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University of Central Florida

Ben D. Sawyer

Director, Laboratory for Autonomy-Brain Exchange (LABx)

*Assistant Professor, Department of Industrial Engineering &
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Ben D. Sawyer CV Contents

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I. PERSONAL

1. Degree & Training Information

Postdoctoral Studies, Massachusetts Institute of Technology, School of Engineering, Cambridge, MA (1/2016-1/2018).

Ph.D. in Human Factors Psychology, University of Central Florida, Orlando, FL, November 2015.

M.S. in Industrial Engineering, University of Central Florida, Orlando, FL, May 2014.

B.S. Cognitive Psychology (*Honors Scholar*), Colorado State University, Ft. Collins, CO, May 2010.

2. Research Positions

Assistant Professor, Department of Industrial Engineering & Management Systems, School of Engineering & Computer Science, University of Central Florida, Orlando, FL (8/2018-present)

Research Scientist, School of Engineering, AgeLab, Massachusetts Institute of Technology, Cambridge, MA (1/2018-8/2018).

Postdoctoral Associate, School of Engineering, AgeLab & Center for Transportation and Logistics, Massachusetts Institute of Technology, Cambridge, MA (1/2016-1/2018).

Repperger Fellow & Contractor, BATMAN Engineering Unit RHCBS, 711th Human Performance Wing, United States Air Force, Dayton, OH (6/2014-6/2015)

Engineering Research Associate, Department of Industrial Engineering, University of Central Florida, Orlando, FL. (1/2014-1/2015)

Repperger Fellow & Contractor, Applied Neuroscience Cyberdefender Unit RHCBS, 711th Human Performance Wing, United States Air Force, Dayton, OH (6/2013-6/2014)

Laboratory Manager, MIT² Laboratory, Institute for Simulation and Training, University of Central Florida, Orlando, FL. (11/2010-12/2015)

Laboratory Manager, Transportation Research Group, Department of Psychology, University of Central Florida, Orlando, Florida (7/2010-3/2011)

Research Assistant, Clegg Applied Lab & Cleary VR Lab, Department of Psychology, Colorado State University, Ft. Collins, CO (3/2007-6/2010)

3. Professional Training

Kauffman Teaching Program, selective teaching training program for Postdoctoral Staff, Massachusetts Institute of Technology, Cambridge, MA (Spring 2017)

How to Make (Almost) Anything, MAS.863, Selected the following concentrations: NC machining, 3-D printing, injection molding, laser cutting; PCB layout and fabrication; sensors and actuators; embedded digital processing. Massachusetts Institute of Technology, Cambridge, MA (Spring 2017)

Internet of Things Hacking & Cracking Cyber Seminar Series, Media Lab, Massachusetts Institute of Technology, Cambridge, MA (Summer 2017)

Mandarin Chinese, Taipei Normal University, Taipei, Taiwan (Summers of 2008, 2009)

II. PROFESSIONAL ACTIVITIES

1. Scientific & Honor Societies

Member, Human Factors & Ergonomics Society (2010-present)

Member, IEEE, Systems, Man & Cybernetics Society (2014-present)

Member, Institute of Industrial and Systems Engineers (2016-present)

Member, MIT Club of Boston (2016-present)

2. Professional Distinctions and Awards

The Human Factors Prize for Excellence in Human Factors/Ergonomics Research, Highest Research Award of the Human Factors and Ergonomics Society, October 2017, \$10,000

MIT Media Lab MAKE ME++, Long-running Wearable Engineering Design Hackathon, March 2016, \$3,000

UCF College of Sciences- Annual Outstanding Dissertation Award, March 2016, \$250

International Ergonomics Association KU Smith Best Triannual Student Journal Paper, for the first evaluation of Google Glass use while driving, July 2015, \$3,000

Intelligence Community for Academic Excellence Research Scholarship, for partnering with the USAF to build a simulation testbed for evaluating email cybersecurity, June 2015 \$8,000

Visiting Researcher Fellowship, University of Canterbury, Christchurch, New Zealand Cyberdefense Group. June 2015, \$7,000

USAF Repperger Fellowship 711th HPW Applied Neuroscience Unit, May 2014 \$12,000

Military Psychology (Div 19) APA Student Research Award \$5,000

USAF Repperger Fellowship 711th HPW BATMAN Unit, May 2013 \$12,000

National Highway Traffic Safety Administration (NHTSA) International Enhanced Safety Design Award Finalist, for a facial recognition system to individualize vehicle safety systems, October 2011, \$5,000

3. Professional Leadership Activities

Director, Laboratory for Autonomy-Brain Exchange (LABx), University of Central Florida, Orlando, FL (8/2018-present)

Lead, Clear Information Presentation (ClearIP) Precompetitive consortium engineering better typography for operational environments (Google, Monotype), June 2017-March 2018

President, Human Factors & Ergonomics Society Orlando Student Chapter, 2013

Treasurer, Human Factors & Ergonomics Society Orlando Student Chapter, 2012

Social Chair, Human Factors & Ergonomics Society Orlando Student Chapter, 2011

4. Invited Lectures

Harvard University: Wolfe Lab. *Machine and human error.*, 2018, Cambridge, MA.

