

















Steering Committee

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Hyperspectral/Polarimetric Community Collaboration Workshop

18-20 July 2012 Solutions Complex Building 1004 Explorer Blvd Huntsville, AL 35806

IMPORTANT

This workshop has been added to the Training Information Program course catalog.

COURSE TITLE: HYPERSPECTRAL & POLARIME COMMUNITY COLABORATION WORKSHOP CATALOG NUMBER: HPCCW NOTE: In order to receive credit for the HYPERSPECTRAL & POLARIMETRIC COMMUNITY COLABORATION WORKSHOP, please log onto the TIP website: https://tip.redstone.army.mil . Once logged into the TIP website click on the "Post Special Training to IDP" link and then select "HYPERSPECTRAL & POLARIME COMMUNITY COLABORATION WORKSHOP " from the course drop down menu and then select or input the date you attended the training and self-certify.

OBJECTIVE

The main objective of this workshop is to encourage interaction among the various hyperspectral/ polarimetric research communities that are sponsored by the U.S. Government and two of its NATO allies (UK and Canada). The workshop will review research progress in multi/hyperspectral/polarimetric sensing measurements, modeling and simulation, including calibration and validation processes, spectral background scenes, algorithm development, and performance metrics for potential technology insertion in current tactical and strategic weapon systems, as well as other defense related systems. The workshop will also give an overview of the current and future

hyperspectral/polarimetric missions, schedules, capabilities, and data access, with emphasis on applications, programs, and requirements.

A second objective is to identify research and technology gaps in the technology that must be filled to achieve DOD and DOE programs, as well as NASA and NIST objectives.



















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Steering Committee

- **♦ U.S. Army Research Laboratory** (ARL)
- -Dr. Dalton Rosario, Chair

- U.S. Army Aviation and Missile **RDEC (AMRDEC)**
- -Dr. Paul Ruffin, Co-Chair
- -Ms. Kelly Risko, Co-Chair
- -Dr. Russ Alexander
- **♦** U.S. Army Space & Missile Defense**♦** National Aeronautics & Space Command (SMDC), ARSTRAT
- -Mr. Edward Kiker

Administration (NASA)

-Mr. Joseph Casas

- ♦ National Institute of Standards & ♦ National Nuclear Security Technology (NIST)
- -Dr. Joseph Rice

- Administration, DOE/NNSA/NA-22
- -Dr. Victoria Franques

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DARPA Keynote Speaker



Dr. Shkel

Dr. Andrei Shkel, Program Manager Defense Advanced Research Project Agency (DARPA) Microsystems Technology Office (MTO) 3701 N. Fairfax Drive, Arlington, VA

Email: andrei.shkel@darpa.mil; Tel:

(571) 218-4422; Fax: (703) 812-5051

22203-1714

Click here to download a quick overview of the Keynote Speech: Keynote Speech

Dr. Shkel serves as a program manager in the Microsystems Technology Office (MTO) at DARPA. His professional interests, reflected in more than 160 publications and two books, include solid-state sensors and actuators, MEMS-based neuroprosthetics, sensor-based intelligence, and control theory.

He is on leave from his faculty position as a professor in the Department of Mechanical and Aerospace Engineering at the University of California, Irvine, where he is also the Director of the UCI Microsystems Laboratory.

Dr. Shkel is an Editor of the Journal of Microelectromechanical Systems. He served as a guest editor for two special issues of the IEEE Sensors Journal, the 2008-2009 Vice President of the IEEE Sensors Council, and the General Chair of the 2005 IEEE Sensors Conference.

He is the holder of 17 U.S. and international patents (with 13 pending) on micromachined angle-measuring gyroscopes, wide-bandwidth rate gyroscopes, design and fabrication of light manipulators and tunable optical filters and hybrid micromachining processes.

Dr. Shkel is the recipient of the 2009 Technical Achievement Award of the IEEE Sensors Council, 2005 National Science Foundation CAREER Award, the 2002 George E. Brown, Jr., Award, and the 2006 Fariborz Maseeh Outstanding Faculty Research Award.

