

Keith Reid MacArthur

Curriculum Vitæ

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℞ [Keith MacArthur](#)

📧 [Keith R. MacArthur](#)

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📄 U-3585-2017

U.S. Citizen

“What is existence but the absorption and reaction to the data that the universe presents. You can either grasp these truths or you can misinterpret them to your constant and considerable agitation.” - Sherlock Holmes ‘Elementry’

EDUCATION

Time Line

- 2016 **Doctoral Student in Modeling & Simulation**, *Institute for Simulation & Training at the University of Central Florida, Orlando, Florida.*, (GPA: 3.786), Expected 2021.
- 2018 **Master of Science in Modeling & Simulation**, *College of Engineering and Computer Science at the University of Central Florida, Orlando, Florida*
- 2014
2012 **Bachelor of Science in Psychology**, *Burnett Honors College at the University of Central Florida, Orlando, Florida*, December, 2014, with honors in the Major, *Cum Laude*. (Overall GPA: 3.83, Major GPA: 3.93)
- 2012
2004 **Associates in Arts**, *Eastern Florida State College, Cocoa, Florida*, May, 2012. Graduated with Honors. (Overall GPA: 3.70, Major GPA: 3.66)

CERTIFICATES

- 2018 **Antiterrorism Awareness Training Level 1**, *Joint Knowledge Online*, United States Joint Chiefs of Staff
- 2018 **OPSEC Awareness for Military Members, DoD Employees and Contractors**, *Center for Development of Security Excellence*
- 2019
2017 **Graduate Certificate in Design for Usability**, *College of Engineering and Computer Science at the University of Central Florida, Orlando, Florida*
- 2017 **Grantsmanship Certificate**, *University of Central Florida Orlando, Florida*
- 2013 **Collaborative Institutional Training Initiative (CITI) Certification**
Conflict of Interest • Department of Navy Supported Extramural Performers • Biomedical Research Investigators and Key Personnel • Social/Behavioral Research Investigators and Key Personnel

PROFESSIONAL EXPERIENCE

- 2019
2018 **Internship**, *Intelligent Training Group at Soar Technology, Inc. Orlando, Florida*
Duties:
 - Literature searches
 - Data cleaning in R
 - Statistical analysis in R
 - Rmarkdown report creation
 - Technical manual writing
 - Drafting data analysis plan
 - Shiny data visualizations
- 2017 **Chairman & Refounder**, *Human Factors and Applied Psychology Student Conference at the University of Central Florida, Orlando, Florida*
(HFAP was founded and hosted at Embry-Riddle Aeronautical University, discontinued 2016, and restarted at UCF under my guidance.)
Duties:
 - Lead board meetings
 - Manage fundraising efforts
 - Design advertisements
 - Event planning
 - Review of submissions
 - Website design
- 2017 **Full Board Member**, *Institutional Review Board at the University of Central Florida, Orlando, Florida*
Duties:
 - Review applications of human subjects research with greater than minimal risk as part of a committee
 - Pre-review applications of human subjects research with minimal or less than minimal risk
 - Answer questions regarding policies among colleagues and department faculty
 - Serve on sensitive topics subcommittee

- 2018
2017 **Officer, *Human Factors and Ergonomics Society Student Chapter at the University of Central Florida, Orlando, Florida***
Duties:
 - Organize annual social at the annual meeting of the Human Factors and Ergonomics Society
 - Organize fund raising events to support the annual social
- 2018
2016 **Graduate Research Assistant, *Minds in Technology – Machines in Thought Research Laboratory at the University of Central Florida, Orlando, Florida***
Duties:
 - Conduct research in accordance with grant sponsor’s mission and goals
 - Lead a team of research assistants
 - Analyze results for reporting and publication
- 2015 **Laboratory Manager, *Minds in Technology – Machines in Thought Research Laboratory at the University of Central Florida, Orlando, Florida***
Duties:
 - Maintain and inventory laboratory equipment
 - Acquired L3 TruckSimulator (2017)
 - Advise & collaborate with other researchers
 - Maintain laboratory website
 - Lead a team in conducting research projects
 - Schedule and allocate research spaces
 - Acquired NADS Driving Simulator (2018)
 - Acquired L3 PatrolSimulator (2017)
- 2015
2014 **Assistant Laboratory Manager, *Minds in Technology – Machines in Thought Research Laboratory at the University of Central Florida, Orlando, Florida***
Duties:
 - Assist in maintaining laboratory equipment
 - Maintain laboratory website
 - Train new research assistants to use equipment
 - Organize laboratory
- 2014
2013 **Undergraduate Research Assistant & Technology Lead, *Minds in Technology – Machines in Thought Research Laboratory at the University of Central Florida, Orlando, Florida***
Duties:
 - Assist in maintaining laboratory equipment
 - Run human participants in research
 - Construct/submit applications to institutional review board
 - Write scripts for running participants in research
- 2014
2013 **Undergraduate Research Assistant, *Performance Research Laboratory at the University of Central Florida, Orlando, Florida***
Duties:
 - Troubleshoot and modify technology for research
 - Communicate with software distributor to resolve technical issues
- 2016
2010 **Business Owner & Technician, *Tiger Tech Computing, Merritt Island, Florida***
Duties:
 - Hardware repair
 - Virus & malware removal
 - Business management
 - Software troubleshooting
 - Onsite service
 - Manage employees

