Video in an Integrated Debriefing Suite
 - c. Holistic Architecture for Tracking Instrumentation
 - d. RF Environment Instrumentation for the Benefield Anechoic Chamber
 - e. A Premier Facility for Measuring Reduced Signature Vehicles
 - f. Data Acquisition System Testing
- 6. Open Ground Support Systems Colloquium
 - 7. Panel Discussion: "Lead, Follow, or Get Out of the Way!: The Role of the Government in Developing Future Data Acquisition Systems"
- C. **International Test and Evaluation Association Workshop hosted by the Antelope Valley and China Lake Chapters.**
- D. For information, see Internet website:
<http://www.edwards.edwards.af.mil/itea/>
- E. For information regarding the technical program, contact: Lee Gardner;
Phone: (805) 275-4359; Fax: (805) 275-4488;
e-mail: gardnerl%tsi@mhs.elan.af.mil
- F. Registration information: ITEA Headquarters; Phone: (703) 631-6220;
Fax: (703) 631-6221; e-mail: itea@itea.org
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APRIL 1998

SPIE International Symposium on Aerospace/Defense Sensing and Controls 1998 (AeroSense 98), 13-17 April 1998, Orlando, FL

- A. Conferences
 - 1. Thermosense
 - a.) Thermosense XX, SPIE 3361
 - 2. Displays
 - a.) **Helmet and Head Mounted Displays III, SPIE 3362, 13-14 April 1998**
 - 1.) **Cochair: Robert K. Osgood, Naval Air Warfare Center**

2.) Sessions

- ** HMD Symbology
- ** Human Factors Issues and Tests
- ** **HMD Design Guidelines and Test Requirements, April 13, 1:30-2:50, Chair: Robert K. Osgood, Naval Air Warfare Center**
- ** HMD Flight Test Descriptions and Test Results
- ** Hardware and Enabling Technology
- ** HMD System Development
- ** HMD Display Media and Advanced Technology
- ** Evolution of HMDs and NVG Displays

b.) Cockpit Displays V, SPIE 3363

3. Guidance and Navigation

- a.) Enhanced and Synthetic Vision 1998, SPIE 3364
- b.) Acquisition, Tracking, and Pointing XII, SPIE 3365
- c.) Robotic and SemiRobotic Ground Vehicle Technology, SPIE 3366

4. Modeling, Simulation, and Visualization

- a.) Modeling and Simulating Sensory Response for Real and Virtual Environments, SPIE 3367
- b.) Technologies for Synthetic Environments: Hardware-in-the-Loop Testing III, SPIE 3368
- c.) Enabling Technology for Simulation Science II, SPIE 3369

5. Image Exploitation and Target Recognition

- a.) Algorithms for Synthetic Aperture Radar Imagery V, SPIE 3370
- b.) Automatic Target Recognition VIII, SPIE 3371
- c.) Algorithms for Multispectral and Hyperspectral Imagery IV, SPIE 3372
- d.) Signal and Data Processing of Small Targets 1998, SPIE 3373
- e.) **Signal Processing, Sensor Fusion, and Target Recognition VII, SPIE 3374, 13-15 April 1998**

1.) Sessions

** Multisensor Fusion, Tracking and Resource Management

** Assisted Target Recognition (ATR)

** Multisensor Fusion Applications

** **Signal and Image Processing I,
14 April 1998, 2:00-5:10**

**--“Enhancement of FLIR imagery by
stochastic resonance,”
L.F. DeSandre, Naval Air Warfare
Center**

6. Sensor Technology Including Infrared and Radar

- a.) Targets and Backgrounds: Characterization and Representation IV, SPIE 3375
- b.) Infrared Readout Electronics IV, SPIE 3360
- c.) Sensor Fusion: Architectures, Algorithms, and Applications II, SPIE 3376
- d.) Infrared Imaging Systems: Design, Analysis, Modeling, and Testing IX, SPIE 3377
- e.) **Passive Millimeter Wave Imaging Technology II, SPIE 3378, 13 April 1998**

1.) **Cochairs:** David G. Gleed, Defense Evaluation and Research Agency Malvern (UK); **Scot Rogala, Naval Air Warfare Center**

2.) Sessions

** PMMW Imaging Systems

** PMMW Component Technology

** PMMW Modeling and Phenomenology

** PMMW Resolution Enhancement/
Super-Resolution

f.) Infrared Detectors and Focal Plane Arrays V, SPIE 3379

g.) Radar Sensor Technology III, SPIE 3395

7. Laser Sensing

a.) Laser Radar Technology and Applications III, SPIE 3380

b.) Airborne Laser Advanced Technology, SPIE 3381

c.) Advances in Laser Remote Sensing for Terrestrial and Hydrographic Applications, SPIE 3382

d.) ElectroOptical Technology for Remote Chemical Detection and Identification III, SPIE 3383

