



**Department of Electrical
and Computer Engineering**
UNIVERSITY OF WISCONSIN-MADISON

Postdoctoral Researcher Position in Applied Electromagnetics

The Sun Research Group at the University of Wisconsin-Madison invites applications for a postdoctoral researcher position in AI-powered electromagnetic sensing technologies for agricultural and environmental applications. For more information about Dr. Sun's research, please visit <https://haihan-sun.github.io/>.

Responsibilities:

The postdoctoral researcher will contribute to the following areas, depending on background and expertise:

- Develop microwave/radar sensing hardware for non-destructive measurement and subsurface characterization.
- Conduct electromagnetic simulations and experimental measurements in laboratory and field settings.
- Develop deep learning-based signal processing and imaging algorithms for sensing data interpretation.
- Integrate sensing hardware and software systems.
- Prepare manuscripts for peer-reviewed journals and conferences.
- Mentor undergraduate students in the same research project.

Required Qualifications:

- A Ph.D. in electrical engineering, computer science, or a closely related field by the start date.
- Strong research background in at least one of the following areas: applied electromagnetics, RF/microwave engineering, radar systems, antenna design, computational imaging, machine learning.
- Strong programming skills in Python and MATLAB.
- Excellent written and oral communication skills.
- Ability to work independently and collaboratively in an interdisciplinary research environment.
- Demonstrated ability to conduct high-quality research, as evidenced by publications and research projects.

Preferred Qualifications:

- Experience with ground-penetrating radar, radar imaging, microwave sensing, or other non-destructive testing technologies.
- Experience with RF/microwave measurement equipment.
- Experience with machine learning or deep learning frameworks.
- Experience with electromagnetic simulation tools such as CST Studio Suite, HFSS, COMSOL.
- Strong interest in developing high-impact sensing technologies for precision agriculture and environmental applications.

How to Apply:

Interested applicants should submit a single PDF containing the following materials to Dr. Sun at haihan.sun@wisc.edu with the subject line "Postdoctoral Researcher Application – AI-Powered Electromagnetic Sensing."

- A one-page cover letter describing research background, relevant experience, and future career goals
- Curriculum vitae (CV)
- 3 representative publications in relevant fields
- Contact information for at least 2 professional references

Review of applications will begin immediately and continue until the position is filled. The expected start date is Summer or Fall 2026.

