

**President**

Patricia DeLucia, Texas Tech University

**Past President**

Peter Hancock, University of Central Florida

**President-Elect**

Joel Warm, United States Air Force Laboratory

**Secretary-Treasurer**

Scott Shappell, Clemson University

**Program Chair**

Anne McLaughlin, North Carolina State University

**Membership Chair**

Ericka Rovira USMA West Point

**Members-At-Large**

Frank Drews, University of Utah

Ericka Rovira, USMA West Point

James Szalma, University of Central Florida

**Representative to APA Council**

Regina Colonia-Willner, Practical Intelligence at Work, Inc.

**APA Women's Programs Liaison**

Regina Colonia-Willner, Practical Intelligence at Work, Inc.

**APA Committee on International Relations in Psychology Liaison**

David Schroeder, FAA Civil Aerospace Medical Institute

**Committee on Aging Liaison**

Regina Colonia-Willner, Practical Intelligence at Work, Inc.

**Representative to the American Psychological Association of Graduate Students (APAGS)**

Nicole Werner, George Mason University

**Chair of Fellows Committee**

Frank Durso, Georgia Institute of Technology

**Mentorship Chair**

Ronald Shapiro

**Editor, JEP: Applied**

Wendy Rogers, Georgia Institute of Technology

**Webmaster**

Drew Link, Clemson University

**Newsletter Editor**

Meghan Rogers, North Carolina State University

*We are grateful to all of our officers for their time and effort in serving the division. If you are interested in becoming active in the division, please contact me: [pat.delucia@ttu.edu](mailto:pat.delucia@ttu.edu)*

# Division of Applied Experimental and Engineering Psychology: Division 21 of the American Psychological Association

VOLUME 34, NUMBER 1

WINTER 2010

## INSIDE THIS ISSUE:

<b>Message from the President</b>	2
<b>About the Editor</b>	2
<b>Welcome and Awards</b>	3
<b>Seeking New Members</b>	3
<b>Division 21 Sponsorships</b>	4
<b>Psychology as a STEM discipline</b>	4
<b>Games To Explain Human Factors</b>	5
<b>Biological and Cultural Factors in Applied Experimental Psychology</b>	5
<b>APA 2011 Annual Meeting</b>	6
<b>Listserve and Website</b>	6
<b>Symposium on Aviation Psychology</b>	6
<b>Mentorship Program</b>	6
<b>Who we are, what we do, and why we want you with us</b>	7

# Message from the President



It is an honor to serve as the President of APA Division 21. I look forward to working with our officers and our members to make this a successful year. My priorities are to inform other groups about who we are and what we do, and to get more people involved in our division.

As you will see in this newsletter, a lot has been happening. We are a sponsor of the Committee on Human-Systems Integration, and a sponsor of Embry-Riddle Aeronautical University's Human Factors and Applied Psychology Student Conference. We have an exciting technical program planned for the 2011 annual meeting in Washington, D.C. Our website has been updated and we now have a webmaster to maintain the website and a newsletter editor to keep members informed about division activities. Please help us recruit new members. We are offering free one-

year division memberships to students and to APA members who are not currently members of Division 21. We are working with APA's International Office to recruit international members. The Immediate Past President (Hancock), Residing President (DeLucia), and President-Elect (Warm) penned a brief article about Division 21 to aid in the recruiting effort. The article is appended to this newsletter.

As detailed in this newsletter, Division 21 has a lot to offer to scientists and practitioners, faculty and students, including an excellent annual convention program, the *Journal of Experimental Psychology: Applied*, and a mentorship program.

How can Division 21 serve you better? I welcome your comments and suggestions. I especially encourage you to become active in the division and become part of its highly esteemed history.

## About the Editor

Hello everyone. I would like to take a moment and introduce myself as the new Editor of the Division 21 Newsletter. My name is Meghan Rogers, and I am a 2<sup>nd</sup> year Masters student in the Industrial and Systems Engineering Ergonomics program at North Carolina State University. My previous work includes a B.S. in Mechanical Engineering from the Georgia Institute of Technology and work as a Human Factors Engineer at Gulfstream Aerospace.