8. Signal and Image Processing
 - a.) Photonic Processing Technology and Applications II, SPIE 3384
 - b.) Photonic Quantum Computing II, SPIE 3385
 - c.) Optical Pattern Recognition IX, SPIE 3386
 - d.) Visual Information Processing VII, SPIE 3387
 - e.) Advances in Optical Information Processing VIII, SPIE 3388
 - f.) Hybrid Image and Signal Processing VI, SPIE 3389

9. Wavelets and Neural Networks
 - a.) Applications and Science of Computational Intelligence, SPIE 3390
 - b.) **Wavelet Applications IV, SPIE 3391, 14-16 April 1998**
 - 1.) **Cochairs:** Y.T. Chien, National Science Foundation; Ingrid Daubechies, Princeton Univ.; **Gary A. Hewer, Naval Air Warfare Center;** Thomas Hopper, Federal Bureau of Investigation; Phillip Q. Hwang, National Imagery and Mapping Agency; Jagdish Chandra, U.S. Army Research Office; William J. Miceli, Office of Naval Research; Anna Tsao, ARPA.
 - 2.) Sessions
 - ** Image Processing
 - ** Compression and Denoising
 - ** Radar Imaging and Signal Processing
 - ** Remote Sensing
 - ** **Poster Pops/Posters, April 14, 1998**
 - **Review Committee:**
Jagdish Chandra, U.S. Army Research Office; Y.T. Chien, National Science Foundation; **Gary A. Hewer, Naval Air Warfare Center;** Phillip Q. Hwang, National Imagery and Mapping Agency; William J. Miceli, Office of Naval Research; Harold H. Szu, Naval Surface Warfare Center
 - ** Video/Communication Technology and Quality

**** “Research and Development Perspectives: Where do we go from here?”, April 15, 1998, 11:30-12:10**

-- Panelists: various, including Gary A. Hewer, Naval Air Warfare Center

- 10. Battlefield Technologies
 - a.) Detection and Remediation Technologies for Mines and Minelike Targets III, SPIE 3392
 - b.) Digitization of the Battlespace, SPIE 3393
 - c.) Sensor Technology for Soldier Systems, SPIE 3394

B. For information, see Internet website: <http://www.spie.org/info/or/>

15th Annual Technology Review and Update for Technical Personnel, 27 April - 1 May 1998, Naval Postgraduate School, Monterey, CA

A. Course Topics

- 1. Cryptology, Present and Future
- 2. Information Warfare and Directed Energy Weapons
- 3. Micro Electro-Mechanical Systems (MEMS)
- 4. Optical Sensing Technology
- 5. Computers and Networks
- 6. Tour of Selected NPS Laboratories
- 7. Satellite Communication Technologies and Trends
- 8. Integrated Circuits
- 9. Computer Intelligence

B. For information, see Internet website:
<http://www.sp.nps.navy.mil/trau98/trau98.html>

C. For information, contact: Space Systems Academic Group, Naval Postgraduate School, Code SP, 777 Dyer Road, Bullard Hall (Rm. 200), Monterey, CA 93943-5110.

MAY 1998

RADARCON '98, 1998 IEEE Radar Conference, 12-14 May 1998, Dallas, TX

A. Sessions

- 1. Radar Systems/Subsystems
- 2. Signal Processing

3. Surveillance
 4. Antenna/Radomes
 5. Phenomenology
- B. For information, contact: Mr. Scott Ramey, 2501 West University, MS 8056, McKinney, TX 75070; Phone: (972) 952-4409; Fax: (972) 952-3071; e-mail: sramey@ti.com
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JUNE 1998

Localized Damming 1998, Fifth International Conference on Computer Aided Assessment and Control of Localized Damage, 8-10 June 1998, Bologna, Italy

- A. For information, contact: Conference Secretariat (Liz Kerr), Localized Damage 98, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton SO40 7AA, UK; Phone: (44) (1703) 293223; Fax: (44) (1703) 292853; e-mail: liz@wessex.ac.uk
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66th MORS (Military Operations Research Society) Symposium -- "Preparing for Military Operations Research in the 21st Century", 23-25 June 1998, Naval Postgraduate School, Monterey, CA