Stanford University: Center for Driver Research. *Human machine teaming: How can we trust in the face of the prevalence paradox.*, 2017, Stanford, CA.

WestPoint Academy: Army Research Laboratory. *The prevalence paradox: Engineering trust, attention, automation, and the warfighter.*, 2017, Providence, RI.

Brown University: Humanity Centered Robotics Initiative. *A playbook for the imitation game: Robotics, agents, autonomy, and us.*, 2017, Providence, RI.

American Trucking Association. Featured Panel. The future of commercial truck driving interface design: From ADAS to AV., 2017, Orlando, FL.

Human Factors and Ergonomics Society: Annual Meeting 2017. *Award colloquium for "Hacking the human: The prevalence paradox in cybersecurity."* (2017). Austin, TX.

Tufts University: Mechanical Engineering. *Building iterative human centered design: From virtual to real environments.* Medford, MA.

Google. Android Auto Group. *Human factors in driving demand estimation.*, 2017, Sunnyvale, CA.

Massachusetts Institute of Technology. Computer Science and Artificial Intelligence Laboratory (CSAIL). *Prevalence effects in driving attention and distraction: Implications for autonomy.*, 2017, Cambridge, MA.

Jaguar-Landover. Automotive Research & Development. *Demand in the automobile.*, 2016, Warwick, UK

Human Factors and Ergonomics Society Annual Meeting. Chair: featured panel. *How human factors must change to address cybersecurity.*, 2016, Washington D.C.

DENSO International America. Technology Division. *Attention management: Demand mitigation through design.*, 2016, Detroit, MI.

Harvard University. Schepens Eye Institute. *Google Glass: From distraction to mitigation.*, 2015, Boston, MA

Massachusetts Institute of Technology. AgeLab. *Google Glass: A driver distraction cause that looks toward a cure.*, 2015, Cambridge, MA.

Purdue University. School of Industrial Engineering. *Human-technology interference* (2015). Lafayette, IN

Tsinghua University. Industrial Engineering Department. *Epoch analysis of driving with Google Glass: Using strategies from EEG ERP brain activity research in simulation.*, 2015, Beijing, China.

University of Canterbury. Psychology Department. *Meet E.T.: Cybersecurity research with the email testbed.*, 2015, Christchurch, New Zealand.

Purdue University. Krannert School of Management. *The human factors and neuroscience of entrepreneurship.*, 2015, Lafayette, IN.

White House. *Office of Science & Technology Policy & U.S. Dept. of Transportation Safety Datapalooza.*, 2012, Washington D.C.

NHTSA Emergency Safety Vehicle Conference. *ESV Design Contest Finalist Presentation: DriveID.* 2011, Washington D.C.

III. EDUCATION

1. Educational Leadership

Graduate Admissions Committee, Department of Industrial Engineering & Management Systems, School of Engineering & Computer Science, University of Central Florida, Orlando, FL (2018-19)

Sloan labCONNECT, a program linking the Sloan School of Business Executive MBA class with School of Engineering Postdoctoral Associates, as a bridge between the Engineering and Business communities (2016, 2017)

Senate Bill Author, **HFES SGA Travel Grant**, pays for all UCF Human Factors Graduate Students to attend HFES each year, \$100,000+ to date (renews annually), 2011-present

2. Teaching

School of Engineering & International Design Center, MIT

Instructor IAP2018 Human Factors Engineering (Undergraduate)

University of Central Florida

Guest Lecturer PSY6257 Human Factors II (Graduate)

CV of Ben D Sawyer

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<i>Instructor</i>	EXP3604c	Cognitive Psychology (Undergraduate)
<i>Teaching Assistant</i>	PSY7217	Lab Advanced Research Methods I (Graduate)
<i>Teaching Assistant</i>	PCB3703	Human Physiology (Undergraduate)
<i>Teaching Assistant</i>	PSY210	Research Methods (Graduate)
<i>Instructor</i>	PSY2023	Lab Statistical Methods I (Undergraduate)

Additional Guest Lectures

Guest Lecturer Cadet General Assembly- Human Factors Engineering, WestPoint Academy

Guest Lecturer PSY980JF The Human Factor, Harvard University

Guest Lecturer ENG-0019-F Self-Driving Cars, Technology, and Change, Tufts University

Guest Lecturer ENP163 Human Factors, Tufts University

Guest Lecturer PSY6257 Human Factors II, University of Central Florida

3. Mentorship

Melnicuk, Vasim., 2017, The CPM-GOMS model of driving. Industrial Engineering PhD Thesis Chapter, University of Warwick, Coventry, UK. In partnership with Jaguar-Landrover.