HONORS, AWARDS, & GRANTS

Awarded

- 2019 **Travel Grant, *UCF’s Student Government Association, \$7,221***
- 2017 **Travel Grant, *UCF’s Student Government Association, \$11,332***
- 2017 **Graduate Presentation Fellowship, *UCF’s College of Graduate Studies, \$500***
- 2017 **Graduate Fellowship, *UCF’s ORC Doctoral Fellowship, \$25,000***
- 2016 **Travel Grant, *UCF’s Office of Undergraduate Research, \$1,014***
- 2014 **Travel Grant, *UCF’s Student Government Association, \$1,500***
- 2014 **Travel Grant, *UCF’s Burnett Honors College, \$250***
- 2014 **Scholarship, *UCF’s Honors in the Major Scholarship, \$1,000***

Submitted

- 2015 **Graduate Fellowship, *National Science Foundation Graduate Research Fellowship***
- 2014 **Graduate Fellowship, *National Science Foundation Graduate Research Fellowship***

CONTINUING EDUCATION

2018

Human Factors & Ergonomics Society Annual Conference, *HFES*

- Behavioral Data Analytics Workshop by John D. Lee and Linda Ng Boyle
















2018

Advancing Ethical Research Conference, *PRIM&R*

- Celebrities, Science-y, and Pseudoscience: Tackling Misinformation in the Era of Health Noise
- Gun Violence and Public Health: Facts, Fiction, and the Future
- IRB Review of Big Data Research
- College Students and Research: Challenges and Issues for IRBs
- Explorations in Optimizing Informed Consent and Assent
- The Regulatory Intersection of Research Misconduct and Human Subjects Protections
- Ethical Challenges in HIV Cure Research
- Social Media in Research: Recruitment, Subject Communication, and Data Source
- Big Data: Who's Minding the Store?

SKILLS

(Bars represent level of experience)

- | | |
|---|---|
|  Computer Repair & Troubleshooting |  Website Design/Maintenance (HTML/CSS) |
|  Qualtrics |  Axure RP |
|  R & R Markdown |  Biopac (EMG/EKG) |
|  L3 PatrolSim Driving Simulator |  C/C++ |
|  FaceLab Eye-Tracking Software |  Python |
|  L ^A T _E X |  Shiny |
|  NADS Driving Simulator |  MATLAB |
|  IBM SPSS | |

GRADUATE COURSES

Psychology (32 credits)

- Advanced Research Methods I
- Advanced Research Methods II
- Advanced Research Methods III
- Doctoral Research
- Human Factors I
- Human Factors II
- Psychology Teaching Methods

Industrial Engineering (21 credits)

- Interactive Simulations
- Ergonomics
- Doctoral Research
- Experimental Design & Taguchi Methods
- Innovation in Engineering & Design

Interdisciplinary (15 credits)

- Quantitative Aspects of Modeling & Simulation
- Perspectives on Modeling & Simulation
- Human Systems Integration
- Building Performance Simulations
- Interdisciplinary Data Visualization

TEACHING EXPERIENCE

2014

2013

Undergraduate Teaching Assistant, *Science and Pseudoscience in Psychology*, University of Central Florida, Orlando, Florida, for Dr. Gabriella M. Hancock (2 semesters)

PROFESSIONAL AFFILIATIONS

2007

Psi Beta National Honor Society in Psychology

American Psychological Association

2012

Golden Key International Honors Society

2013

Psi Chi International Honor Society

2013

Phi Kappa Phi Honors Society

2013

Human Factors and Ergonomics Society

2016

The National Center for Simulation

2016

Human Factors & Ergonomics Society Student Chapter, *University of Central Florida*

2016

2017 Officer

Association for Psychological Science

2017

Human Factors & Applied Psychology Student Conference

2017

Refounder & Chairperson of the Board of Directors

PUBLICATIONS

Refereed Publications

- 1) Hancock, P. A., Kaplan, A. D., Cruitt, J., Hancock, G. M., **MacArthur, K. R.**, & Szalma, J. L. (2019). A meta-analysis of flow effects on the perception of time. *Acta Psychologica, 198*, 102836. doi: [10.1016/j.actpsy.2019.04.007](https://doi.org/10.1016/j.actpsy.2019.04.007)
- 2) Sanders, T. L., **MacArthur, K. R.**, Volante, W., Hancock, G. M., MacGillivray, T., Shugars, W. T., & Hancock, P. A. (2017). Trust and prior experience in human-robot interaction. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 61*(1), 1809–1813. doi: [10.1177/1541931213601934](https://doi.org/10.1177/1541931213601934)
- 3) **MacArthur, K. R.**, Hancock, G. M., & Sawyer, B. D. (2015, August). Deindividuation of drivers: Is everyone else a bad driver? *Proceedings of the 19th Triennial Congress of the IEA, Melbourne, Australia* (p. 282). ([Article](#))
- 4) **MacArthur, K. R.** (2014). *Deindividuation of drivers: Is everyone else a bad driver?* (Unpublished undergraduate honors thesis) University of Central Florida, Orlando, Florida. (Thesis ID No. [CFH0004644](#))