- A. Composite Groups
1. Composite Group A - Strategic & Defense
 - a.) Working Groups
 - 1.) Strategic Operations
 - 2.) Nuclear, Biological and Chemical Defense
 - 3.) Arms Control and Proliferation
 - 4.) Air and Missile Defense
 2. Composite Group B - Space/C4ISR
 - a.) Working Groups
 - 1.) Operational Contributions of Space Systems
 - 2.) Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR)
 - 3.) Operations Research and Intelligence Analysis
 - 4.) Information Operations/Information Warfare (IO/IW)
 - 5.) Electronic Warfare and Countermeasures
 - 6.) Unmanned Systems
 - 7.) Military Environmental Factors

3. Composite Group C - Joint Warfare
 - a.) Working Groups
 - 1.) Land and Expeditionary Warfare
 - 2.) Littoral Warfare and Regional Sea Control
 - 3.) Power Projection, Planning & Execution
 - 4.) Air Combat Analysis & Combat ID
 - 5.) Special Operations/Operations Other Than War (SO/OOTW)
 - 6.) Joint Campaign Analysis
4. Composite Group D - Resources
 - a.) Working Groups
 - 1.) Mobility & Transport of Forces
 - 2.) Logistics (LOG), Reliability and Maintainability (RAM)
 - 3.) Manpower and Personnel
5. Composite Group E - Readiness/Training
 - a.) Working Groups
 - 1.) Readiness
 - 2.) Analytic Support to Training & Mission Rehearsal
 - 3.) Battlefield Performance, Casualty Sustainment & Medical Planning
6. **Composite Group F - Acquisition**
 - a.) Working Groups
 - 1.) **Measures of Effectiveness -
Chair: Robert J. Meyer, NAWCWPNS,
Code 418200D; Phone: (760) 927-1279;
Fax: (760) 939-2062; e-mail:
bob meyer@imgw.chinalake.navy.mil**

Co-Chair: Lt. Col Mark Reid, AFOTEC/SAN,
(505) 846-1357; Wyoming B. Paris,
AMSAA/AMXSU-EV, (410) 278-2143.

** Purpose, nature, and characteristics of MOEs

** Changing MOE development due to “New
Sciences” techniques (evolutionary
programming, chaos theory, etc.)

** Program-related development and use of both
current MOEs, and those that the “New
Sciences” techniques seem to offer up as
potentially helpful to problem analysis and

solution

- 2.) Test and Evaluation
 - 3.) Analyses of Alternatives
 - 4.) Cost Analysis
 - 5.) Decision Analysis
7. Composite Group G - Advances in Military Operations Research
- a.) Working Groups
 - 1.) Modeling Simulation and Wargaming
 - 2.) Revolution in Military Affairs
 - 3.) Computing Advances in MOR
 - 4.) Social Science Methods
- B. For information, contact: Military Operations Research Society (MORS),
101 S. Whiting Street, #202, Alexandria, VA 22304-3483;
Phone: (703) 751-7290; Fax: (703) 751-8171;
e-mail: morsoffice@aol.com
- C. For information, see Internet website: <http://www.mors.org>
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JULY 1998

1998 International Conference on Applications of Photonic Technology, ICAPT '98,
27-30 July 1998, Ottawa, Canada

- A. Conference Topics
1. Materials and Processing
 2. Optical Measurements
 3. Remote Sensing
 4. Lasers and Industrial Applications
 5. Optical Communication Devices
 6. Optical Communication Systems
 7. Optical Devices and Waveguides
 8. Optical Routing, Switching in Networks
 9. Novel Devices
- B. For information, contact: ICAPT, P.O. Box 69070, 2 St. Clair Avenue
East, Concourse Level, Toronto, Ontario, Canada M4T 1K0;
e-mail: icapt@sympatico.ca
- C. For information, see Internet website:
<http://www3.sympatico.ca/icapt/icapt.html>
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AUGUST 1998

14th International Conference on Pattern Recognition, ICPR '98, 17-20 August 1998, Brisbane, Australia