Geitner, C., 2016, *Trust in technology and glance allocation in on-road driving*. Mechanical Engineering PhD Thesis Chapter, MIT AgeLab, MA. In partnership with Jaguar-Landrover.

Nir, T., 2015, *Hebrew and computer-mediated communication: The effects of a language manipulation on perception, identity, and preservation*. Computational Linguistics Honors Thesis, University of Central Florida Orlando, FL.

Walker, J., 2015, *An examination of individual differences in the context of performance on a feedback v. no feedback vigilance task*. Human Factors Honors Thesis, University of Central Florida Orlando, FL.

MacArthur, K.R., 2014, *Deindividuation of drivers: Is everyone else a bad driver?* Human Factors Honors Thesis, University of Central Florida Orlando, FL.

Siler, J., 2013, *Generation and the Google effect: Transactive memory system preference across age*. Human Factors Honors Thesis, University of Central Florida Orlando, FL.

Niederman, E., 2013, *Investigation of visual requirements for change detection*. Human Factors Honors Thesis, University of Central Florida Orlando, FL.

IV. RESEARCH

As of Dec 1, 2018: 300 citations, h-index of 8 and i10-index of 7. My most cited first author publication, "Google Glass: A driver distraction cause or cure?" has 63 citations.

Research Profile: <https://scholar.google.com/citations?user=mynHwzkAAAAJ&hl=en>

1. PUBLICATIONS, PRESENTATIONS, AND POPULAR PRESS

1a. Publications: Peer-reviewed Journals

◇ *Designates paper awards* * *Designates mentee author*

◇ Sawyer, B. D., & Hancock, P. A. (2018). Hacking the Human: The Prevalence Paradox in Cybersecurity. *Human factors*, 60(5), 597-609.

Skrypchuk, L., Langdon, P., Sawyer, B. D., Mouzakitis, A., & Clarkson, P. J. (2018). Enabling multitasking by designing for situation awareness within the vehicle environment. *Theoretical Issues in Ergonomics Science*, 1-24.

Rosenholtz, R., Wolfe, B., Sawyer, B. D., Kosovicheva, A. and Reimer, B., 2017, Perceptual and attentional factors in detection of driving-relevant visual events. *Journal of Vision*, 17(10), 754-754.

Lee, J. B., Sawyer, B. D., Mehler, B., Angell, L., Seppelt, B., Seaman, S., Fridman, L. and Reimer, B., 2017, Linking the detection response task and the AttenD algorithm through the assessment of human machine interface workload. *Transportation Research Record*. (No. 17-06664)

Jansen, R. J., Sawyer B. D., van Egmond, R., de Ridder, H. and P.A. Hancock (2016). Hysteresis in mental workload and task performance: The influence of demand transitions and task prioritization. *Human Factors*, 58(8), 1143-1157.

Sawyer, B. D., Finomore, V. S., Funke, G., Warm, J. S., Matthews, G and Hancock, P. A., 2016, Cyber vigilance: the human factor. *American Intelligence Journal*, 32(2), 157-165.

Sawyer, B. D., Karwowski, W., Xanthopoulos, P. and Hancock, P. A., 2016, Detection of error-related negativity in complex visual stimuli: a new neuroergonomic arrow in the practitioner's quiver. *Ergonomics*, 1-7.

Hancock, P. A. and Sawyer B. D., 2015, Judging thieves of attention: Commentary on "Assessing cognitive distraction in the automobile," by Strayer, Turrill, Cooper, Coleman, Medeiros-Ward, and Biondi (2015)." *Human Factors* 57(8) 1339-1342.

Hancock, P. A., Hancock, G. and Sawyer, B. D., 2015, Cybernomics and the implications of cyber-deception. *The Ergonomist*, 537, 12-14.

Hancock, P. A., Sawyer, B. D. and Stafford, S., 2015, The effects of display size on performance. *Ergonomics*, 58(3), 337-354.

