



# ODU HFES student chapter NEWSLETTER

April 2012

## Letter from the President:

Hi all.

It's hard to believe it is almost May and another academic year is coming to a close. We ended the semester on a high note with three events. We hosted Dr. Tony Anglero, an Experimental Aerospace Psychologist. He gave an informal briefing about his background and work as an AEP. We also took a field trip to Virginia Tech's Transportation Institute where we spent a full day touring simulators and labs across campus with Dr. Justin Morgan and some members of the VT HFES student chapter. We also had two fun social activities with the VT student chapter. Last but not least, our Spring social was a success. Thanks to everyone who brought food and took time out of their busy schedules to enjoy the day as a group.

We do have some big plans for the summer. We are hosting a student conference for HFES student chapter members from George Mason, UVA, and Virginia Tech. We will showcase our research and it's a great opportunity for us to get to know each other and to share our research. We will also host Dr. Chris Wickens for a colloquium the night before. As plans continue to unfold, you'll hear more details. I personally am incredibly excited about these two events!

We also held elections in April. So, I'd like to introduce you to the new Executive Board:

Becca Kennedy: President  
Alex Proaps: Vice President  
Eric Chancey: Treasurer  
Veronica Scerra: Secretary  
Wes Harden: Webmaster  
Kellie Kennedy: Public Relations

Thank you all so much for your help this year. I thoroughly enjoyed serving as President of the student chapter. It was probably one of the most fun and rewarding experiences I've had in graduate school.

Hope to see you all this summer.

Alex Proaps

## Save the date: Virginia HFES student chapter conference

- June 7<sup>th</sup> at 5pm
  - Colloquium with Dr. Wickens in VMASC East auditorium
  - Reception to follow sponsored by Tidewater chapter
- June 8<sup>th</sup> 8am to 4pm
  - Student conference featuring student demos, posters and presentations from George Mason, Virginia Tech, University of Virginia, and Old Dominion students in TED Constant multipurpose room
- Stay tuned for more details

### Spring 2012 ODU HFES officers

**Alex Proaps:** President (aproa001@odu.edu)  
**Kimberly Culley:** Vice President (kcull009@odu.edu)  
**Erik Prytz:** Treasurer (erik.prytz@gmail.com)  
**Becca Kennedy:** Secretary (rkenn014@odu.edu)  
**Kellie Kennedy:** Webmaster (Kellie.d.kennedy@gmail.com)  
**Molly Liechty:** Public Relations (mcris005@odu.edu)  
**Dr. Chris Brill:** Advisor

### Old Dominion University Human Factors and Ergonomics Society student chapter

**April newsletter contributors:**  
Alex Proaps, Becca Kennedy,  
Brittany Neilson, Eric Chancey,  
Molly Liechty, and Kellie Kennedy

**Find us on Facebook (ODU Human Factors)!**



## Healthcare Symposium in Baltimore

by Becca Kennedy



Top: Rob Turner presenting a poster; Bottom: Brittany Anderson-Montoya and Becca Kennedy's poster presentation, Mike Montano's poster presentation; Right: Erik Prytz demonstrating equipment. *Photos by Becca Kennedy*

The Human Factors and Ergonomics Society held its first Healthcare Symposium in March at the Marriott Waterfront Hotel in Baltimore, MD. The symposium's focus, "Bridging the Gap" between the scientific and clinical communities, was supported by three presentation tracks: patient and healthcare provider safety, healthcare information technology, and medical device design.

Old Dominion University graduate students from Dr. Scerbo's lab showcased posters and interactive demonstrations at the symposium's well-attended poster session. The students presented posters describing research findings and demonstrated the equipment and techniques used to collect data. Erik Prytz and Michael Montano encouraged symposium attendees to perform a simulated laparoscopic task, arguably the most popular demonstration. Brittany Anderson-Montoya and Becca Kennedy also presented a maternal-fetal heart rate simulator, and Robert Turner demonstrated a standardized patient training scenario with the help of a standardized patient from EVMS.

The 2013 HFES Symposium on Human Factors and Ergonomics in Healthcare, "Advancing the Cause," will be held next March in the same location. To stay informed about Human Factors issues in healthcare, students are invited to join the HFES Healthcare Technical Group.