- A. Conference Topics
 - 1. Computer Vision
 - a.) Active-Passive Sensing
 - b.) Curves-Shape Analysis
 - c.) Active Shape
 - d.) Shape from X
 - e.) Active Vision
 - f.) Biological Vision
 - g.) Robotics/Automation
 - h.) Invariance and Geometry
 - i.) Functional Vision
 - j.) Grouping and Segmentation
 - k.) Object Models
 - l.) Motion Analysis
 - 2. Pattern Recognition and Analysis
 - a.) Feature Extraction
 - b.) Statistical Methods
 - c.) Morphology
 - d.) Machine Learning
 - e.) Connectionist Models
 - f.) Fuzzy Models
 - g.) Hierarchical Models
 - h.) Picture Grammars
 - i.) Geometric Reasoning
 - j.) Optimization
 - k.) Object Recognition
 - l.) Invariance in Recognition
 - m.) Validation and Verification
 - 3. Algorithms and Techniques
 - a.) Image Coding
 - b.) Image Signals
 - c.) Wavelets
 - d.) Image Mappings
 - e.) Visualization
 - f.) Auditory Signals
 - g.) Software/Architectures
 - h.) AI Techniques
 - i.) Distributed Systems
 - j.) Parallel Systems
 - k.) Syntactic Models
 - l.) Statistical Models

- m.) Geometric Methods
 - 4. Systems and Applications
 - a.) Document Analysis
 - b.) Surveillance
 - c.) Character Recognition
 - d.) Robotics
 - e.) Face/Gesture Recognition
 - f.) Handwriting
 - g.) Multi-Media
 - h.) Content Queries
 - i.) Image Interpretation
 - j.) Digital Libraries
 - k.) Biometry
 - l.) GIS - Remote Sensing
 - m.) Medical Applications
 - B. For information, see Internet website:
<http://www.cssip.elec.uq.edu.au/~icpr98/call.html>
 - C. e-mail: ICPR98@cssip.elec.uq.edu.au
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SEPTEMBER 1998

SPIE's 1998 Symposium and Education Program on Micromachining and Microfabrication, 20-22 September 1998, Santa Clara, CA

- A. Technical Conferences
 - 1. Micromachining and Microfabrication Process Technology, SPIE MF01
 - a. Topics
 - 1.) HighAspect Ratio Microfabrication Technologies
 - 2.) Materials Issues
 - 3.) Compatibility Issues and Other Fabrication Technologies
 - 4.) Manufacturing for MEMS
 - 2. Materials and Device Characterization in Micromachining, SPIE MF02
 - a. Topics
 - 1.) Microlithography Fabrication Techniques
 - 2.) Lithography and Fabrication Issues

- 3.) Test Structures
- 4.) Dimensional Measurements
- 5.) Physical Measurements (force, velocity, flow, deflection, etc.)
- 6.) Reliability Models and Accelerated Life Testing Systems and Tools
- 7.) Processing Monitoring During Microfabrication
Micro-Material Characterization
- 8.) Micromachines Instruments and Mechanisms for
Microscopy and Nanolithography
- 9.) Materials
- 10.) Device and Systems Modeling

3. Microelectronic Structures and MEMS for Optical Processing IV, SPIE MF03

a. Topics

- 1.) Microopto-electromechanical (MOEM) systems, optical scanners, FDDi
- 2.) On-chip optical processing
- 3.) Device packaging issues characterization
- 4.) FEA for extracting material properties and control at micro scales
- 5.) Electrostatic interactions
- 6.) Direct view and projection display capabilities including DMD
- 7.) Optical communication interface, digital computer and HDTV systems
- 8.) Printer applications
- 9.) MEMS, CMOS, for optical applications
- 10.) abSMD/flipchart applications

4. Micromachined Devices and Components, SPIE MF04

a. Topics

- 1.) Pressure sensors
- 2.) Accelerometers
- 3.) Rate sensors
- 4.) Microrelays and actuators
- 5.) Microvalves
- 6.) Micropumps
- 7.) Flow sensors
- 8.) Integrated devices
- 9.) Multidevice platforms
- 10.) Micromechanical springs, bearings, gears, connectors, etc.
- 11.) Micromotors
- 12.) Chemical sensors
- 13.) Magnetic sensors
- 14.) MEMS for biomedical applications
- 15.) Packaging technologies for MEMS
- 16.) Modeling and CAD for MEMS

- 17.) Testing and characterization for devices
- 18.) Reliability of micromechanical components

5. Micro Fluidic Devices and Systems, SPIE MF05

a. Topics

- 1.) Chemical analysis systems
- 2.) Biological analysis systems
- 3.) Opto-fluidic systems
- 4.) Cellular systems
- 5.) Energy systems
- 6.) Fluid delivery systems
- 7.) Detection systems
- 8.) Fluid interfaces
- 9.) Mixing systems
- 10.) Fluid control systems
- 11.) Fluid transport systems
- 12.) Heating/cooling systems
- 13.) Micro valves
- 14.) Micro pumps
- 15.) Flow sensors
- 16.) Fluidic system design tools
- 17.) Micro fluid modeling
- 18.) Bio/chemical synthesis
- 19.) Basic research empirical/analytical