◇* Sawyer, B. D., Finomore, V. S., Calvo, A. A. and Hancock, P. A., 2014, Google glass: A driver distraction cause or cure? *Human Factors*, 56(7), 1307-1321. Winner of the International Ergonomics Association KU Smith Award, 2014

Blalock, L. D., Sawyer, B. D., Kiken, A., Gutzwiller, R. S., McGrill, C. L. and Clegg, B. A., 2014, Cognitive load while driving impairs memory of moving but not stationary elements within the environment. *Journal of Applied Research in Memory and Cognition*, 3(2), 95-100.

Sawyer, B. D. and Hancock, P. A., 2012, Assisted entry mitigates text messaging based driving detriment. *Work*, 41(2012), 4279-4282.

Cleary, A. M., Brown, A. S., Sawyer, B. D., Nomi, J. S., Ajoku, A. C. and Ryals, A. J., 2012, Familiarity from the configuration of objects in 3-dimensional space and its relation to déjà vu: A virtual reality investigation. *Consciousness and Cognition*, 21(2), 969-975.

Sawyer, B. D., Hancock, P. A., Deaton, J. and Suedfeld, P., 2012, Finding the team for Mars: a psychological and human factors analysis of a Mars Desert Research Station crew. *Work*, 41(2012), 5481–5484.

Sawyer, B., Teo, G. and Mouloua, M., 2012, DriveID: Safety innovation through individuation. *Work*, 41(2012), 4273–4278.

*Ledbetter, J. L., Boyce, M. W., Fekety, D. K., Sawyer, B. and Smither, J. A., 2012, Examining the impact of age and multitasking on motorcycle conspicuity. *Work*, 41, 5384-5385.

1b. Publications: Educational Capstones

◇Doctoral Dissertation: Effects of signal probability on multitasking-based distraction in driving, cyberattack, and battlefield simulation., 2015, Committee: Peter A. Hancock (chair), Gerry Matthews, Mustapha Mouloua, James Szalma. Winner of the UCF College of Science Outstanding Dissertation Award, 2015.

Masters Thesis: Applied error related negativity: single electrode EEG in complex visual stimuli., 2014, Committee: Waldemar Karwowski (chair), Peter A. Hancock, Petros Xanthopoulos.

Honors Thesis: Impact of components of text messaging on simulated driving performance., 2010, Committee: Benjamin Clegg (chair), Anne Cleary, Jerry Deffenbacher.

1c. Publications: Chapters of Books

Sawyer, B. D., Karwowski, W., Xanthopoulos, P. and Hancock, P. A. (2016). Applied Potential: Neuroergonomic Error Detection in Single Electrode Electroencephalography in R. Parasuraman & C. Mitchell (Eds.), *Neuroergonomics*, New York, NY.: Columbia University Press.

Mehler, B., Sawyer, B. D. & Reimer, B., 2016, An Applied Driving Evaluation of Electrodermal Potential as a Measurement of Attentional State in R. Parasuraman & C. Mitchell (Eds.), *Neuroergonomics*, New York, NY.: Columbia University Press.

1d. Publications: Journal Publications in Submission

Siegenthaler, E., Sawyer, B. D., Chavaillaz, A., Sonderegger, A., Schneider, A., Groner, R. and Hancock, P. A. (R&R). Microsaccades distinguish looking from seeing in applied environments.

Sawyer, B. D., Dobres, J., Mehler, B. and Reimer, B. (R&R). The Great Typography Bakeoff: Comparing Legability at a glance. *Ergonomics*.

Sawyer, B. D., Dobres, J., Mehler, B. and Reimer, B. (in submission). The science of style: scientifically grounded design heuristics for typographic legibility. *IEEE Transactions on Human-Machine Systems*.

1e. Publications: Refereed Conference Proceedings

Sawyer, B. D., Dobres, J., Chahine, N., & Reimer, B. (2017, September). The Cost of Cool: Typographic Style Legibility in Reading at a Glance. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 61, No. 1, pp. 833-837). Sage CA: Los Angeles, CA: SAGE Publications..

Sawyer, B. D., Mehler, B. and Reimer, B. (in press). Trusting Eyes: Voice navigation system-directed glance strategy in high and low trust drivers. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*. Austin TX.

Sawyer, B.D., Mehler, B. and Reimer, B., 2017, An antiphony framework for dividing tasks into subtasks. *Proceedings of the Ninth International Driving Symposium on Human Factors in Driver Assessment, Training and Vehicle Design*.

*Geitner, C., Sawyer, B. D., Birrell, S., Jennings, P., Skrypchuk, L., Mehler, B. and Reimer, B., 2017, A link between trust in technology and glance allocation in on-road driving. *Proceedings of the Ninth International Driving Symposium on Human Factors in Driver Assessment, Training and Vehicle Design*.

