

Center for Soil Dynamics Technologies

NSF IUCRC Opportunity

<http://soiltech.org>



About us

SOILTECH is a joint research effort between the University of Southern California, University of Connecticut, University of Washington, and Iowa State University that seeks industry collaboration through the National Science Foundation's Industry-University Cooperative Research Center (IUCRC) program.

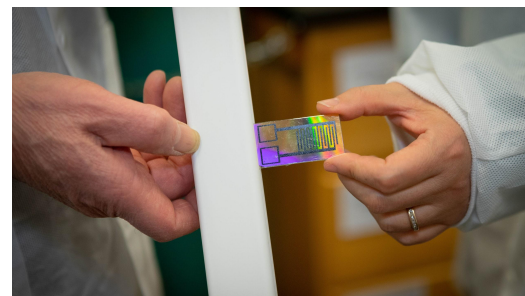


Vision

SOILTECH aims to *develop next-generation sensor systems capable of in-situ and remote measurement of dynamic variables in managed and unmanaged soils*. Our research team is poised to make significant advances in sensor development, soil health monitoring, ground penetration, data transmission, data analytics, dynamic models and visualization tools, thus enabling scientists and engineers to gain deeper understanding of dynamic processes in soils. SOILTECH will provide the underlying science and engineering necessary to develop new, more efficient and more sustainable ways of studying soil properties and managing soils and natural resources for a range of industries including agriculture, utilities, defense, insurance, communications, and more. This will lead to broad societal benefits such as reduced soil and water contamination, improvements to agricultural practices and food security, and management of the nitrogen cycle.

Proposed Research

SOILTECH's university researchers have several proposed projects already in development, leveraging unique research strengths, academic-industry connections, and facilities available at each of the affiliated research institutions. For example, we are working on development of advanced 4D soil models that enable predictive algorithms, aided by use of real-time in-situ sensor networks and remote sensing, to regulate precise application of water, nutrients and pesticides. We are also working on the development of mechanical and structural soil models to optimize sustainability and land use for agriculture and transportation. Companies that join SOILTECH as Industry Advisory Board members will have the opportunity to shape the center's research priorities and will vote annually to select which proposed research projects will be funded by SOILTECH.



Contact Us

To learn more about the Center for Soil Dynamics Technologies, contact info@soiltech.org.

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About IUCRCs

The IUCRC program fosters research collaborations between industry and universities. There are currently 85 active Centers and over 200 university sites across the nation, with over 900 industry members, and with a total program budget of approximately \$80M. IUCRCs operate with a leveraged funding model. NSF provides \$150K per year, per member university toward center operations. The Center's research budget comes from member fees. Members sit on the Center's Industry Advisory Board (IAB) and are responsible for advising on center operations, setting research directions in line with industry needs, and selecting research proposals to fund. IAB meetings are held twice per year to review research outcomes, collect industry feedback, and discuss new proposals. To learn more about the NSF IUCRC program, visit their website: iucrc.nsf.gov

Through membership in the Center, companies benefit by:

- Gaining significant return on investment: IAB membership fee of \$50k/year is part of a minimum \$1.2M/year Center operating budget across four university research sites
- Enjoying a low overhead rate of just 10%: IAB membership fees directly fund research
- Selecting up to 10 cutting-edge research projects per year on topics like remote and in-situ soil sensing, precision agriculture, infrastructure, resource management and carbon accounting
- Networking with leading university researchers and collaborating with industry peers on pre-competitive research with low IP exposure risk
- Gaining opportunities to recruit top student researchers working on SoilTech projects

Program Benefits for Industry Members	Full Members (\$50K/yr)	Associate Members (\$25K/yr)
Non-exclusive, royalty-free license to Center IP	✓	
First opportunity to negotiate an exclusive commercial license to Center IP	✓	
Quarterly reports of recent invention disclosures	✓	
Annual customized member visit to Center	✓	
Named graduate fellows (additional cost)	✓	
Help set the agenda for problem-solving sessions with Center faculty	✓	
Vote to select and sponsor research projects at the Center	✓	✓
Opportunity to sponsor company-directed proprietary research	✓	✓
Industrial Advisory Board seat	✓	✓
Access to Center test bed and other facilities (user fees may apply)	✓	✓
Review Center progress and advise the Director on all matters pertaining to the Center	✓	✓
Recruiting opportunities for graduate students and postdocs	✓	✓
Access to student interns	✓	✓
Periodic member communications, news, and updates	✓	✓
Visiting industry scientist program	✓	✓
Collaborate with Center faculty to obtain grants and other funding	✓	✓
Members-only website with access to research results, publications, etc.	✓	✓
Network with other industry colleagues	✓	✓