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## VTTI field trip

by Molly Liechty and Alex Proaps



Top left: Virginia Tech and Old Dominion's HFES student chapters enjoying a social events at Macado's and Bull and Bones in Blacksburg, Virginia; Bottom: Mike Montano and Kellie Kennedy learning how to drive a "double clutch" in the commercial truck simulator, Molly Liechty sitting in an 18-wheel research vehicle; Left top to bottom: Smart Road weather towers, Smart Bridge, inside Smart Bridge. *Photos by Alex Proaps*

In April, members of the HFES student chapters at ODU and Virginia Tech (VT) visited Virginia Tech Transportation Institute (VTTI) for these a series of tours. Dr. Justin Morgan gave a presentation and tour of the Commercial Training and Prototyping (CTAP) Simulator. The CTAP can provide commercial motor vehicle training to organizations and researchers can obtain data about driving performance. The CTAP simulator is based on a FAAC TT-2000-V7 full-mission truck driving cab. The simulator provides a 225 degree forward field of view, it is surrounded by multiple LCD monitors that provide the feeling of being in a real world environment, including two monitors positioned at the rear of the simulator which create a mirror parallax that is rarely found in most driving simulators. The CTAP simulator is able to replicate not only multiple vehicle styles (conventional and cab-over tractors) but also multiple environments and driving scenarios. Members of our group were allowed the opportunity to not only view the CTAP but also experience it first hand, participating in several driving simulations.

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ODU also collaborated with VT's HFES student chapter for an additional tour of VTTI. Dr. Morgan provided an in depth review of VTTI's current research before leading a tour of the Smart Road and instrumented-vehicle fleet. As stated on the VTTI website, the Smart Road is a 2.2-mile two-lane road featuring weather-making capabilities. The Smart Road Bridge is the tallest bridge in Virginia at 450 feet, which is three times longer than most highway bridges. The road also has the capability to simulate weather through 75 weather-making towers that can rotate and tilt to create rain, sleet and fog conditions to tackle research related to driving performance, green tire technology, and road surface materials. We also toured the inside of the Smart Bridge, which is a cavernous expanse and a place that visitors rarely get to ever see. In fact, according to Dr. Morgan, only around 200 people have ever been inside. VTTI manages the Smart Road for research purposes, but it is owned and maintained by VDOT. Scientists and product developers conduct a wide range of research with this Smart Road. The smart road is equipped with 14 experimental pavement systems and over 400 electronic sensors that monitor everything from road conditions to vehicle weight and speed. The student chapters also toured garages with some of VTTI's instrumented-vehicle fleet. These vehicles record real-time, naturalistic driving data using sensors and cameras located inside the vehicles. This was an excellent opportunity for the student chapters to see firsthand what kind of research is ongoing at VTTI.

The student chapters also met for two social events during ODU's visit, one at Macado's and one at Bull and Bones. Overall, it was an exciting and educational field trip for the chapters!



Virginia Tech and Old Dominion's HFES student chapters and Dr. Justin Morgan overlooking the Smart Bridge at VTTI.



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## Applying to Human Factors PhD programs

edited by Alex Proaps

Congrats to Kellie Kennedy and Brittany Neilson, both of whom were accepted to Human Factors Doctoral programs this semester. Kellie accepted an offer to Old Dominion University and Brittany accepted an offer at Texas Tech University. The lengthy graduate school application process is still fresh on their minds. They each have some advice for students who are thinking about applying to graduate programs in Human Factors.

### Kellie Kennedy's Top 10 Tips for Applying to Grad School

1. **Start early.** Applying to a program actually requires a huge amount of background research and preparation work. Ideally, this prep work should begin in the last two years of your undergraduate program. This prep work can help you narrow down your interests so that you can choose a school that may best suit your future plans. Two years before graduation is the ideal time to start your road to success. The application deadline for most Doctoral programs falls in November to February.
2. **Know thyself.** This single point is the key to making successful forward momentum in education. Failure to be honest with yourself about your own strengths and weaknesses can ruin any plan. By working to your strengths and adopting techniques to improve your weaknesses will allow the personal growth you need make good choices for your future. Here you need to actually explore not only if you want to move forward, but also if you are able to move forward.
3. **Ask yourself, "What do you want to be when you grow up?"** Remember, a graduate program is about honing your skills so that you are able to be a specialist in your area. How do you know what you want to do if you have never experienced it? Often undergraduate students do not know what they want to do because they have no opportunity for exposure to some specific fields, like HF, through coursework. Here are a few suggestions to get such exposure: Become a research assistant, complete an undergraduate honors thesis, and/or complete independent study with a faculty advisor or on your own time.
4. **Now ask yourself, "What degree do I need to do that?"** Once you have a better idea about what you want to do, you should explore what education you need to do that. This will help to narrow down what type of degree you need. Can you do what you want with a M.S.? Do you need or want the Ph.D.? Do you want to start with a M.S. first, then Ph.D.?
5. **Next ask, "What school should I apply to?"** Graduate programs have expectations and ideals and each has a variety of faculty members conducting different types of research. You can find this information on websites or through contacting their program department. Graduate school is training for your career and you are seeking a mentor. Each professor is a specialist in his or her own area. This is the most important thing for school applications. You are looking for a match. You want to contact potential advisors who are doing things you are interested in. You want to ask: "Are you taking new students?" Many professors do not take new students every year. You should not waste your time or money applying to work with a person who is not taking students. You should also ask: "What research are you currently interested in?"
6. **GRE.** The GRE is a hurdle you must jump through for any move into higher education. You must study for this test. Let me say that again; you must study for this test. Do not attempt to cram for this test. You must achieve a GRE score that does not exclude you from consideration. You are permitted to take the GRE more than once; however, your previous scores are often available to professors. Some universities average the scores for individuals who take more than one attempt. You can get this information in your university search.