Sawyer, B. D., Karwowski, W., Xanthopoulos, P. and Hancock, P. A. (2016). Applied potential: Neuroergonomic error detection in single electrode electroencephalography. *Presentation at Neuroergonomics*, Paris, France.

Mehler, B., Sawyer, B. D. and Reimer, B., 2016, An applied driving evaluation of electrodermal potential as a measurement of attentional state. *Presentation at Neuroergonomics*, Paris, France.

Sawyer, B. D., Lee, J., Dobres, J., Mehler, B., Coughlin, J. F. and Reimer, B., 2016, Effects of a voice interface on mirror check decrements in older and younger multitasking drivers. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting 60(1)*, 95-100. Washington DC.

Greenlee, E. T., Funke, G. J., Warm, J. S., Sawyer, B. D., Finomore, V. S., Mancuso, V. F. and Matthews, G., 2016, Stress and workload profiles of network analysis: not all tasks are created equal. *Advances in Human Factors in Cybersecurity*, 153.

Gutzwiller, G.S., Fugate, S., Sawyer, B. D. and Hancock, P. A., 2015, The human factors of cyber network defense. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting 59(1)*, 322-326.

Sawyer, B. D., Finomore, V. S., Funke, G., Mancuso, V., Warm, J. S. and Hancock, P. A., 2015, Evaluating cybersecurity vulnerabilities with the email test-bed: Effects of training. *Proceedings of the 19th Triennial Congress of the International Ergonomics Association*, 9, 14. Melbourne, Australia.

Sawyer, B. D., Calvo, A., Finomore, V.S. and Hancock, P. A., 2015, Serendipity in simulation: Building environmentally valid driving distraction evaluations of google glass and an android smartphone. *Proceedings of the 19th Triennial Congress of the International Ergonomics Association*, 9, 14. Melbourne, Australia.

Hancock, G. and Sawyer, B. D., 2015, A heuristic-based re-evaluation of the IBM Academic Initiative Project interface. *Proceedings of the 19th Triennial Congress of the International Ergonomics Association*, 9, 14. Melbourne, Australia.

Sawyer, B. D., Finomore, V. S., Funke, G. and Warm, J. S., 2014, Cyber vigilance: effects of signal probability and event rate. *Proceedings of the 2014 Human Factors and Ergonomics Society Annual Meeting*, 58(1), 1771-1775. Chicago, IL.

Sawyer, B. D. and Hancock, P. A., 2014, An evaluation of drivers using an ignition interlock breath test while driving. *Proceedings of the 2014 Human Factors and Ergonomics Society Annual Meeting*, 58(1), 2098-2101. Chicago, IL.

Sawyer, B. D. and Hancock, P. A., 2013, Performance degradation due to automation in texting while driving. *Proceedings of the 7th International Driving Symposium on Human Factors in Driving Assessment, Training and Vehicle Design*, No. 68, 446-452. Bolten, NY.

Sawyer, B. D. and Hancock, P. A., 2012, Development of a linked simulation network to evaluate intelligent transportation system vehicle to vehicle solutions. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 56(1), 2316-2320.

Fok, A. W., Frischmann, T. B., Sawyer, B., Robin, M. and Mouloua, M., 2011, The impact of GPS interface design on driving and distraction. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 55(1), 1755-1759.

Blalock, L. D., Sawyer, B. D., Kiken, A. and Clegg, B. A., 2009, The impact of load on dynamic versus static situational knowledge while driving. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 53(18), 1338-1342.

1f. Conference Presentations without Proceedings

Sawyer, B. D. (Chair), Schuster, D. and Hancock, P.A., 2016, How human factors must change to address cybersecurity. *Featured invited panel presented at The Human Factors & Ergonomics Society Annual Meeting*, Washington, D.C.

Vieane, A. (Chair), Hale, K. (Cochair), Sawyer, B. D., Funke, G., Mancuso, V. and Wickens, C., 2016, Addressing human factors gaps in cyberdefense. *Panel presented at The Human Factors & Ergonomics Society Annual Meeting*, Washington, D.C.

*Walker, J. A., Hancock, G. M., Sawyer, B. D., Karwowski, W., Sims, V. K. and Hancock, P. A., 2016, An Examination of individual differences in the context of vigilance. *Poster at University of Central Florida's Annual Showcase of Undergraduate Research*, Orlando, FL.

*Walker, J. A., Sawyer, B. D., Hancock, G. M., Karwowski, W., Sims, V. K. and Hancock, P. A., 2016, Individual differences in working memory capacity and the role they play in performance on a feedback v. no feedback vigilance task. *Poster at Tampa University's Florida Undergraduate Research Conference*, Tampa, FL.