Dr. Andrei M. Shkel received the Diploma degree (with excellence) in Applied Mechanics and Control from Lomonosov's Moscow State University, Moscow, Russia, in 1991, and his Doctor of Philosophy in Mechanical Engineering from the University of Wisconsin, Madison, in 1997. He completed his postdoctoral study in 1999 at Berkeley Sensors and Actuators Center, University of California, Berkeley.



















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Click here to download PDF version of "Call for Papers" Click here to download PDF version of the "Agenda"

♦ Security:

All abstracts should be <u>unclassified</u>. This workshop will be <u>ITAR</u> <u>restricted</u>, with both <u>unclassified</u> and <u>secret</u> sessions.

Attendance:

US, Canadian, and United Kingdom citizens, with attendance approval from US DoD.

♦ Submissions:

The abstract should clearly express the objective, scope, and conclusions of the presentation of one or more of the Potential Topic areas listed. It should be kept between 250-500 words.

Potential Presenters:

Prepare for a <u>twenty minute presentation</u> with a <u>1-2 minute</u> <u>question/answer time</u> immediately following each presentation.

Selection Results:

All submitters will be notified of the selection results.

♦ All Abstract Submissions Must Include:

- Title of Author (Dr., Ms., Mr., Prof., Rank, etc.)
- Author's Full Name
- Author's Company/Organization
- Paper Title
- Complete Contact Info of Primary Author, (phone, email, fax, work mailing address)
- The Presenter Name & Organization, if different than author.

Submission:

Email your submission, preferably in PDF form, to the workshop coordinator at angie.cornelius@us.army.mil.

















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Visitor Information

For more information about places to stay in Huntsville, click here. For printable directions to the conference, click here. For a printable map of surrounding hotels and restaurants, click here.

RECOMMENDED HOTELS:

Comfort Suites 1.5 miles from conference

→6224 Torok Circle, Huntsville, AL 35806

→Phone: (256) 562-2400 Fax: (256) 562-2409

Directions to the hotel are available online.

Directions to Dynetics: From hotel, turn right onto Torok Circle, and then left onto Waddell Dr. At the light, turn left onto University Dr and proceed to get into the right-hand lane. At the next light, take a right onto Enterprise Way. Turn right onto Explorer Boulevard Northwest and proceed to take the next right. You will see the Dynetics building immediately to your right. Follow the road around to the parking lot.

Best Western 1.5 miles from conference

→6200 Torok Circle, Huntsville, AL

 \rightarrow Phone: (256) 837-7412

LOCAL ATTRACTIONS:

U.S. Space & Rocket Center:

For \$20 visitors can get a firsthand look at multiple exhibits showcasing artifacts and insights into the US space program's evolution throughout its history of space exploration, as well as the current visiting exhibition 'Mammoths and Mastodons: Titans of the Ice Age'. The center also offers movie showings at its IMAX theatre, as well as in the Davidson 3-D theatre. For more detailed information, including directions and showtimes.

Bridge Street Towncenter:

A hub for dining, shopping, and entertainment, Bridge Street offers a close option for an all encompassing night on the town. In addition to a variety of shops, it is home to many restaurants ranging from quick-service shops to fine dining options. While there are often many musicians out along the performance areas on a nice night for entertainment, and a bowling alley the main draw for many is the Monoco Theatre. The theatre also houses the restaurant The Scene, as well as more private 21 and over only seating in it's upstairs Prive section where you can also enjoy selections from the restaurant for anyone who'd like to grab dinner and a movie in one place. For a listing of the

RECOMMENDED HOTELS:

Towneplace Suites 1.7 miles from conference

→1125 McMurtrie Drive, Huntsville, AL 35806

→Phone: (256) 971-5277 Fax: (256) 971-5233

Directions to the hotel are available online.

Directions to Dynetics: From hotel, turn left onto McMurtrie Drive, then turn right onto University Drive. Stay straight through the first traffic light, and then move to the right-hand lane. At the next light, take a right onto Enterprise Way. Turn right onto Explorer Boulevard Northwest, and proceed to take the next right. You will see the Dynetics building immediately to your right. Follow the road around to the parking lot.