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7. **Stay organized!** Depending on the number of universities you plan to apply to, your selection process may require you to compile information for 15 or more universities. Make notes on all programs including the professors and all requirements for that university. This will be incredibly helpful in the future.
8. **Letters of Recommendation.** These letters should be from faculty within your department. To get letters that speak to your character, these professors must know you well enough to provide you a strong recommendation. The research assistant role is the best way to get these letters of recommendation; however, being a particularly excellent student can help to earn you a strong recommendation. You need to plan for at least three recommendations and these professors need to have enough time to complete this goal. You should be fostering these relationships your entire undergraduate career.
9. **Personal Statement.** Now you have chosen your universities for application. There is one very big surprise waiting for you: the personal statement. The personal statement varies across universities. They have specific prompts and character counts. Do not deviate from this. Creating a master personal statement that you tailor to each school can be very helpful. You may wish to review some online examples to get an idea of some basic personal statements. You should provide yourself plenty of time to draft and redraft this document. I highly recommend asking a professor, graduate student, or the school writing center to review this document.
10. **Applications.** Your selected university must receive your transcripts, personal statement(s), letters of recommendations, and GRE scores before the deadline. Applications are meant to be completed over time so start this part early, such as the summer before the applications are due. Once you have submitted your materials, be vigilant that they mark your materials as received. If they do not, you must call. Give yourself plenty of time to deal with any problems with material delivery.

## Brittany Neilson's Top 10 Tips for Applying to Grad School

1. **Evaluate your reasons for wanting to pursue a graduate education carefully.** Take a good, hard honest look at yourself, your interests, and your overall goals. Does the field of your interest require a graduate education? If so, how much graduate education? There are many human factors positions in industry that require a Master's degree and others that require a Doctoral degree. Are you prepared to dedicate 2 years of your life in a Master's program or 4-6 years of your life in a Doctoral program? Did you enjoy your undergraduate education and the workload involved or were you counting down the days to graduation? For many people, graduate education does not directly precede undergraduate education, and that is OK. Taking time after undergrad to experience the job market will likely not hinder your chances of later getting into graduate school, if this is your goal. Especially with human factors, some programs may value your on-the-job experiences and skills.
2. **Prepare for and take the GRE.** Trust me, the mere mention of the GRE makes me cringe too, but it is absolutely necessary that you take the time to prepare and actually take the test early. The more you delay this process, the less time you will have to retake it if needed. Ultimately, the GRE will let you know where you stand in comparison to other applicants. You will be able to make realistic decisions about applying to programs where your score is competitive and within the range of applicants that were previously accepted.
3. **Get involved in research.** In my opinion, this is the most imperative step in preparing for graduate education, especially in human factors. You will be heavily engrossed in research as a graduate student, so figure out if you enjoy research now before you make a long-term commitment. If you can begin conducting human factors research now, that is fantastic. If you are not able to work on research specific to human factors, involvement in any research within your psychology department will serve as a valuable experience. Human Factors Programs want to see that you have gained a keen perspective of methodology and experimental design in undergraduate research. You may also pick up additional programming and/or software skills, which are advantageous in applying to human factors programs.