Sawyer, B. D., Oppold, P. and Hancock, P. A., 2015, Using the Population Specific User Mastery (PSUM) Scale to determine training needs. *Presented at the 19th Triennial Congress of the International Ergonomics Association 2015*. Melbourne, Australia..

*Shankle, J., Nir, T., Stafford, S., Hancock, P.A. and Sawyer, B. D., 2015, *Measuring judgment, reaction time, and reaction type in drivers: comparing collision rates of four scenarios*. Poster presented at University of Central Florida's annual Showcase of Undergraduate Research Excellence, Orlando, FL.

◇*Walker, J. A., Xanthopoulos, P., Karwowski, W., Hancock, P. A. and Sawyer, B. D., 2015, Interpreting electroencephalography output for error-related negativity. *Presentation at the 8th annual Student Conference on Human Factors and Applied Psychology*, Daytona Beach, FL. Winner of Best Student Poster.

*Walker, J. A., Xanthopoulos, P., Karwowski, W., Hancock, P.A. and Sawyer, B. D., 2015, Qualitative analysis of event-related potential EEG data. *Poster presented at the University of Central Florida's Annual Showcase of Undergraduate Research Excellence*, Orlando, FL.

*Nir, T., Shankle, J., Vermillion, B. Hancock, P. A. and Sawyer B. D., April 2015, Driver distraction simulation testbed (building). *Poster presented at University of Central Florida's annual Showcase of Undergraduate Research Excellence*, Orlando, FL.

*Nir, T., Shankle, J., Stafford, S., Hancock, P. A. and Sawyer, B. D., March 2015, Driver reaction: collision rates in four maps. *Poster presented at the 2nd annual Undergraduate Psychology Conference*, Orlando, FL.

Sawyer, B. D., Finomore, V. S., Funke, G., Warm, J. S. and Hancock, P. A., 2014, Vigilance in cyber defense: a strategy and individual differences based approach. *Presented at the American Psychological Association 2014 annual convention*. Washington D.C.

*MacArthur, K. R., Greenstein, S., Sawyer, B. D. and Hancock, P. A., 2014, PSUM: Training in Google Glass and Android. *Presented at the American Psychological Association 2014 Annual Convention*. Washington D.C.

*Sawyer, B. D., Calvo, A., Finomore, V.S. and Hancock, P. A., 2014, Evaluating Google Glass by building serendipity in simulation. *Presented at the Human Factors & Applied Psychology Student Conference at Embry-Riddle Aeronautical University*. Daytona Beach, FL.

Sawyer, B. D., Finomore, V. S., Funke, G. and Hancock, P. A., 2014, Are cyber tasks examples of vigilant attention? *Presented at the Human Factors & Applied Psychology Student Conference at Embry-Riddle Aeronautical University*. Daytona Beach, FL.

*Siler, J., Sawyer, B. D., Stafford, S. and Hancock, P. A., 2014, Driving simulation: Ecological validation and participant perception. *Presented at the Human Factors & Applied Psychology Student Conference at Embry-Riddle Aeronautical University*. Daytona Beach, FL.

*MacArthur, K. R., Greenstein, S., Sawyer, B. D. and Hancock, P. A., 2014, Mastering Google Glass. *Presented at the Human Factors & Applied Psychology Student Conference at Embry-Riddle Aeronautical University*. Daytona Beach, FL.