B. For information, see Internet website: <http://www.spie.org/info/mf/>

OCTOBER 1998

ICES '98, 6-9 October 1998, Atlanta, GA

A. Topics

1. Variational methods and fundamental theory
2. Finite element, boundary element and spectral methods, and their coupling
3. High-speed computing methods and solution algorithms
4. Solid and structural mechanics
5. Mechatronic reliability
6. Microelectronics
7. MEMS
8. Integrated product and process design
9. Structural integrity and damage tolerance
10. Computational fluid dynamics
11. Heat transfer and thermal phenomena
12. Electromagnetics

13. Computational material science
 14. Stability and bifurcation
 15. Smart structures, control and dynamics
 16. Fracture and damage mechanics
 17. Molecular dynamics simulation
 18. Super and parallel computing
 19. Inverse problems and optimization
 20. Smart algorithms and adaptive methods
 21. CAD, Cam and CAE
 22. Intelligent approach
 23. Scientific visualization and virtual reality
 24. Industrial applications
 25. Environmental problems
 26. Robotics and human-machine systems
 27. Process and chemical engineering
 28. Geomechanics
- B. For information, contact: ICES'98 Scientific Committee, Computational Mechanics Center, Georgia Institute of Technology, 237 Uncle Heinie Way, Room 225, French Building, Atlanta, GA 30332-0356; Phone: (404) 894-2758; Fax: (404) 894-2299; e-mail: ices98@cm.gatech.edu
- C. For information, see Internet website: <http://cm.gatech.edu/ices98>
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1998 IEEE Military Communications Conference MILCOM 98, "Force Projection - Meeting the Communication Challenge", 18-21 October 1998, Bedford, MA

- A. Preliminary Unclassified Program
1. Communication Systems
 - a. Satellite Communications
 - b. DoD Communications Advances
 - c. Information Dissemination
 - d. Multimedia Applications
 - e. Terrestrial Communications
 - f. Modeling and Simulation
 2. Mobile Communications
 - a. Wireless Information Systems
 - b. PCS Advances
 - c. Airborne Communications Relay
 - d. Access and Routing Techniques
 - e. Multi-user Interference Suppression
 - f. Digitization of the Battlefield
 3. Networks
 - a. Network Architectures and Protocols
 - b. ATM

- c. Warfighter's Internet
 - d. Network Management
 - e. Expert / AI Systems
 - f. Optical Networks
4. Communications Technology
- a. Advanced Modulation Techniques
 - b. Phased Arrays and Advanced Antennas
 - c. Spread Spectrum and Antijam Advances
 - d. Advanced RF Systems
 - e. Exploitation of Commercial Technology
 - f. Advanced Coding Techniques
5. Signal Processing
- a. Adaptive Processing
 - b. Speech Processing
 - c. Software Design and Applications
 - d. Signal Detection and Classification
 - e. Fading and Interference Mitigation
 - f. Information Security
- B. Preliminary Classified Program
1. MILSATCOM
- a. Satcom Technology
 - b. MILSATCOM Architecture
 - c. Terminals
 - d. Military Use of Civil Satcom
 - e. Far Side Architectures
 - f. Survivability
2. Information Dominance
- a. Info War Threats and Countermeasures
 - b. GII / Global Grid
 - c. Global Broadcast
 - d. DARO
 - e. Panel IW / ECM
3. Intelligence, Security, and Interoperability
- a. Encryption
 - b. Intel Ops Support
 - c. LPI Systems and Techniques
 - d. Modeling and Simulation
 - e. Non War Ops
 - f. PMCS
4. Advanced Technology
- a. Technology for the Warfighter

- b. ACTDs (DARPA)
 - c. PANEL Coalition Warfare
 - d. Warfighting Experiments
- C. For information, see Internet website:
<http://www.milcom98.com/milcom98/>
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NOVEMBER 1998

24th Joint Services Data Exchange (JSDE) for Guidance, Navigation, and Control, 16-19 November 1998, Anaheim, CA