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4. **Identify a handful of mentors at your current institution.** You will need to have a good support system that includes individuals who have gone through the same process and can provide valuable advice. Your research adviser tends to play the role of a mentor naturally in providing guidance for graduate school. Additional individuals that can serve as a mentor may be professors and current graduate students. You should identify at least three individuals the support your goals and would be willing to write a letter of recommendation on your behalf; these should ideally be people with PhDs.
5. **Join HFES or another organization that represents the field of human factors.** Our local chapter of HFES at ODU is a great organization to join! You will have the opportunity to learn more about the field, attend monthly webinars, network with graduate students and professionals in the field, and tour labs and facilities within our region.
6. **Create a professional-looking curriculum vitae.** You will most likely need to create a CV for your graduate application, but it's a good idea to start making one as you involve yourself in academic activities. This is your chance to highlight all the aspects that make you a good applicant. Include your education, research experience, presentations and papers, technical skills, organizations you are involved in, and any awards or honors that you have received. There are several variations in formatting your CV, but most importantly make it look professional. Have a mentor (or several) review your CV before sending it to anyone.
7. **Make a list of Human Factors programs that meet your interests and needs.** You can find a list of Human Factors graduate programs on the HFES website ([www.hfes.org](http://www.hfes.org)) under the tab "Information for Students." Be advised that there are human factors programs within engineering and psychology departments. This list provides information on admissions requirements, admissions statistics for the previous year, financial assistance, curriculum and faculty's research interest. Use this resource to create a list of programs based on those that you meet the admissions criteria and are interested in the curriculum and faculty research. Take special consideration of programs that have a good reputation of job placements for their graduates.
8. **Search for advisers you would be interested in working with and talk to them.** You will be working with your adviser for many years, so take the time to get to know them. Similar academic interests are important but also compatible personalities and work-styles are also traits to consider in searching for advisers. Once you have found some potential advisers, email them about applying to their institution's program. Include your research interests and your CV in the email, and even ask if he or she has time to speak on the phone. Don't be nervous about talking on the phone- you need to decide if you want to work with this person, too! This phone conversation will allow you to gauge if you are a "good fit" with that adviser and program.
9. **Begin working on your applications early.** Most applications are due in December and January. If you are currently in school, then you will have to juggle schoolwork with applying to schools. Applying to schools is akin to taking on another course, so expect it to be a lot of work and plan ahead. I would suggest giving yourself at least a few months to complete applications and have mentors review your CV and personal statement.
10. **If at first you don't succeed...** Try, try again! I did not get into a PhD program on my first try, and this is not an uncommon story. The truth is that the ratio of those admitted to those who applied is skewed. After receiving 12 rejection letters, I decided that I would not let the application process defeat me in achieving my overall goals. Continue to involve yourself in research and academia as much as possible, learn from the mistakes of your first application process, and apply the next year. You will be surprised how quickly a year goes by and hopefully you will gain further experiences within that time to make yourself a competitive applicant. Persistence does pay off in the end!



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## Student spotlight: Eric Chancey

edited by Alex Proaps

Eric Chancey is Doctoral student and a member of the REACTS (Research Environment for Alarms and Complex Task Simulation) lab. He conducts research related to the application of technology on the decision making abilities and training of dismounted soldiers. Most of his research has focused on the reliability of automated systems and information using alarms, intelligence, and currently combat identification aids. Recently, some of Eric's work was published in a journal. I asked him to write a brief summary of his research. Congrats to Eric for being a published author!

Previous research indicates information reliability may influence warfighters' situation awareness (SA). The purpose of our study was to assess the impact of unreliable information on SA and performance in a computer simulated Infantry based search scenario. Participants were provided with information that was associated with a certain reliability level (100%, 75%, or 50%). This information could be used to complete a simulated mission and answer SA assessment questions. The content of the information was 100% reliable in regard to its accuracy and the only aspect of the information that changed across conditions was the stated reliability. The results revealed that stated information reliability had no significant impact on any level of SA. However, telling the participants that the information was more reliable, resulted in locating a hidden objective faster, increased success rate for finding the hidden objective within the time limit, and increased ability to avoid "dangerous" areas within the simulation. These findings further highlight the importance information reliability has on the battlefield and the need for accuracy when selecting an associated reliability level. The article was titled "Unreliable Information in Infantry Situation Awareness: Improvement through Game-Based Training" and is in press for the journal *Simulation & Gaming*.

## Faculty spotlight: Dr. Poornima Madhavan

edited by Alex Proaps

Last month, Dr. Poornima Madhavan was named the winner of the Earl Alluisi Award for Early Career Achievement of the American Psychological Association (APA). According to ODU's University News website, APA gives the award to one individual who has earned a PhD in the last ten years and has made exceptional contributions to applied experimental and engineering psychology. Dr. Madhavan earned her PhD Engineering Psychology from the University of Illinois at Urbana-Champaign in 2005. Dr. Madhavan, supported by the U.S. Department of Homeland Security, studies the decision making processes involved in airport luggage screening. More recently, she also began studying decision making in the face of climate change and flood threats. In an interview published at ODU's University News website, Dr. Barbara Winstead, the Chair of the Department of Psychology, said:

“This is a great honor and recognition of Poornima's important research on training, information processing and decision making. She is a rising star. In her fifth year at ODU, she has had a significant impact in the department, the college, the university and the community. In her research she has focused on airport baggage screening, real estate and climate change; and, while these may seem like disparate topics, the fundamental question is how do people make decisions about critical events. Her interest in using research to address important and practical questions is key.”

Congrats, Dr. Madhavan!