I currently attend school full time under a NIOSH training program grant and work as a research assistant in the NCSU Ergonomics Laboratory under the direction of Dr. David Kaber. My current research includes assessing distraction on driver situation awareness, determining the effect of nine panel logo signs on driver performance and gaze patterns, analyzing the effect of

monitor position on performance during minimally invasive surgery, and studying musculoskeletal disorders and underlying risk factors in large animal veterinarian tasks. I also spend time working at the Ergonomics Center of North Carolina.

I am a member of the Human Factors and Ergonomics Society and the Triangle Usability Professionals Association, along with being your new Newsletter Editor. I look forward to working with all of you in the future.

Meghan Rogers

## Welcome!

### Newly Elected Officers

Congratulations and welcome to our newly elected officers: Joel Warm (President Elect), Regina Colonia-Willner (APA Council Rep), James Szalma (Member-at-Large). Thank you for your service to Division 21.

### New Division Fellows

Congratulations to Roger Kirk, Herbert Moskowitz, Gary M. Olsen, Peter L.T. Pirolli, and Jennifer A. Veitch for being elected as fellows of Division 21! A list of fellows can be found at <http://www.apa21.org/about/fellows>



## 2010 Division Awards

Each year, Division 21 confers four awards. This year the Franklin V. Taylor Award for outstanding contribution to the field of Applied Experimental and Engineering Psychology was awarded to **John Senders** of the University of Toronto.

The Earl A. Alluisi Award for early career achievement was awarded to **Bruce Walker** of Georgia Tech University.

The George E. Briggs Dissertation Award was awarded to **Mike Nees** of Georgia Tech University.

The Raymond S. Nickerson Best Paper

Award was awarded to **Raja Parasuraman** for the article: Parasuraman, R., de Visser, E., Clarke, E., McGarry, W.R., Hussey, E., Shaw, T., & Thompson, J.C. (2009). Detecting threat-related intentional actions of others: Effects of image quality, response mode, and target cuing on vigilance. *Journal of Experimental Psychology: Applied*, 15, 275–290. Read this paper at <http://www.apa.org/pubs/journals/features/xap-15-4-275.pdf>

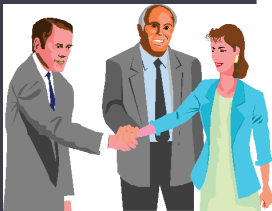
**Congratulations to all winners! For information about previous winners, and nomination forms go to: <http://www.apa21.org/about/awards>**

## Seeking New Members: Free Membership Offers in Division 21

Division 21 is offering free memberships which include a free subscription to the top-tier journal, *Journal of Experimental Psychology: Applied*.

These offers consist of one year of free membership to (a) APA members who are not currently members of Division 21, and (b) Students. Students who become active in the Division during their year of free membership are eligible to apply for subsequent free years of membership.

To take advantage of these offers, please complete the membership form ([http://www.apa21.org/files/Div21\\_Application.rtf](http://www.apa21.org/files/Div21_Application.rtf)) and e-mail it to our membership chair Ericka Rovira ([ericka.rovira@usma.edu](mailto:ericka.rovira@usma.edu)). Please write "Free Div 21 membership offer" at the top of the form.



## Division 21 Sponsors the Committee on Human-Systems Integration

Division 21 is now a proud sponsor of the National Academy of Sciences' Committee on Human-Systems Integration (COHSI), formerly known as the Committee on Human Factors.

The Committee studies the relationship of individuals and organizations to technology and the environment; identifies critical issues in the design, test, evaluation, and use of new human-centered technologies; and advises sponsors on the research needed to expand the scientific and tech-

nical bases for effectively designing new technology and training employees. Current projects include the Role of Human Factors in Home Healthcare, and Unifying Social Frameworks. Project development areas include Engineering Education, Next Generation Air Traffic Control, and Medical Records and Devices.

