MISSISSIPPI STATE UNIVERSITY™
— J A M E S W O R T H —
BAGLEY
COLLEGE OF ENGINEERING

**INFORMATION PROCESSING
& SENSING LABORATORY**

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Postdoctoral Research Position
AI, Sensing, Subterranean Robotics

The InforMation PRocEssing and SenSing (IMPRESS) Laboratory (http://impress.ece.msstate.edu/) at the Department of Electrical and Computer Engineering is seeking highly motivated individuals to join as a postdoctoral research associate. The selected associate will primarily work in one of the following areas: artificial intelligence (AI), computer vision, unmanned vehicle platforms, and sensing systems (e.g., polarimetric cameras, acoustic arrays, and mm-wave radars), applied towards detection, estimating, localization of hazards in subterranean environment. The selected associate will assist advising the graduate students and support the analysis of each sensor modality used in the effort, the mounting and integration of the sensors on different subterranean unmanned vehicle platforms (e.g., Boston Dynamics Spot, Clearpath Husky, and SuperDroid Robots), the integration and validation of the platform communication system, and the generating of the presentations and publications.

Essential Duties and Responsibilities:
1. Supporting development of integrated hardware and software for AI-driven subterranean robotic systems.
2. Contributing to development of novel machine/deep learning methodologies for various sensor modalities and combinations, including polarimetric imaging systems at five spectral bands (i.e., UV, VIS, NIR, SWIR, and LWIR) for object detection, acoustic arrays for sound localization, radio frequency (RF) micro-Doppler for motion discrimination in complex subterranean environment.
3. Supporting activities such as design, test, verification, customization, and assembly of prototype subterranean unmanned vehicle sensing systems
4. Designing and implementing research tasks, collecting, and analyzing data, and assisting the group in preparing research results for publications.
5. Assisting the team in preparing manuscripts for peer-reviewed publication.
6. Presenting research results in scientific meetings and symposiums.
7. Assist in the supervision of student researchers.
8. Assist in the writing and submission of new research proposals.
9. Take part in professional development events in the Bagley College of Engineering.
10. Other duties as assigned.

Minimum Qualifications:
A Ph.D. degree in Electrical Engineering, Computer Engineering, Computer Science, or closely related engineering discipline.

Preferred Qualifications:
- Research or development experience post-graduation.
- Good track record of peer-reviewed publications in one or more of the following areas: artificial intelligence, machine learning, computer vision, robotics, radar/array signal processing, unmanned vehicle platforms, or sensing systems.
- Demonstrated experience with one or more programming languages (Python, MATLAB, ROS, C/C++).
- Ability to work with minimal supervision and self-driven individual.
- Experience in software development, maintenance, and testing,

Knowledge, Skills, and Abilities:
Strong communication and writing skills and the ability to function effectively in a team environment is required.

Location: Mississippi State University is in Starkville, a vibrant college town located in northeast Mississippi.

Salary: Commensurate with experience.

Starting Term: Immediately

Application: Interested candidates should apply at
https://explore.msujobs.msstate.edu/cw/en-us/job/503369?lApplicationSubSourceID=

For more information about IMPRESS lab, visit http://impress.ece.msstate.edu.