**Oak Ridge National Laboratory - Grid Communications and Security Group**

Background includes a loyal record of employment; a diverse range of training; a wide range of skill set; understanding and the fortes to provide support to multiple projects.

* ***Security Clearance:***Department of Energy Q – Clearance (active); TS/SCI (active) L – Clearance (2002 – 2003)
* ***Specialized Training:*** FAA part 107 unmanned aerial system (UAS) license
* ***Digital Signage Network Expert Certification:*** 2019
* ***United States Marine Corps Veteran***

**WORK EXPERIENCE**

**OAK RIDGE NATIONAL LABORATORY – Technical Professional –** *Oak Ridge, Tennessee (2018 – present)*

* Provide operational and logistical support for researchers and staff
* Lab Space Manager (LSM) providing inputs to RSS & SST
* Manage the operations of the Grid Operations Analytics Laboratory (GOAL) as LSM
* Communicate directly with vendors to procure and oversee installation of equipment
* Manage procurement purchases and inventory for current projects/programs
* Communication and Timing equipment installation including network servers, switches, power distribution units, uninterrupted power supply systems (UPS), and Kernel Virtual Machines (KVM)
* Generate Statements of Work (SOW) as directed
* Operation of Glowforge Laser cutter
* Design and print prototypes using 3D CAD modeling software
* Host tours for protocol, academia, industry and government visits
* FAA Part 107 Unmanned Aerial System Pilot current July 18, 2023-2025
	+ Briar
	+ AIMS
	+ Road Pavement Marker
	+ Wildfire Detection
* Design / Construction of sensors and sensor enclosures
* Troubleshoot physical hardware systems
	+ Single board computers (SBC)
	+ Weatherproofing electronic systems for outdoor deployment

**TENNESSEE WESLEYAN UNIVERSITY – Adjunct instructor –** Athens*, Tennessee (2019 – present)*

* Teach students the mechanics of creating artistic and dynamic photographs using modern digital technology
	+ Subjects covered include commercial, portrait, food, photojournalism, and product photography
* Evaluate students work­­­

**OAK RIDGE NATIONAL LABORATORY – Photographer –** O*ak Ridge, Tennessee (2008 – 2018)*

* Perform day to day photo shoots including commercial, scientific research, aerial, photojournalism, and cover photos
* Maintain a positive relationship with clients in all departments
* Work independently to accomplish a broad range of assignments on any given day
* Trainings: Radiological Worker I, Fall Protection, Aerial Lift Operator
* 1st place winner of 2008 Olympus “Photographers of Tomorrow” contest

***Software Proficiencies:***

|  |  |  |
| --- | --- | --- |
| * PC/Apple OS
 | * Autodesk Fusion 360
 | * Adobe DC Pro
 |
| * Microsoft Office Suite
 | * Adobe Photoshop
 |  |

**EDUCATION**

**KING UNIVERSITY,** Knoxville, Tennessee

B.S., Interdisciplinary Studies; Concentration Business Management & Criminal Justice

*Graduated Magna Cum Laude*

**PELLISSIPPI STATE TECHNICAL COMMUNITY COLLEGE,** Knoxville, Tennessee

A.A.S., Media Technologies concentration in Photography

*Graduated Magna Cum Laude, Phi Theta Kappa Honor Society*

**Invention Disclosures**

*Method to Encode Automation System Messages into Images via Stenography with Video System Transport*, Co-Inventors: Peter Fuhr, Marissa Morales Rodriguez, Margret Morganti, Shawn Brown, Gray Hahn, William Monday and Jason K. Richards, March 2020

*Microwave and Thermal Sterilization of Personal Protection Equipment (PPE) N-95 Masks*, P Co-Inventors: Peter Fuhr, William Monday, Jason K. Richards, Margret Morganti, April 2020

*Drone-based Visualization of Radio Signals,* Co-Inventors: Peter Fuhr, Richard Moyers, Jason K. Richards

**Patent**

*Method to Encode Automation System Messages into Images via Stenography with Video System Transport*, Co-Inventors: Peter Fuhr, Marissa Morales Rodriguez, Margret Morganti, Shawn Brown, Gray Hahn, William Monday and Jason Richards, March 2022

R&D 100 Finalist 2023: **SynSteg: Synesthesia+Steganography–Based Encryption Systems**

**Publications**

*“Pulsar Based Alternative Timing Source for Grid Synchronization and Operation”* coauthored by He Yin, Yilu Liu, Peter Fuhr, Marissa Morales Rodriguez, Margret Morganti, William Monday, Jason Richards, Sterling Rooke, Wenxuan Yao, and Lingwei Zhan, submitted to IEEE Access, Dec 2019

*“Control Center Viewing of UAS-Based Real-time Sensor and Video Measurements at an Electric Utility* Facility” Peter Fuhr, Kenneth Woodworth, Gary Hahn, Jason Richards and William Monday, International /research Journal of Engineering and Technology, Vol. 6, Issue 12, Dec 2019

*“The Design of an Integrated Sensing System for Various Applications”* Peter Fuhr, Sterling Rooke, William Monday, Jason Richards. International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056Volume: 08 Issue: 02| Feb2021

*“Research and Evaluation Concepts in Support of Asbestos Detection During Wildfire Operations”* Peter L. Fuhr, Maggie Morganti, William Monday, Jason Richards, Elizabeth Piersall, Sterling Rooke. International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056 Volume: 8 Issue: 3| Mar2021

*“Frequency and Temporal Analysis of Cicada Brood X Sounds”* Peter Fuhr, Sterling Rooke, Elizabeth Piersall, Erica Grant, Maggie Morganti, Thomas J. King, Jr, Aaron Wilson, Jason Richards, William Monday. International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056 Volume: 08 Issue: 9 | September 2021

*“Sensor-Equipped Unmanned Surface Vehicle for High-Resolution Mapping of Water Quality in Low- to Mid-Order Streams”* Natalie A. Griffiths, Peter S. Levi, Jeffery S. Riggs, Christopher R. DeRolph, Allison M. Fortner, and Jason K. Richards. ACS ES&T Water, Volume: 02 Issue: 03| March 2022

*“Oak Ridge National Laboratory Assessment of the Electrical Substation-Grid Test Bed with Inside/Outside Devices and Distributed Ledger Technology”* Emilio C. Piesciorovsky, Raymond Borges Hink, Aaron Werth, Gary Hahn, Annabelle Lee, Jason Richards, Yarom Polsky. ORNL/TM-2022/1840, April 2022

*“An ad hoc performance comparison of candidate technologies for rural*

*broadband deployment”* Peter L. Fuhr, Ph.D., Rick Moyers, Elizabeth Piersall, Ali Ekti, Ph.D. Jason Tuttle, Jason Richards, Chris Cooper, Jeff Cornett, David Pesin, William Monday. Volume: 09 Issue: 07, July 2022

**Drone-based Visualization of Radio Signals** *“****International Research Journal of Engineering and Technology (IRJET)****, Volume 11 Issue 06, June 2024.*

***Paper ID: FTP11060305***