



# Stephen Bauman

Hands-on Engineer | Creative Imagineer


Interdisciplinary brainstormer with 8+ years of individual/team work on high-tech research and innovation. Bringing curiosity, creativity, and passion for the natural world as well as an eagerness to learn. Seeking an engaging team with which to share talents and ideas, contribute to meaningful outcomes, and expand and grow into new areas of experience. Let's put our heads together to generate solutions to the world's opportunities!

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## TECHNICAL EXPERIENCE

### Optical Engineer L3Harris Technologies

01/2020 - Present

Palm Bay, FL

#### Achievements/Tasks

- Used Matlab, Python, C#, SoapUI code for various hardware control, data handling/analysis, and modeling applications
- Collected, processed, and analyzed complex datasets to guide model development and drive research project next-steps
- Conducted in-lab and outdoor distributed sensing field tests, modeled and processed field-deployed fiber-optic network data, and created test plans for deliverable hardware
- Generated innovative technical ideas, resulting in patent applications submitted to the USPTO after internal peer review
- Organized and communicated data-centered conclusions to internal & external (non)technical audiences

### Engineering and Nanotech Lead, Grant Writer Nanomatronix, LLC

09/2018 - 12/2019

Fayetteville, AR

#### Achievements/Tasks

- Won \$125k NASA STTR grant to develop graphene-based water filtration membrane for human space systems
- Worked with DoD-contracted clients to establish crucial test protocols for spaceflight qualification of optoelectronic devices on projects totaling ~\$5MM

### Doctoral Fellow, Author, Mentor University of Arkansas

08/2013 - 12/2018

Fayetteville, AR

#### Achievements/Tasks

- Co-authored and won \$35k AR state grant for sensor research
- Communicated results of experiments and data analysis via 15+ collaboratively published research articles & presentations
- Processed data in Matlab and maintained team's various database organization and knowledge-sharing documentation

### Research Fellow (2017 & 2018 Summers) U.S. Naval Research Laboratory

06/2017 - 08/2018

Washington, D.C.

#### Achievements/Tasks

- Published high-impact journal article of research project results
- Wrote software script for rapid data processing & analysis, shortening time to obtain actionable information by > 1000%

## CERTIFICATIONS

PADI Advanced Open Water Diver (2022)

Graduate Certificate of Entrepreneurship (2018)

University of Arkansas Walton College of Business

## TALENTS, SKILLS, & TOOLS

### General Programming Experience

Python, Git | Hardware Comms: Arduino (C/C#/C++) SoapUI, LabView | Data handling: Matlab, Excel | Web Dev: HTML/CSS, Javascript

### Complex Software Tools & Techniques

various modeling and device fabrication tools (COMSOL, Synopsys, etc), CAD, Blender, Microsoft Office, GitHub

### Engineering Hardware, Fabrication, & Prototyping

robotics/drones, analog/digital electronics, microcontrollers, soldering, 3D printing, metalwork, woodworking, machine shop tools

### Language Skills and Interpersonal Connections

strong technical & lay writing/presentation, Spanish proficiency, team player, flexible, approachable, emotional intelligence, love of humor

### Natural Talents and Tendencies

creative, quick/eager/broad learner, pattern recognition, attention to detail, organized, adventurous, hard-working

## EDUCATION

### Ph.D. in Microelectronics-Photonics University of Arkansas

08/2013 - 12/2018

Fayetteville, AR

## TEACHER, LEADER, & VOLUNTEER

### Applied Conservation Field Work Volunteer Brevard Zoo & Wildlife Sanctuary, L3Harris

01/2020 - Present

Palm Bay, FL

#### Tasks/Achievements

- Oyster bed out-planting for lagoon restoration, wildfire prevention and native plant support, ecosystem trash removal

### Co-founder & President: Arkansas Laserbacks SPIE & Optica joint student chapters

01/2014 - 12/2018

#### Tasks/Achievements

- Secured over \$30k in grants and scholarships for chapter activities
- Inspired 500+ students & parents through local educational outreach
- Facilitated learning of 200+ students at SPIE leadership workshop

## INTERESTS

Fantasy & Sci-fi

Horseback riding

Conservation

Travel

Surfing

Bouldering

Homebrewing

Martial arts

Camping

Beekeeping

DIY projects