

**Annual Midyear Symposium  
March 6th & 7th, 2003**

**Fort Belvoir, Virginia  
Officers Club, Belvoir Room**

***Measuring and Maintaining Performance in Complex  
Environments***

Presented by the

**AMERICAN PSYCHOLOGICAL ASSOCIATION**



**Division 21**

**Applied Experimental and Engineering Psychology**



**Division 19**

**Military Psychology**

**&**



**Potomac Chapter**

**Preliminary Schedule**

***Don't miss the Potomac Chapter HFES Dinner Meeting w/ speaker  
Thursday, March 6<sup>th</sup> at the Officers Club***

## Wednesday, March 5<sup>th</sup>

**0900-1400 APA Division 19 Executive Committee Meeting – at HumRRO in Alexandria, VA**

## Thursday, March 6<sup>th</sup>

**0800-1100 APA Division 21 Executive Committee Meeting – Fort Belvoir Officers Club, Belvoir Room**

**1100-1200 On-site registration**

**1200-1230 Welcome**

**David Schroeder, Ph.D., President, APA Division 21**

**Henry Taylor, Ph.D., President, APA Division 19**

**Gerald Krueger, Ph.D., President, HFES Potomac Chapter**

**1230-1315 Optimizing Cognitive Readiness under Combat Conditions**

TBA

*Peter Hancock*

TBA

*Clint Bowers, Shawn Burke, K. Asberg, Laura Milham, Heather Priest, & Eduardo Salas,  
University of Central Florida*

**1345-1515 Measuring and Maintaining Performance in Air Traffic Control**

The measurement of air traffic controller performance.

*Don Weitzman, FAA*

Identifying causal factors in ATC environments

*Julia Pounds, FAA Civil Aerospace Medical Institute*

How will that effect controller efficiency

*Ben Willems, FAA William J. Hughes Technical Center*

Assessing effects on en route controller performance of alternative flight data displays

*Carol Manning, FAA Civil Aerospace Medical Institute*

Development of an Empirically-based Index of Aircraft Mix

*Elaine Pfeleiderer, FAA Civil Aerospace Medical Institute*

**1545-1700 Cutting-edge Research from the Military Academies: U.S. Military Academy**

Attitudes of military cadets toward the role of women in the military: Effects of academic class and sex

*Michael Mathews, United States Military Academy*

Effects of expertise and workload on situation awareness in a digital command and control simulation

*Joseph Mitek, Chris Trombetta, & Ian Vargas, United States Military Academy*

Effects of data entry method and attention condition on speed and accuracy of PDA data entry

*Paul Gerry & Steven Reynolds, United States Military Academy*

Measuring situation awareness in the field and assessing its relationship to hardiness in field training exercises: A twofold study

*Jennie Hattman & Michelle Kracht, United States Military Academy*

## Thursday, March 6<sup>th</sup> (continued)

**1800-1845 HFES Potomac Chapter - Cocktail Hour**

**1845-2030 HFES Potomac Chapter – Dinner**

### *Guest Speaker*

**Note: Separate reservations must be made with Jerry Krueger if you plan to attend the HFES Potomac Chapter Dinner/Meeting. Please contact him by phone at (703)749-9134 x204 or by e-mail at [gkrueger@thewexfordgroup.com](mailto:gkrueger@thewexfordgroup.com).**

**Cost is \$24.00 at the door and please let Dr. Krueger know your preference of beef or fish at the time of reservation.**

## Friday, March 7<sup>th</sup>

**0800-0930 Cutting-edge Research from the Military Academies: USAF Academy**

Transforming Air Force Academy cadets in the classroom: Development of a classroom leadership scale  
*Heidi Smith, United States Air Force Academy*

The effect of distraction on UAV operator performance  
*Justin Godfrey, Nicholas Helms, Tiffany Stewart, Ellen Stimmel, and James Patrey, United States Air Force Academy*

The effects of highlighting validity on eye movement behaviors  
*Dana Bochte & Heather Pringle, United States Air Force Academy*

Verbal protocol analysis of UAV pilot's attention allocation strategies  
*Sarah Kotte, Mathew Purtee, Michael Krusmark, Kevin Gluck, United States Air Force Academy*