Other committee sponsors include the Agency for Healthcare Research and Quality, Federal Aviation Administration, The Human Factors and Ergonomics So-

ciety, The National Institute on Disability and Rehabilitation Research, Office of Naval Research, US Army Research Laboratory, US Air Force Research Laboratory. This year COHSI celebrates its 30<sup>th</sup> Anniversary. For more information about COHSI: [http://www7.nationalacademies.org/bbcss/COHSI\\_AbouttheCommittee.html](http://www7.nationalacademies.org/bbcss/COHSI_AbouttheCommittee.html).

### Division 21 Sponsors Embry-Riddle Aeronautical University's Student Conference

Division 21 is sponsoring Embry-Riddle's Fourth Annual Florida Student Conference for Human Factors and Applied Psychology which takes place on April 15, 2011. The conference showcases the academic research of undergraduate and graduate

students and includes best paper awards. More information can be found at <http://daytonabeach.erau.edu/coas/human-factors/news-events/events/2010-florida-student-conference-for-human-factors-and-applied-psychology.html>



## Psychology as a STEM discipline: APA's 2010 Science Leadership Conference

APA's 6<sup>th</sup> Annual Science Leadership Conference focused on enhancing the status of psychology as a STEM discipline. STEM stands for Science-Technology-Engineering-Math. Policy makers in the United States consider these areas essential for the nation's economic, scientific, and technological leadership. Hence, there is a growing number of STEM initiatives including funding opportunities. APA's 2009 Presidential Task Force on the future of psychology as a STEM discipline reviewed psychology's status as a STEM discipline, discussed rea-

sons that psychology is not consistently recognized as a STEM discipline and offered recommendations for consistent inclusion. Recommendations were diverse and comprehensive. Examples include increasing the number of psychological scientists in federal research agencies, advisory boards and honorary societies; expanding psychological science education in high school, college, and graduate school; increasing interaction between psychological science and other STEM disciplines; developing interdisciplinary curricula that emphasize translation of basic psychological science to applied

settings; and public education and advocacy campaigns. The Leadership Conference featured speakers from the National Science Foundation, FABBS, United State Congress, and various leaders in academia, public education and industry. Through break-out groups and discussions actions to implement the task force's recommendations were developed by those attending the conference. It is essential for psychological scientists to promote psychology as a STEM discipline.

## Games To Explain Human Factors: Come Participate, Learn & Have Fun!!!



Champion Sara Giglio

APA Division 21 sponsored the **Games To Explain Human Factors: Come, Participate, Learn & Have Fun!!!** outreach program for the sixth consecutive year at the APA 118<sup>th</sup> Annual Convention on August 14, 2010 in San Diego, CA. This year the session was presented by Ron Shapiro (APA Division 21), Jaye Van Kirk (a professor at San Diego Mesa College and a former president of Psi Beta, The National Honor Society in Psychology for Community and Junior Colleges), and Elizabeth MacKinnon (past president of Psi Beta at Mesa College and now a pre-med student and sociology major at San Diego State University). Approximately fifty students and professionals attended the one hour and fifty minute session making it the largest Division 21 session in San Diego.

For those individuals not familiar with the **Games** session, it is a non-traditional TV Game show style presentation designed to introduce our profession to students and professionals alike. The program includes activities involving sensing, perceiving, interpreting, assuming, thinking, learning, storing and retrieving information from memory, decision making, responding, interacting in a social environment and multitasking. After completing each activity the theoretical basis of the activity and applying the activity to human factors problems in real world situations are discussed. Additionally, the program contains sections on "Tools of the Trade", "What Can You Do Today?", and a final comprehension check. Given the game show format of the program, designations of champion and semifinalist are awarded (along with prizes) during the program.