- A. Paper Topics: Subjects dealing with DoD Guidance, Navigation and Control of space, air, land and sea applications in the following:
 - 1. Concentration Areas
 - a. Research and Development
 - b. Manufacturing Technology
 - c. Systems Evaluation
 - d. Reliability and Maintenance
 - e. Operations & Logistics
 - 2. Emphasis will be placed on:
 - a. Radio Navigation
 - b. Pointing and Stabilization
 - c. Integrated Navigation Systems
 - d. Industry Trends/Defense Conversions
 - e. New Systems/Components Development
 - f. Tri-Service Programs & Commonality Considerations
 - g. Foreign Technology Development/Evaluation
 - h. Test and Analytical Techniques
 - i. Operational Lessons Learned
 - j. Simulation
 - k. NDI/COTS
 - B. For information, contact: John Carvil, Chairman;
Phone: (757) 464-7750; e-mail: carvil@nosc.mil
 - C. For information, contact: Herb Schoenfeld, Secretary; 7802 NW 77 Avenue, Tamarac, FL 33321; Phone: (954) 726-2405;
e-mail: herbsch@aol.com
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Military Operations Research Society (MORS) Symposium (SECRET), 17-19 November 1998, Naval Postgraduate School, Monterey, CA

- A. Sponsored by AIAA and the Office of the Undersecretary of Defense (Acquisition and Technology).
 - B. For information, contact AIAA at 1-800-639-2422 or (703) 264-7500.
 - C. For information, see Internet website:
<http://web.nps.navy.mil/~code09/conferen.html>
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AIAA Missile Sciences Conference, 17-19 November 1998, Naval Postgraduate School, Monterey, CA

- A. Conference Sessions
 - 1. Mission Planning Technology
 - a. System Architecture and System Performance Advances
 - b. Mission Planning Support
 - c. Advances in Modeling Techniques
 - d. Attack/Strike Planning Optimization
 - 2. Army Tactical Missiles
 - 3. Theater Missile Defense
 - a. Technologies that enhance TMD development for the Army, Navy or Air Force
 - b. Technologies or mechanisms that improve interceptor lethality or survivability
 - c. Demonstrations conducted that enhance TMD
 - d. Kill vehicles or kill vehicle subsystems that improve TMD missile performance
 - e. Supporting systems to TMD Interceptors
 - f. Technologies that support international cooperation for TMD
 - 4. **Naval Tactical Air Weapon Systems - Session Chair:
Dr. Karen Higgins, Head, Weapons/Targets Dept.,
Naval Air Warfare Center-Weapons Division**
 - a. Missile acquisition and tracking of targets including IR, ARH, RF, LADAR, and dual or multi spectrum techniques and/or seekers
 - b. Automatic target recognition and tracking
 - c. Guidance, navigation, and control of missiles or missile subsystems
 - d. Missile TVC, jet reaction, and aerodynamic control systems
 - e. Hypersonic missiles
 - f. Airframe structures and composite materials
 - g. Airbreathing, solid, hybrid, and gel propulsion subsystems
 - h. Warheads and fuzes
 - i. Cost reduction techniques for test and evaluation
 - j. Advanced modeling and simulation techniques
 - k. Real time battle damage assessment/information

1. Missile integration onto aircraft
5. Interceptor Technologies for Missile Defense
 - a. Advanced propulsion systems
 - b. Advanced target state estimation techniques
 - c. Dual mode seekers and sensor fusion algorithms
 - d. Multispectral focal plane arrays
 - e. 10-70K crycoolers
 - f. Innovative guidance, navigation and control concepts, and inertial sensor components
 - g. Robust discrimination algorithms and aimpoint selection
 - h. Divert and attitude control systems
 - i. monolithic kill vehicles
6. Sensor Fusion
 - a. Multi-mode sensors
 - b. Multi-band/multi-color sensors
 - c. Sensors that counter low observable threats
 - d. Sensors with ground clutter rejection
 - e. Sensors with adverse weather target acquisition
 - f. Targeting and acquisition using netted assets
 - g. Real time automatic target recognition
 - h. Enhanced standoff range automatic target recognition
 - i. Automatic target recognition algorithms
 - j. False alarm rejection algorithms
7. Cruise Missile Defense
 - a. Cruise missile defense concepts
 - b. CM defense CONOPS
 - c. Innovative uses of current technologies
 - d. Technology advances
 - e. Sensor and sensor concepts
 - f. Interceptors/kill mechanisms
 - g. End-game analysis
 - h. Modeling and simulation of the CM defense problem
8. Weapon System Effectiveness Technology
9. Micro Electro Mechanical Systems (MEMS)
 - a. Inertial navigation on a chip
 - b. Mass data storage devices
 - c. Active, conformal surfaces for flight control
 - d. Opto mechanical components for adaptive optics, switches, and precision alignment
 - e. Integrated fluidic systems
 - f. Embedded sensors for condition-based maintenance
 - g. Uncooled focal plane array infrared detectors
 - h. Fuze/safe/arm on a chip
 - i. Radar transmitters and receivers on a chip
10. **Lethal Unmanned Aerial Vehicles - Session Chair:**