Holiday Inn 2.9 miles from conference

→5903 University Dr, Huntsville, AL 35806

 \rightarrow Phone: (256) 830-0600 Fax: (256)

Directions to the hotel are available online.

Directions to Dynetics: From hotel, turn right onto Torok Circle, and then left onto Waddell Dr. At the light, turn left onto University Dr and proceed to get into the right-hand lane. At the next light, take a right onto Enterprise Way. Turn right onto Explorer Boulevard Northwest, and proceed to take the next right. You will see the Dynetics building immediately to your right. Follow the road around to the parking lot.

Days Inn & Suites 1.6 miles from conference

→1145 McMurtrie Drive Northwest, Huntsville, AL 35806

→Phone: (256) 971-0208 Fax: (256) 971-1099

Directions to the hotel are available online.

Directions to Dynetics: From hotel, turn left onto McMurtrie Drive, then turn right onto University Drive. Stay straight through the first traffic light, and then move to the right-hand lane. At the next light, take a right onto Enterprise Way. Turn right onto Explorer Boulevard Northwest, and proceed to take the next right. You will see the Dynetics building immediately to your right. Follow the road around to the parking lot.

stores, restaurants, and any other special events. To check showtimes and reserve tickets for the Monaco, visit http://www.monacopicturesusa.com/.

Downtown Huntsville:

Downtown Huntsville offers many restaurants, bars, shopping areas, and other attractions like the Early Works Museum and Huntsville Museum of Art. For any additional information, visit one of Huntsville's visitor information webpages: http://www.huntsville.org/visitors/

830-9576

Directions to the hotel are available

Directions to Dynetics: From the hotel, take a left onto the mall access road, and then a second left at the first stop sign. At the light, turn left onto University Drive. Follow the road straight, passing under the overpass and continuing through the next two stoplights. At the third light, turn left onto Enterprise Way. Turn right onto Explorer Boulevard Northwest, and proceed to take the very next right. You will see the Dynetics building immediately to your right. Follow the road around to the parking lot.

<u>Sleep Inn & Suites</u> 3.1 miles from conference

→4727 University Drive, Huntsville, AL 35816

→Phone: (256) 382-2583 Fax: (256) 382-2584

Directions to the hotel are available online.

Directions to Dynetics: From hotel, turn left onto University Drive. Keep going straight, passing under the overpass and continuing through the next two stoplights. At the third light, turn left onto Enterprise Way. Turn right onto Explorer Boulevard Northwest, and proceed to take the next right. You will see the Dynetics building immediately to your right. Follow the road around to the parking lot.

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REGISTRATION

REGISTRATION FOR THE CONFERENCE IS NOW CLOSED

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Attendance Requirements

Security:

This workshop is ITAR restricted, with both UNCLASSIFIED and SECRET sessions.

♦ Fees:

There are no attendance fees for this workshop.

Limitations:

Attendance is limited to US, Canadian, and United Kingdom citizens, with attendance approval from US DoD.

♦ Proof Of Citizenship:

All attendees must present proof of citizenship at the workshop. Proof of citizenship is either your:

- Passport
- Certified birth certificate and photo ID
- Certificate of naturalization and photo ID
- Visit request (faxed prior to workshop) and photo ID



















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The U.S. Army Aviation and Missile Research, Development and Engineering Center (AMRDEC)



US Army Research Lab (ARL)



Defense Advanced Research Project Agency (DARPA)



The U.S. European Command (EUCOM)

The National Aeronautics and



Space Administration (NASA)



National Institute of Standards and Technology (NIST)



Department of Energy, National Nuclear Security Administration (DOE/NNSA/NA-22)



US Army Space & Missile Defense Command/Army Forces Strategic Command (SMDC/ARSTRAT)



















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Administrative Points of Contact:

Mrs. Angie Cornelius (UAH)
Program Coordinator
Phone: 256-876-6483

Email: angie.cornelius@us.army.mil

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