



**Our mission is to provide a real world experience for students and recent graduates in a research institute that addresses advanced technology to sense and understand natural and man-made environments.**

**The Michigan Tech Research Institute (MTRI)**  
([www.mtri.org](http://www.mtri.org)) located in Ann Arbor, MI, is currently seeking  
Interns for our Sensor/Signal Processing Lab.

## **Seeking qualified candidates with the following background/coursework:**

- Excellent analytical abilities
  - Mathematics (calculus and linear algebra) with advanced math courses being a plus
  - Statistics and probability (basic courses) with advanced statistics courses being a plus
  - Electrical engineering and/or physics
- Experience with signal processing concepts (e.g., discrete Fourier transforms) is preferred
- Currently pursuing or recently received a Bachelor's, Master's, or Ph.D. degree, with preference to those in mathematics, statistics, electrical engineering, or computer science
- Comfortable working within Windows PC and Linux environments, and familiar with MS Office (Word, Excel, and PowerPoint)
- Skill editing publications and preparing reports/PowerPoint briefings is preferred
- Experience with programming, such as MATLAB, Python, C, etc., is preferred
- Familiarity with statistical analysis software (R, SAS, JMP) is helpful
- Familiarity with shell language programming (Linux or Unix) is helpful
- Ability to obtain a DoD security clearance, which requires U.S. citizenship, and no dual citizenship with any other country

**Sensor/Signal  
Processing Lab Internships**

Responsible for supporting research projects within the Institute. Example research projects include:

- Research related to radar scattering and imaging for military and civil applications
- Radar and electro-optic sensing for agricultural, water quality, ecological, environmental, and transportation applications
- Research into machine learning and data science
- Signal processing research for biomedical applications

**A significant focus of research is on rigorous mathematically-based information processing, and includes aspects of** signal/signature modeling, mathematical transforms (Fourier), parameter estimation, parametric and non-parametric hypothesis testing, and hidden parameter estimation (inverse problems). Day-to-day tasks will be diverse, but typically an intern will work on 2-3 research projects over a semester under the supervision/mentorship of the Primary Investigator. The successful candidate would be expected to help with research algorithm development (in software) and testing, signal/image data preparation and processing, report preparation, and other tasks related to research and analysis of remote sensing data. The candidate must be self-motivated, with excellent communication skills (written and oral), strong organizational ability and attention to detail. The candidate must be able to work independently as well as in a team environment.

**Duration:** Flexible, typically 10-12 weeks, 20-40 hours per week. Most internships are in the summer, but academic-year positions are also available.

**To be eligible for an internship, you must:**

- Be a student or recent graduate in good standing at an accredited college or university
- Be majoring or received a degree in a field appropriate to the job opening
- Have a minimum grade point average of 3.0 on a 4.0 scale, or equivalent
- Be a U.S. citizen and not a dual citizen

**Additional statements:**

The qualifications and specifications mentioned above are intended to indicate the kinds of tasks and levels of work difficulty that will be required of positions that will be given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of any supervisor to assign, direct, and control the work of employees under his/her supervision. The use of a particular expression or illustration describing duties shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty. The position will be filled based on qualifications regardless of Race, Color, Disability, Religion, Sex, Sexual Orientation, National Origin, Height, Weight, Age, Veteran or Marital Status.

**Michigan Technological University is an Equal Opportunity Educational Institution/Equal Opportunity Employer, which includes providing equal opportunity for protected veterans and individuals with disabilities. Minorities and women are encouraged to apply.**

**Interested candidates please apply by contacting:**

**Dr. Joseph Burns**

**Sensor/Signal Processing Lab Manager**

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