Edmund Anderson, Assistant Program Executive Office for Cruise Missiles and Unmanned Aerial Vehicles (PEO [CU]) for Advanced Technology; **Vice Chair: John Fischer, Naval Air Warfare Center-Weapons Division**

a. **Abstracts are to be sent to:**
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China Lake, CA 93555-6001
(760) 939-3549
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b. Session Topics

- 1.) Conversion of currently fielded UAVs into lethal weapon systems
- 2.) Development of weapons specifically designed for UAV integration
- 3.) Conversion of manned aircraft into lethal UAVs
- 4.) Concept of Operations (CONOPS)
- 5.) Development of future lethal UAVs known as Uninhabited Combat Aerial Vehicles (UCAV)
- 6.) Survivability
- 7.) Mission planning
- 8.) Integration of lethal UAVs into presently fielded systems, i.e. manned aircraft squadrons, Navy battle groups, Army and Marine Corps units
- 9.) Anti-lethal UAV technology
- 10.) Sensor-to-shooter technology
- 11.) Integration of existing weapons into current and proposed UAV systems
- 12.) Application of lethal UAVs in operations other than war (OOTW)
- 13.) Application of lethal UAVs in full scale combat
- 14.) Air-to-air combat with lethal UAVs
- 15.) Integration technologies

11. National Missile Defense

- a. Off-the shelf vs. new GBI boosters
- b. EKV test objectives and results
- c. EKV seeker performance
- d. Discrimination techniques and aimpoint selection
- e. Target signatures discrimination vulnerabilities
- f. Lethality and kill assessment
- g. In flight interceptor communication systems

12. Dealing With Proliferation

13. Air Force Strategic Systems Programs

14. Air Force Tactical Missiles

- a. Advanced target acquisition capabilities including autonomous, adverse weather, and all-aspect target

- b. acquisition
 - b. Advanced guidance, navigation, and control technology; midcourse sensors, sensor fusion and estimation algorithms, guidance laws, and autopilots
 - c. Advanced warheads, fuses, and components
 - d. Advanced solid, airbreathing and/or hybrid propulsion subsystems and components
 - e. Advanced power generation and distribution concepts
 - f. Advanced aerodynamic and control subsystem concepts
 - g. Advanced packaging and design technologies for subsystems such as sensor/guidance electronics, Inertial Measurement Unit (IMU), and Control Actuation System (CAS)
 - h. Advanced airframe structures and materials, including radomes and infrared domes
 - i. Simulation, test, and evaluation of missile/weapon system performance and effectiveness
15. Submarine Launched Ballistic Missiles
- B. For information, contact AIAA at 1-800-639-2422 or (703) 264-7500.
- C. For information, see Internet website:
<http://www.aiaa.org/calendar/missci98cfp.html>
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DECEMBER 1998

VSJ-SPIE98, International Conference on Optical Technology and Image Processing in Fluid, Thermal, and Combustion Flow, 7-9 December 1998, Yokohama, Japan

- A. Conference Topics
- 1. New Development of Optical Technology
 - 2. Optical Sensor/Device and Fiber Optics
 - 3. Interferometric Techniques (holographic, real-time, phase-shifting, heterodyne, resonance)
 - 4. Speckle Metrology, Tomography, and Cross-field Techniques
 - 5. Methods Based on Nonlinear Optics, Molecular Scattering, and Absorption
 - 6. Laser-induced Fluorescence, Luminescent Paints
 - 7. Liquid Crystals
 - 8. Velocimetry (particle-image, holographic, global/point Doppler)
 - 9. Particle, Droplet, and Spray Analysis (optical scattering, sizing, concentration detection)
 - 10. Optical Aerodynamic Testing and Aero-optics
 - 11. Short Time Measurement
 - 12. Measurements in Combustion, Emissions, and Convective/Radiative Transfer

13. Thermal Imaging and Optical Thermometry
 14. Image Processing, Data Acquisition/Analysis, Control Systems, Applications of Artificial Intelligence (neural networks, expert systems, fuzzy logic)
- B. For information, contact: Prof. M. Kawahashi, VSJ-SPIE98, Faculty of Engineering, Saitama University, Shimo-Okubo 255, Urawa, Saitama, 338, Japan; Phone: +81-48-858-3443; Fax: +81-48-856-2577; e-mail: vsjspie@vsj.or.jp
- C. For information, see Internet website: <http://www.vsj.or.jp/vsjspie/>
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JANUARY 1999