The 2010 APA Champion was Sara Giglio a former student of Professor Van Kirk and cur-

rently a PhD Candidate ('12) in Clinical Psychology at Alliant University. Sara earned her champion status by an outstanding performance in one of the details activities. In this activity after Sara was blindfolded, I placed some lotion on her left hand and asked her what was on her left hand. She answered *Lotion*. I then touched her right hand and asked her what was on her right hand. Initially, she responded *Nothing*. Eventually, Sara solved the problem and responded *My ring*. We then discussed how individuals adapt to, for example, wearing a ring and how people interpret instructions. Many participants in this activity interpret the question *What is on your right hand?* as *What did the presenter place on my right hand?* For her *Comprehension Check* (or final exam) Sara was asked (while blindfolded) to name all of the people in the front of the room and explain what they did and how it applied to human factors. The most common errors champions make on the *comprehension check* is that they forget to name themselves and/or members of the presentation team.

In addition to Sara the semifinalists for the 2010 program included Issadora Saeteng, Rashanda Allen, Craig Robinson, Robert Byrom, Martin Wong and Jennifer B. Rious (pictured on the left). Photo-Certificates are also sent to the award recipients. The album of photo certificates may be viewed on SlideShare:<http://www.slideshare.net/DrRonShapiro/games-to-explain-human-factors-come-participate-learn-have-fun-certificates-from-the-2010-american-psychological-association-convention-in-san-diego-ca-august-14-2010>

Division 21 members may also request a copy of the **Games** program for not for profit educational use by sending a note to Ron.

([DrRonShapiro1981@SigmaXi.Net](mailto:DrRonShapiro1981@SigmaXi.Net)).



The Semifinalists

## Biological and Cultural Factors in Applied Experimental Psychology

A special section of the Winter 2010 (Vol. 123, No. 4) issue of the *American Journal of Psychology* is devoted to articles based on talks presented at a symposium on Biological and Cultural Factors in Applied Experimental Psychology, held by Division 21 at the 117<sup>th</sup> annual meeting of the American Psychological Association in August 2009. The articles present current thought regarding how biological and cultural factors influence behavior and their consequences for performance in applied settings.

The articles included in the section are:

"Adaptive Memory: Nature's Criterion and the Functionalist Agenda," by James S. Nairne and Josefa N. S. Pandeirada.

"Translating Cognitive Neuroscience to the Driver's Operational Environment: A Neuroergonomic Approach," by Monica N. Lees, Joshua D. Cosman, Nicola Fricke, John D. Lee, and Matthew Rizzo.

"Cross-Modal Congruency Bene-

fits for Combined Tactile and Visual Signaling," by James L. Merlo, Aaron R. Duley, and P. A. Hancock.

"Universal and Culture-Specific Effects of Display-Control Compatibility," by Robert W. Proctor and Kim-Phuong L. Vu

Together, the articles highlight the need for researchers and designers to consider biological and cultural factors, and their interaction, in the application of experimental psychology.



# Call for Papers! APA 2011 in Washington D.C.



APA Division 21 (Applied Experimental and Engineering Psychology) invites submissions for the 2011 Convention of the American Psychological Association, to be held in Washington, D.C. August 4-7, 2011. Proposals for papers, posters, or

symposia in areas related to applied experimental/engineering psychology, or human factors/ergonomics, are encouraged. Broad topics of interest include, but are not limited to:

- Issues in automation across domains
- The contribution of applied research to fundamental knowledge and theory
- Advanced student work
- International perspectives
- Use and effectiveness of technology in clinical/healthcare settings

While the formal submission period closed in December individuals who may have missed the deadline and still want to submit should contact our program chair (Anne McLaughlin at [anne\\_mclaughlin@ncsu.edu](mailto:anne_mclaughlin@ncsu.edu)

Full instructions concerning submissions, submission length, etc. may be found on APA's site: <http://www.apa.org/convention/call-programs-2011.pdf>

## Division 21 Listserve

The Division 21 listserv provides noteworthy information such as job announcements and APA news. If you are a member of APA Division 21 and are not currently a member of the Division 21 listserv, you can be added by sending an email request to our listserv coordinator Scott Shappell at [HFeng@clemsun.edu](mailto:HFeng@clemsun.edu).