Paper Presentations

- 1) **MacArthur, K. R.**, Parkhurst, E., MacGillivray, T. G., & Hancock, P. A. (2018, April). *Trinary Scales: Psychometrics in 3-D*. Presented at the University of Central Florida's 15th annual Graduate Research Forum, Orlando, FL. ([Abstract Only](#))
- 2) **MacArthur, K. R.**, Stowers, K., & Hancock, P. A. (2017). Human-robot interaction: Proximity and speed—slowly back away from the robot! In P. Savage-Knepshield and J. Chen (Eds.), *Advances in Human Factors in Robots and Unmanned Systems: Proceedings of the AHFE 2016 International Conference on Human Factors, July 27-31, 2016* (pp. 365-374). Walt Disney World®, Florida, USA: Vol. 499. Switzerland: Springer International Publishing AG. doi: [10.1007/978-3-319-41959-6_30](https://doi.org/10.1007/978-3-319-41959-6_30)

Poster Presentations

- 1) **MacArthur, K. R.**, Shugars, W. T., Sanders, T. L., & Hancock, P. A. (2017, August). *Effects of anthropomorphism on trust in human-robot interaction*. Poster presented at the 125th annual meeting of the American Psychological Association, Washington D. C. ([Abstract Only](#))
- 2) Hancock, P. A., Kaplan, A. D., Stowers, K., Kessler, T., Sanders, T. L., Volante, W., **MacArthur, K. R.**, & Brill, J. C. (2017, May). *Trust in automation and autonomy: A growing challenge for aviation operations*. Poster presented at the 19th annual International Symposium on Aviation Psychology, Dayton, OH. ([Program](#))
- 3) Van Lue, L., Kessler, T., **MacArthur, K. R.**, & Hancock, P. A. (2017, April). *Trust in analytical automation*. Poster presented at the University of Central Florida's 14th annual Graduate Research Forum, Orlando, FL.
- 4) Kessler, T., **MacArthur, K. R.**, Trujillo-Silva, M., MacGillivray, T. G., Ripa, C., & Hancock, P. A. (2016, November). *Perceptions of planned versus unplanned malfunctions: A human-robot interaction scenario*. Poster presented at the 57th annual meeting of the Psychonomic Society, Boston, MA. ([Abstract Only](#))
- 5) MacGillivray, T. G., Parkhurst, E. L., **MacArthur, K. R.**, & Hancock, P. A. (2016, April). *Human-robot versus human-human relationship impact on comfort levels regarding in home privacy*. Poster presented at the 10th annual Human Factors and Applied Psychology Student Conference, Daytona Beach, FL. ([Abstract Only](#))
- 6) Hancock, P. A., Kessler, T., **MacArthur, K. R.**, & Stowers, K. (2016, January). *HI.3 trust in human-robot interaction: Current findings and future investigations*. Poster presented at the annual Research Management Board Meeting of the Army Research Laboratories: Robotics Collaborative Technology Alliance, Aberdeen, MD.

- 7) Sawyer, B. D., Oppold, P., **MacArthur, K.**, & Hancock, P. A. (2015, August). *Using the Population Specific User Mastery (PSUM) scale to determine training needs*. Poster presented at the 19th Triennial Congress of the IEA, Melbourne, Australia (p. 1546). ([Abstract Only](#))
- 8) Hancock, P. A., Sanders, T. L., Kessler, T., Volante, W., & **MacArthur, K. R.** (2015, May). *Who will fly in the future: The human role in automated flight spaces*. Poster presented at the 86th annual meeting of the Aerospace Medical Association, Lake Buena Vista, FL.
- 9) **MacArthur, K. R.**, Fund, I., Siler, J., Hancock, G. M., & Mouloua, M. (2014, March) *Validating the continuum mysteriosum*. Poster presented at the 60th annual meeting of the Southeastern Psychological Association, Nashville, TN. ([Paper](#))
- 10) **MacArthur, K. R.** (2014, April). *Deindividuation of drivers: Are we individuals?* Poster presented at University of Central Florida's 11th annual Showcase of Undergraduate Research Excellence, Orlando, FL. ([Abstract Only](#))
- 11) **MacArthur, K. R.**, Greenstein, S., Sawyer, B. D., & Hancock, P. A. (2014, April). *Mastering Google Glass*. Poster presented at the 8th annual Human Factors and Applied Psychology Student Conference, Daytona Beach, FL. (Abstract Only)
- 12) **MacArthur, K. R.**, Greenstein, S., Sawyer, B. D., & Hancock, P. A. (2014, August). *PSUM: Training in Google Glass and Android*. Poster presented at the 122nd annual meeting of the American Psychological Association, Washington D. C. ([Abstract Only](#))

Technical Reports

- 1) **MacArthur, K. R.**, Song, J., & Volante, W. (2018). *Playtest of There Came an Echo*. Technical Report for, Iridium Studios, Los Angeles, CA.