- *Walker, J. A. Diaz, D. A., Finomore, V., Funke, G., Sawyer, B. D. and Hancock, P. A., 2014, Can you think through the boredom? An examination of executive functioning in cybernetic vigilance tasks. *Presented at the Human Factors & Applied Psychology Student Conference at Embry-Riddle Aeronautical University*. Daytona Beach, FL.
- *Walker, J., McPeak, B., Perkins, S., Fishburn, D., Tungate, A., Stafford, S., Sawyer, B. D. and Hancock, P. A., 2014, Event labeling in the context of weapon discrimination. *Presented at the 60th annual meeting of the Southeastern Psychological Association*. Nashville, TN.
- *Siler, J., Niederman, E., Sawyer, B. D. and Hancock, P. A., 2014, Braking the chain: A brake light impact prevention system. *Presented at the 60th meeting of the Southeastern Psychological Association*. Nashville, TN.
- *Niederman, E., Siler, J., Diaz, D. A., Sawyer, B. D. and Hancock, P. A., (2014). Texting with your own phone does not improve driving performance. *Presented at the 60th annual meeting of the Southeastern Psychological Association*. Nashville, TN.
- *Diaz, D. A., Walker, J. A., Finomore, V., Funke, G., Sawyer, B. D. and Hancock, P. A., 2014, Personality impact on vigilance performance. *Presented at the Showcase of Undergraduate Research Excellence at the University of Central Florida*. Orlando, FL.
- *Niederman, E., Diaz, D. A., Siler, J., Sawyer, B. D. and Hancock, P. A., 2014, Driving performance while texting does not improve by using a familiar phone. *Presented at the Showcase of Undergraduate Research Excellence at the University of Central Florida*. Orlando, FL.
- *Greenstein, S., Sawyer, B. D., Niederman, E., Oppold, P. and Hancock, P. A., 2013, Piloting with the PSUM Scale: Establishing usability first. *Presented at Vehicular 2013*. Nice, France.
- *Niederman, E., Price, J., Sawyer, B. D., Hancock, P. A., 2013, Neatness of dress affects perceived personality. *Presented at the Association for Psychological Science 25th Annual Convention*. Washington, DC.
- *Laborde, P., Perkins, S., Niederman, E, Sawyer, B. D., Hancock P. A., 2013, Surprising effects of priming on incidence of simulator sickness. *Presented at the Association for Psychological Science 25th Annual Convention*. Washington, DC.
- *Siler, J., Sawyer, B. D. and Hancock, P. A., 2013, Generation and the Google effect: Transactive memory system preference across age. *Presented at the Showcase of Undergraduate Research Excellence*. Orlando, FL.
- *Laborde, P., Perkins, S., Niederman, E, Sawyer, B. D. and Hancock P. A., 2013, Simulation sickness: An unexpected effect of priming. *Presented at the Showcase of Undergraduate Research Excellence at the University of Central Florida*. Orlando, FL.
- *Niederman, E., Sawyer, B. D. and Hancock, P. A., 2013, Contribution of physiological limitations of vision to change blindness. *Presented at the Showcase of Undergraduate Research Excellence at the University of Central Florida*. Orlando, FL.
- *Perkins, S., LaBorde, P., Niederman, E., Sawyer, B. D. and Hancock, P. A., 2013, A replication of a surprising effect in a priming and simulation sickness study. *Presented at the*

Human Factors & Applied Psychology Student Conference at Embry-Riddle Aeronautical University. Daytona Beach, FL.

*Niederman, E., Price, J., Sawyer, B. D. and Hancock, P. A., 2013, Can neatness of dress affect perceived personality? *Presented at the Human Factors & Applied Psychology Student Conference at Embry-Riddle Aeronautical University. Daytona Beach, FL.*

Sawyer, B. D., Fok, A., Ludvigson, J and Hancock, P. A., 2012, Simulator sickness, dare I speak thy name? *Presented at American Psychological Association 2012 Annual Convention. Orlando, FL.*

Sawyer, B. D., Teo, G, and Mouloua, M., 2012, DriveID: Vehicle safety innovation through individuation. *Presented at the 11th Congress of the International Ergonomics Association. Recife, Brazil.*

Fok, A., Frischman, T., Sawyer, B. D. and Mouloua, M, 2012, An evaluation of keyboard interface types on driver distraction. *Presented at the 11th Congress of the International Ergonomics Association. Recife, Brazil.*

Fok, A., Frischman, T., Sawyer, B. and Robin, M., 2011, Effects of navigational interface type on distracted driving. *Presented at the 2011 Meeting of the Association for Psychological Science. Washington, D.C.*

Ryals, A. J., Sawyer, B. D., Nomi, J. S., Cleary, A. M. and Brown, A. S., 2010, Eliciting déjà vu using virtual reality: Support for the Gestalt familiarity hypothesis. *Presented at the Annual Meeting of the Psychonomic Society. St. Louis, MO.*

Sawyer, B. and Clegg, B. A., 2010, Impact of components of text messaging on simulated driving performance. *Presented at the 2010 Meeting of the Association for Psychological Science. Boston, MA.*

Blalock, L. D., Sawyer, B., Kiken A. and Clegg, B. A., 2010, The impact of load on dynamic versus static situational knowledge while driving. *Presented at the 80th meeting of the RMPA. Denver, CO.*

Sawyer, B., Ahmed, A., Mong, H. M. and Clegg, B. A., 2009, Virtually there: A comparison of conventional navigational aids with HUD alternatives. *Presented at the 79th annual convention of the Rocky Mountain Psychological Association. Albuquerque, NM.*

Sawyer, B. and Clegg, B. A., 2009, Cognitive versus motor components of text messaging impairment of driving. *Presented at the 79th annual convention of the Rocky Mountain Psychological Association. Albuquerque, NM.*

1g. Popular Press Coverage of My Research

Human Factors Engineering Class

IDC (2018, February) [Human factors engineering class tackles design for aging.](#) MIT News

Autonomy in Trucking

Clevenger, S. (2017, November) [Human-Machine Interaction, Computing Power Key to Development of Autonomous Trucks](#). Transport Topics.