**1000-1045 Knowledge Web (K-Web): Improving knowledge exchange during Operation Enduring Freedom**

*Ron Moore, Jeffrey Morrison, Janel Schermerhorn, Heather Oonk, & Marlin Averett, Pacific Science and Engineering Group & Space and Naval Warfare Systems Center, San Diego*

**1100-1200 Policy Hour with APA Science**

*Heather Kelly, Senior Legislative & Federal Affairs Officer*  
*Dianne Maranto, Director of Psychology in the Workplace*

**1300-1400 Poster Session (Please set up posters between 0930-1000 during the break)**

Thinking about thinking: Development of the meta-cognitive survey  
*Jesse Smith, Justin Godfrey, Chris Forsythe, & Mike Bernard, United States Air Force Academy and Sandia National Laboratories*

Design of e-learning interfaces: Challenges, iterative design, and heuristic application  
*Christine Covas, Toni Portrey, & Terence Andre, Arizona State University and United States Air Force Laboratory*

Spatial disorientation training at the U.S. Air Force Academy  
*B. Self, R. Maresh, E. Shpak, W. Ercoline, and H. Pringle, United States Air Force Academy and Brooks Air Force Base*

Effects of cueing and presence of a distracting task on detecting change in battle icons  
*Simon Boyd, Mark Juntunen, & Kelly Schachtler, United States Military Academy*

The effects of experience and mode of presentation on the use of an Army field manual  
*Chris Collins & John Selby, United States Military Academy*

Effects of speed reading training on Army operation order comprehension  
*Brian Hatalla & Jesston Wagner, United States Military Academy*

The effect of gestures and desynchronization on comprehension of a video telecast  
*Darin Howe & Miguel Martinez, United States Military Academy*

Designing more effective enemy icons: An evaluation of the RAPTOR interface role certainty indicator  
*Jertez Hunter & John Trahan, United States Military Academy*

Effects of PDA and laptop data entry on speed and accuracy of note taking

*Brandon Kint & Eric Wagoner, United States Military Academy*

Effects of experience and information mode on processing representation aiding of tactical operations resources (RAPTOR) icons

*Patrick McGinty & Shannon Worthan, United States Military Academy*

Effects of level of training on comprehension of friendly and enemy battle icons

*Dennis Scott, Kevin Smith, & Apphia Taylor, United States Military Academy*

Effects of video and textual learning on Army land navigation training

*Lillian Stanton & Kainoa Paloma, United States Military Academy*

The effects of color, size, and eccentricity on peripheral target detection

*Ian Billington & David Meyer, United States Air Force Academy and University of Michigan*

Effect of combat earplugs on sound localization

*Miguel Martinez & Christopher Collins, United States Military Academy*

### **1400-1530 Measuring and Maintaining Performance in Flight**

A human factors analysis of military and civilian aviation accidents

*Scott Shappell & Douglas Wiegmann, FAA Civil Aerospace Medical Institute & University of Illinois at Urbana-Champaign*

The effect of NEXRAD image resolution on pilot decision-making

*Dennis Beringer, FAA Civil Aerospace Medical Institute*

Effectiveness of personal computer aviation training devices (PCATDs) for instrument training, recency of experience, and instrument proficiency checks

*Henry Taylor, Donald Talleur, Tom Emanuel, & Esa Ratanen, University of Illinois at Urbana-Champaign*

Factors affecting pilots' decisions to continue flight into adverse weather

*Douglas Wiegmann & Juliana Goh, University of Illinois at Urbana-Champaign*

Money talks, weather walks: Effects of visibility, cloud ceiling, and financial incentive on GA pilots' willingness to take off into marginal weather

*William Knecht, Howard Harris, & Scott Shappell, FAA Civil Aerospace Medical Institute*

### **1530-1600 Division 19 Student Paper Awards Ceremony**

### **1600-1630 Concluding remarks**

## **Lunch**

Please note that the Officer's Club has a wonderful buffet and downstairs cafeteria-style restaurant available for lunch on both days of the symposium.

