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**CV**

NAME: Windham, Jerrod

eRA COMMONS USER NAME (credential, e.g., agency login): windhjb

POSITION TITLE: Associate Professor Industrial Design

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**EDUCATION/TRAINING**

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Auburn University, Auburn, AL	B.I.D.	06/2000	Industrial Design
Auburn University, Auburn, AL	M.I.D.	05/2007	Industrial Design

**A. Personal Statement**

I am currently a tenured associate professor of industrial design in the School of Industrial and Graphic Design at Auburn University and the director of the Assistive Technology Design Lab. For over seven years, I have been the lead educator and researcher for a unique assistive technology design collaboration. Over that time, design students, rehabilitation students, prosthetic students and licensed prosthetists have addressed the needs and desires of over 50 participants with some form of disability. The work includes the design, development, and fabrication of a number of assistive devices, including mobile note taking applications for those with limited hearing and prosthetic devices specifically designed to address tasks intended to enhance the lives of the participants. More recent Assistive Technology work includes the development of a cloud based environmental control system and user interface for the Department of Veterans Affairs – Veterans Health Administration.

**B. Positions and Honors****Positions and Employment**

2000-2001 Industrial Designer, Push Product Design, Birmingham, AL

2001-2007 Project Manager, Push Product Design, Birmingham, AL

2007-2013 Assistant Professor of Industrial Design, Department of Industrial & Graphic Design

2013-Present Associate Professor of Industrial Design, School of Industrial & Graphic Design

## Awards

- 2010                    **Young Educator of the Year** – Industrial Designs Society of America (IDSA)
- 2015-2017            **Bauhaus Professor** - Endowed professorship honor awarded within the School of Industrial and Graphic Design.

## Other Experience and Professional Memberships

IDSA, Industrial Designers Society of America, Member and Student Chapter Advisor

## **C. Contribution to Science**

The profession of industrial design is experiencing three distinct movements in the early part of the 21<sup>st</sup> century. Sustainable design, digital manufacturing, and product digitization require designer to develop new strategies and approaches to the production of goods and services. Through sustainable design strategies, the benefits provided by products are being rethought. How can these benefits be provided in alternative ways with less impact both socially and environmentally? While there are many answers, digital manufacturing and product digitization are two promising pursuits. The focus of my academic research lies at the intersection of these three movements.

Environmental impact can be reduced by transferring the benefit formerly provided by a physical product to a digital product or service. Here, design methods and strategies long employed by industrial designers and graphic designers are combined to create new and innovative user interfaces and experiences. Digital manufacturing, including 3D printing, is the antithesis to the mass production model of delivering products that has defined the industrial revolution, and many of the negative impacts we associate with it. Physical goods can now be manufactured on-demand and customized to each individual user.

In-depth research, exploration, and development is being done within the context of undergraduate and graduate courses. It is also the subject of a number of graduate level thesis projects under my direction. Many of the papers and presentations in this document are outcomes of these research efforts.

## Assistive Technology Design Lab

The Assistive Technology Design Lab was created in 2014 to support the research and development effort of a design collaboration started in 2008. The collaboration included Auburn's School of Industrial and Graphic Design and The Center for Disability Research and Service. The focus of the collaboration has been the development of assistive technology to improve the lives of those with disabilities. The research and development is conducted by faculty, graduate research assistants, and undergraduate students. The backbone of the collaboration is an inter-disciplinary design studio. I have served as lead faculty for the program since 2010. Below is a summary of the focus of the collaboration since 2010.

- 2010                    The collaborative studio focused on opportunities to leverage research and exploration to develop universal design solutions
- 2011-2013            The collaborative studio focused on developing solutions for the disabled U.S. veteran population
- 2014-2015            The focus shifted somewhat to the unique opportunities digital fabrication had in the development of assistive technology
- 2016                    Specifically focused on digital fabrication (3D printing) as a means to create highly customized prosthetic devices
- 2017                    Collaborative studio sponsored by *Superior Recreational Products* to develop playground equipment appropriate for children on autism spectrum.

## **D. Additional Information: Research Support and/or Scholastic Performance**

### **Peer-reviewed Publications**

- 2011 "Wayfinding: Lifeblood of a City", *Design Alabama Journal* Volume XXI (2011)  
2015 "Tissue Changes During Operational Load Bearing in UH-60 Aircrew Using Magnetic Resonance Imaging.", *Aerospace Medicine and Human Performance* Volume 86. Number 9 (2015)

### **Conference Lectures and Presentations**

- 2015 "Universal Design and Mass Customization in Assistive Technology", *Auburn Talks* Faculty Symposium. (2015)  
2015 "Assistive Technology Design Lab – Digital Fabrication and Inclusive Design", *This is Research – Auburn University* Poster Presentation. (2015)  
2014 "3D Printed Prosthesis Influenced by Biomimicry" *Creative Scholarship SHOWCASE* Auburn University Research Week (2014)  
2012 "The Present and Future of On-Demand Manufacturing: Customizable and Sustainable" *IDSA 2012 International Conference: The Future is . . .* (2012)  
2012 "Assistive Technology Collaborative Studio" *Alabama Alliance for Students with Disabilities in Science, Technology, Engineering, and Math Conference* (2012)

### **Grants**

- 2017 "Affordable Accessible Housing Solutions for the Aging in Place and People with Disabilities", *Department of Housing and Urban Development* \$633,954 total award. (2017-2018), Industrial Design Advisor  
2016 "Touch-Voice-Eye controlled assistive technology for veterans and service members with significant disabilities", *Department of Veterans Affairs-Veterans Health Administration* \$199,630 total award. (2016 - 2017)  
2015 "Exploration of Wearable Product Virtual Design Process and Cognition using 3D Parametric Modeling and 3D Printing Technology", *Auburn University Intramural Grant Program*, \$10,000 including matching funds. (2015-2016), Co-I.  
2010 "Assistive Technology Studio, Creating Innovative Solutions and Improving Lives", *Auburn University Intramural Grants Program*, \$6,000 including matching funds. (2010)  
2011 "Assistive Technology Studio, Wounded Warriors", *Auburn University Intramural Grants Program*, \$94,566 including matching funds. (2011-2013)

### **Other Funding**

- 2017 Corporate sponsored design studio by *Superior Recreational Products* \$30,000  
2015 "3D Printed Prosthetics", *Auburn University Tiger Giving Day*, \$10,400 raised by crowdfunding. (2015)  
2014 "Assistive Technology Design Lab", *College of Architecture Design and Construction*, \$40,000 internal support for continued research and collaborative studio. (2014)