## Updated Website

Division 21's website has been updated and resides at <http://www.apa21.org/>. Our webmaster is Drew Links at Clemson University. If you have announcements, suggestions, or other contributions to the website, please send them to [pat.delucia@ttu.edu](mailto:pat.delucia@ttu.edu)

## Announcement: Symposium on Aviation Psychology

You are invited to participate in the 16th International Symposium on Aviation Psychology, to be held in Dayton Ohio, May 2 – May 5, 2011. Proposals are sought for posters, papers, sessions, panels, and workshops. Any topic related to the field of aviation psychology is welcomed. Topics on human performance problems and opportunities within the aviation systems, and design solutions that best utilize human capabilities for creating safe and efficient aviation systems are all appropriate. Any basic or applied research domain that generalizes from or to the aviation domain would be welcomed also. The deadline for proposals was October 15, 2010

## Mentorship Program

Division 21 offers a mentorship program. Members have the opportunity to learn from the experiences of other industry and academic professionals. Whether deciding which graduate courses are appropriate with your future goals, preparing for a board certification, or securing funding for your research programs, one of our members can provide valuable advice. For more information contact Ron Shapiro ([drronshapiro@gmail.com](mailto:drronshapiro@gmail.com)).

Are you looking for recommendations on

- Starting a great career in Applied Experimental and Engineering Psychology?
- Helping your students with their career choices?
- Making a career change?
- Solving a career related problem?

If so, please consider utilizing (or encouraging your students and/or colleagues to utilize) the Division 21 Mentoring program. It is easy to participate in the program. Just go to the Mentoring page on the Division 21 web site (<http://www.apa21.org/students/mentor>) and click on the mentoring guide. Find a potential mentor or two and follow the directions to get connected with the mentor.

If you are an established professional and would like to serve as a mentor to others please go to the last page of the directory, complete the mentor template, and forward the template to the mentoring chair for evaluation.

Questions and suggestions may be directed to Ron Shapiro, the APA Division 21 Mentoring Chair, [DrRonShapiro1981@SigmaXi.Net](mailto:DrRonShapiro1981@SigmaXi.Net).



## Applied Experimental and Engineering Psychology: Division 21 of the APA: Who we are, what we do, and why we want you with us.

*P.A. Hancock<sup>1</sup>, P.R. DeLucia<sup>2</sup>, and J.S. Warm<sup>3</sup>*

There are many divisions within the American Psychological Association (APA) and indeed many associations for research and clinical psychology around the world and so this begs the question what is Division 21 of the American Psychological Association (APA) and what might it be able to do for you? The central focus of Division 21 is on applied experimental and engineering psychology. The two themes are not synonymous and so they deserve a little further explanation in and of themselves. Applied psychology in the present context is a rather broad concept but it primarily involves the use of results from both experimental and clinical psychology to effect practical solutions to real world problems. This might, for example, include issues involved with the training of personnel for high-level skills or with advances in therapy for post-traumatic stress disorder to name but two relevant examples. As should already be immediately evident, the applications embraced by Division 21 overlap to a significant extent with other divisions and central themes of APA.

The primary focus of Division 21 is perhaps clarified in the second theme that is engineering psychology. For those who are not familiar with the term this might seem an interesting but somewhat strange marriage of disciplines. Often related to terms such as Human Factors, Ergonomics, and the historical study of man-machine systems in general, engineering psychology looks to understand human performance in the realm of technological applications. Thus, research in aviation and flight-deck design has been a long-term theme of engineering psychology. Indeed, it is an arguable case that our field originated from the need for pilots to fly newly-designed military planes during the tumult of the second world war. However, this would be to confine our efforts to a much too narrow a context. In general, our aim is to promote the development and application of psychological principles, knowledge, and research to improve technology, consumer products, energy systems, communication and information, transportation, health care, decision-making, work settings, and living environments.