## **Registration Information**

### **Advance Registration for symposium (before February 18<sup>th</sup>, 2003)**

March 6 <sup>th</sup> 1200-1600:	\$25.00
March 7 <sup>th</sup> 0800-1600:	\$30.00
Both Days:	\$50.00

### **On-Site Registration**

March 6 <sup>th</sup> 1200-1600:	\$30.00
March 7 <sup>th</sup> 0800-1600:	\$50.00
Both Days:	\$75.00

Please make checks payable to:  
**APA Division 21**

Mail to:  
Richard T. Kelly, Ph.D.  
Pacific Science & Engineering Group, Inc.  
6310 Greenwich Drive, Suite #200  
San Diego, CA 92122  
(858)535-1661

Email registration questions to:  
rtkelly@pacific-science.com

## Directions to Fort Belvoir Officers Club

### From Reagan National Airport and Alexandria, Virginia.

Drive 11 miles south on Route #1, Richmond Hwy. From Route #1, turn left (East onto Belvoir Road at the Pence Gate (South Post); stop to obtain visitors' pass. Follow Belvoir Road to 21<sup>st</sup> Street. Turn left, go 100 yards, turn right onto Belvoir Drive. At the fork in the road, bear left onto Woodlawn Drive to Schultz Circle. The free parking area is to the left of the Officers Club Building.

Additional maps and detailed directions can be found on the web at [www.mapquest.com](http://www.mapquest.com) and at [www.belvoir.army.mil](http://www.belvoir.army.mil).

## Security

Given heightened security at Military and Federal Facilities, please allow for additional time to register your vehicle with the Military Police at the gate and to receive a visitor pass to get to the Officer's Club. You will need a government issued ID to get on the base (Suitable ID includes a valid drivers license, military ID, passport, or other U.S. government issued ID).

## Housing

### *Fort Belvoir Bachelor's Officers Quarter*

For government employees on travel orders, Fort Belvoir Bachelor Officers Quarters (BOQ) are available (range \$44.50 to \$89 based on availability). Call toll free at (800)295-9750 or (703)704-8600.

Other suggested housing is in Alexandria, VA roughly 20 minutes away from the symposium site.

### *Hotels in Alexandria, Virginia*

- [Best Western Mount Vernon](#) - \$  
8751 Richmond Highway, Alexandria, VA 22309  
Fitness center - restaurant - lounge  
[Overview](#) | [Map](#) | [Availability & Rates](#)
- [Comfort Inn Alexandria](#) - \$\$  
5716 South Van Dorn Street, Alexandria, VA 22310  
[Overview](#) | [Map](#) | [Availability & Rates](#)
- [Courtyard Alexandria](#) - \$  
2700 Eisenhower Avenue, Alexandria, VA 22314  
Fitness center - restaurant - lounge  
[Overview](#) | [Map](#) | [Availability & Rates](#)
- [Embassy Suites Alexandria-Old Town](#) - \$\$  
1900 Diagonal Road, Alexandria, VA 22314  
Swimming pool - restaurant  
[Overview](#) | [Map](#) | [Availability & Rates](#)
- [Hampton Inn Alexandria Old Town-King St Metro](#) - \$\$  
1616 King Street, Alexandria, VA 22314  
Swimming pool - fitness center  
[Overview](#) | [Map](#) | [Availability & Rates](#)
- [Hilton Alexandria Mark Center](#) - \$\$  
5000 Seminary Road, Alexandria, VA 22311  
Swimming pool - fitness center - restaurant - lounge  
[Overview](#) | [More Info](#) | [Map](#) | [Availability & Rates](#)
- [Hilton Alexandria Old Town](#) - \$\$  
1767 King Street, Alexandria, VA 22314  
Swimming pool - fitness center - restaurant - lounge  
[Overview](#) | [Map](#) | [Availability & Rates](#)
- [Holiday Inn Hotel & Suites Alexandria Historic District](#) - \$\$\$  
625 First Street, Alexandria, VA 22314  
Swimming pool - restaurant - lounge  
[Overview](#) | [Map](#) | [Availability & Rates](#)
- [Holiday Inn Select Old Town VA Alexandria](#) - \$\$  
480 King Street, Alexandria, VA 22314  
Swimming pool - restaurant - lounge  
[Pet friendly](#)  
[Overview](#) | [Map](#) | [Availability & Rates](#)
- [Radisson Old Town](#) - \$\$  
901 North Fairfax, Alexandria, VA 22314  
[Overview](#) | [Map](#) | [Availability & Rates](#)

## ***Additional Questions or Inquiries***

### **Symposium Program Chairman**

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