Menzies, J. (2017, October) [Government collaboration required on automated trucks](#). Truck News.

Engineering Typography for Augmented Reality

Steven, R., 2017, [Monotype, Google and MIT AgeLab team up to research how we read at a glance](#). Creative Review.

Monotype (2017, November) [Transcend imagery. Transport audiences](#).

Tselentis, J. (2017, August) [The Art of the Glance](#). Print.

Semi-autonomous Interface Engineering

Marshall, A. (2017, July) [To End Distracted Driving, MIT Figures out How People Really Drive](#). Wired.

Driving Distraction and Google Glass

"Google Glass: Driving distraction cause or cure?" (2014), was covered by TV, radio and [over 200 print sources](#):

Ackerman, E. (2014, September). [Research Reveals Danger Of Texting While Driving With Google Glass](#). Forbes.

Liston, B. (2014, September). [Driving while texting with Google Glass as distracting as phone –study](#). Reuters.

Creating DejaVu in Virtual Environments

Choi, C.Q. (2012, June) [Been There, Done That—or Did I?: Déjà Vu Found to Originate in Similar Scenes](#). Scientific American

Cleary, A. (2017) [Déjà vu](#). TEDx

2. GRANTS, CONTRACTS, AND CONSORTIA

2a. External Research Grants and Awards

Sawyer, B.D. (Principal Investigator), Influencing Trust in Cybersecurity by Hacking the Human Factor. Air Force Office of Scientific Research, Young Investigator Research Program (USAF YIP), \$450,000, Dates TBD.

Hancock, P.A., (Principal Investigator), Sawyer, B.D. (Co-Principal Investigator), Workload and Scheduling Tools for Long Duration Missions. NASA Johnson Space Center, Contract Number: 64016363, \$22,615, April 6th 2015 to February 29th 2016. *University of Central Florida*.

Hancock, P.A., (Principal Investigator), Sawyer, B.D. (Co-Principal Investigator), Factors Influencing Search in Complex Driving Environments. Component Element of the Georgia

Institute of Technology/NHTSA UTC Project, Contract Number: RC614 G3, \$45,000, January 1st, 2012 to January 31st, 2014. *University of Central Florida*.

2b. Internal Research Grants

Sawyer, B.D. (Senate Bill Author), HFES SGA Travel Grant, \$100,000+ to date (renews annually), 2011-present

Sawyer, B.D. (Principal Investigator), IEMS Equipment Grant (EEG System), \$19,000, 2014

Hancock, P.A. (Principal Investigator), Sawyer, B.D. (Co-Principal Investigator), Eye-tracking Equipment Grant, \$60,000, 2011

Sawyer, B.D. (Principal Investigator), Simulator Upgrade & Software Development Grant, \$19,000 2011

2c. Industry Consortia

Lead, Clear Information Presentation (ClearIP). Precompetitive consortium including Monotype, Google, & Mazda, \$215,000, June 1st, 2017 to March, 2018. *Massachusetts Institute of Technology*.

Technical Team, Advanced Human Factors Evaluator for Human Factors Demand (AHEAD). Noncompetitive consortium including Google, Jaguar/Landrover, DENSO, Honda, Subaru, & Panasonic. \$2,000,000, January 1st, 2017 to Present. *Massachusetts Institute of Technology*.

V. SERVICE ACTIVITY

1. Reviewer of Research Proposals for:

- Society for Military Psychology (Div 19)
- The Pacific Northwest Transportation Consortium, UTC for Region 10

2. Reviewer for archival peer-review journals:

- Ergonomics
- Human Factors
- Applied Ergonomics
- Journal of Cybersecurity
- IEEE Transactions on Human-Machine Systems
- Presence: Teleoperators and Virtual Environments
- Frontiers in Human Neuroscience

3. Other Professional Activities

CV of Ben D Sawyer

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- Cofounder, Awayr, June 2018-present
- Subject Matter Expert in Human Factors and Industrial Engineering, Martin Trust Center for MIT Entrepreneurship, June 2016-present
- Volunteer Mentor, MIT Make Cool ShMIT Student Hackathons, May 2016-December 2017
- Engineering Postdoctoral Liaison for Sloan School of Business Executive MBA Program July 2016 to December 2017
- Repair Leader, Circular Cambridge Repair Café, 2017-present
- Member, MIT Postdoctoral Association, January 2016-December 2017
- Usability testing lead for UCF's POPUP online educational platform, Summer 2012