Thus we look to study and embrace almost all of the contexts in which humans effect work. A classic contribution in our area for example, is the design of the center high-mounted rear brake light, now standard on all passenger vehicles. More recent efforts have aimed to reduce medical errors by improving designs of new medical equipment and facilitating communication amongst healthcare professionals. Thus, we look to embrace many working contexts and have recently even sought to look at the very nature of work itself and whether our principles and knowledge can and should be applied for example to leisure and sport contexts. In other words, there is a great deal of room under our collective umbrella and we welcome new and diverse contributions from new and diverse members. Indeed we are a proud sponsor of the National Academy of Sciences' Committee on Human Systems Integration on which several of our members serve and have served, and we enthusiastically sponsor the Florida Student Conference held in Daytona, Florida each year. We are always looking for new ways to promote engineering psychology in this broad context.

We are not solely concerned with the performance of the moment, important though that is. Indeed, much emphasis in our part of the world is given over to issues associated with design. We have learned much over the years from studying unfortunate disasters that appear with horrible regularity around the world and our discipline is redolent with short-hand references to such major failures. In the U.S. we refer often to Three-Mile island (TMI), Hurricane Katrina, etc and such accounts are featured in the more popular texts representing our discipline such as Steve Casey's "*Set Phasers on Stun.*" Of course, the

self-same references can be recognized in respect to other disasters world-wide such as “Bhopal’, “Chernobyl’, “Herald of Free Enterprise,’ and the like. It is one of the saddest dimensions of our enterprise that we receive a boost in interest and in research support following each of these very public and lamentable, major disasters. It is the aspiration of our work to apply the lessons learned from such horrendous events in order to help their prevention in the future by design. This requires that we know much about human behavior and similarly how the technological context of behavior influences an individual’s response. Thus, our role in the system design process is to ensure that human psychological, physiological, and performance characteristics are addressed (see February, 2006, *APA Monitor* (<http://www.apa.org/monitor/feb06/closer.aspx>). We have a valued history of more than seven decades of previous existence and achievement and are constantly searching for way to improve the service to our members and to the wider research community who meet together across the disciplines of neuroscience, human-computer interaction, technological design, socio-technical systems operations, safety, and contextual performance in advanced technical environments. Hopefully, you might be among those individuals who feel they fit within this broad category of humans and technology and you will come and join us in our efforts to improve the quality of all human life. If you are not, we wish you well, but if you are, we wish you – welcome.

As we welcome you we provide you with a variety of benefits. Our annual scientific and technical program at the APA convention presents state-of-the-art research on current and emerging issues. The meeting provides opportunities to meet and network with premier scholars in small informal settings. Our *Journal of Experimental Psychology: Applied* is the top publication in the field of applied experimental and engineering psychology and is distributed to all members. Each year we award a prize for best paper in the journal. Other awards include a dissertation award, an early career award, and an outstanding career award. We provide a mentorship program for those who seek guidance on developing a successful career. Our listserv and website provides timely and valuable information such as job openings, funding announcements, and other events in the field. We especially encourage members to participate in the governance of the division and in important decisions that impact our field and the community at large. In short, our welcome extends to students, new scholars, and experienced scholars from all parts of the world—to you. **To join Division 21, complete the membership application form at <http://www.apa21.org/membership>**

---

<sup>1</sup>Dept. of Psychology and Institute for Simulation and Training, *University of Central Florida*, Orlando, FL 32816. Immediate past-President of the Division.

<sup>2</sup>Psychology Department, *Texas Tech University* Lubbock, Texas 79409. President of the Division.

<sup>3</sup>Senior Scientist, *Wright-Patterson AFB*, Dayton, OH. President-elect of the Division.