37th AIAA Aerospace Sciences Meeting and Exhibit, 11-14 January 1999, Reno, NV

- A. Meeting Topics
1. Aeroacoustics
 2. Aerodynamic Measurement Technology
 3. Aerospace Power Systems
 4. Air Breathing Propulsion
 5. Aircrew Centered System Design
 6. Applied Aerodynamics
 - a. Low-speed, low-Reynolds number aerodynamics
 - b. Airfoil/wing/configuration aerodynamics
 - c. Computational aerodynamics and methods
 - d. Unsteady aerodynamics
 - e. Transonic, supersonic, hypersonic aerodynamics
 - f. Vortical/vortex flows
 - g. High-Angle-of-Attack Aerodynamics
 - h. Wind-tunnel aerodynamics
 - i. Innovative aerodynamic designs
 - j. VSTOL/STOL/propeller/rotor aerodynamics
 - k. Uninhabited aerial vehicle aerodynamics
 - l. Active Flow Control
 - m. Weapons carriage and separation aerodynamics
 7. Artificial Intelligence
 - a. Machine learning
 - b. Intelligent control
 - c. Flight simulation
 - d. Man-machine interface
 - e. Planning or scheduling
 - f. Design and optimization
 - g. Pilot training aids

- h. Fluid dynamic modeling
 - i. Health monitoring
- 8. Atmospheric Environment
- 9. Atmospheric Flight Mechanics
 - a. Aerodynamic prediction
 - b. Flight mechanics, flight dynamics, handling qualities, and performance
 - c. Missile and projectile flight dynamics
 - d. Planetary entry and aeroassist technology
- 10. Education
- 11. Fluid Dynamics
 - a. Innovative aero-design tools
 - b. Complex fluid physics
 - c. Advanced flow control concepts for performance enhancements
 - d. Innovative and advanced measurement and testing techniques
 - e. Aerodynamics of unconventional configurations
 - f. Transition physics and modeling
 - g. Turbulence modeling for steady and unsteady flows
 - h. Measurements of transitional and turbulent flow properties and structure
 - i. Separated and shear flows
 - j. Aero-acoustic and aero-optical flow phenomena
 - k. Jet interaction and mixing
 - l. Turbulence/chemistry interaction
 - m. Shock/shock and shock/boundary layer interaction
 - n. Flow physics of rarefied and continuum hypersonic flows
 - o. CFD and experimental for high-lift systems
 - p. Nonequilibrium chemistry of hypersonic flowfields
 - q. Geophysical fluid dynamics
- 12. Ground Testing
 - a. Test simulations for all aerodynamic flow regimes, propulsion, hypervelocity, and outer space environments
 - b. Design, development, and performance of new, modified, or unique ground test facilities, subsystems, and components thereof
 - c. Integration and use of computing equipment for real-time test control, data acquisition, processing, validation, and presentation
 - d. Development, application, and validation of flow diagnostics in ground testing facilities
 - e. All aspects of test techniques
 - f. Issues focused on reducing cost and cycle time of wind tunnel testing
- 13. Improvements in Engineering Education
- 14. Interactive Computer Graphics

15. Microgravity Science and Space Processing
16. Multidisciplinary Design Optimization
17. Plasmadynamics and Lasers
 - a. Spacecraft Tether Electromagnetics and Plasmadynamics
 - b. Plasmas Relating to Electromagnetic Launchers and Spacecraft Propulsion
 - c. Laser Plasma Generation and Application
 - d. Space Environmental Effects
 - e. Plasma Materials Processing
 - f. Electromagnetic Properties of Chemical Propulsion Exhaust
18. Propellants and Combustion
 - a. Combustion Modeling
 - b. Spray Combustion
 - c. Rocket and Air-Breathing Combustion
 - d. Propellant and Fuel Development
 - e. Rocket and Air-Breathing Exhaust Emission and Environmental Impact
 - f. Diagnostic Instrumentation
19. Terrestrial Energy Applications of Aerospace Technology
20. Thermophysics
 - a. Aircraft and Spacecraft Thermal Management
 - b. Hypersonic Flows and Aerothermodynamics
 - c. Thermophysical Properties
 - d. Numerical Techniques in Thermophysics and Code Validation
 - e. Experimental Facilities and Diagnostics Techniques for Thermophysics Research
21. Wind Energy
22. Young Members

B. For information, contact AIAA at 1-800-639-2422 or (703) 264-7500.

C. For information, see Internet website:
<http://www.aiaa.org/calendar/asm99cfp.html>
