

Profiles



Department of Soil Science
UNIVERSITY OF WISCONSIN-MADISON

DEC 2021 VOL. 13 NO.1

MESSAGE FROM THE DEPARTMENT CHAIR

Recently a student asked me “....how to make a career in soil science?” I had to think a little and then replied that if you go to work early every day, are creative and are a learner, read widely, chase dreams, and develop a vision, then some 30 years later there may be a career. But that is not guaranteed and paths differ. The beauty of soil science is that there are numerous tracks and countless opportunities – from the private to the public sector, the outdoors to an indoor lab and office, from test tube to the global scale, in small and large teams, and from cornfields to brownfields. Our work is fundamentally applicable although sometimes sooner than others.

Soil science is vital for solving grand environmental challenges, and recently the discipline is experiencing an upsurge. All we can do is to deliver the promise, show the importance of soil in relation to the challenges, and as a department make sure our teaching, research, and outreach remains top-notch, novel, and forward-looking. Our graduates promptly find jobs. That gives some reassurance, but we always think that we can do much better as the world, the job markets, and those demands are rapidly changing. As an example how we deal with that change, we are currently revamping the soil science curriculum to offer education that prepares our students for their own career in soil science. It will be different from ours, but we will put them on their path, well grounded, and trust they will excel and do good work!



At last, a picture from August when we held what we called “a departmental reunion” - a rare moment of seeing the soil science family without masks. Wishing you all the best for the Holiday Season. Thank you for all your support to our department!

Alfred Hartemink
Chair

OUR SUPPORTERS

5/16/2021 to 11/15/2021

Anonymous

Professor Barak and Ms. Barak

Professor Bockheim and Ms. Bockheim

Professor Brown and Dr. Brown

Mr. Cole

Ms. Comfort and Dr. Comfort

Corteva Agriscience

Mr. Demo and Ms. Demo

Ms. Duffy and Mr. Duffy

Ms. Frazier and Dr. Frazier

Mr. Greiten

Professor Harris and Ms. Harris

Professor Hartemink

Mr. Hess

Mr. Hole

Mr. Jackson

Mr. Karlen and Ms. Beck

Professor Keeney and Ms. Keeney

Professor Kirkham

Dr. Koons

Mr. Krueger and Ms. Krueger

Mr. Mulcahy

National Turfgrass Evaluation Program

Professor Nielsen and Ms. Nielsen

Nuto Farm Supply, Inc.

Mr. Owens and Mrs. Owens

Dr. Pan

Dr. Parker

Mr. Patel

Professor Peterson

Mr. Rand and Ms. Rand

Dr. Randall

Professor Soldat

Professor Emeritus Sommers

Mr. Timmons

Mr. Van Herwynen and Ms. Van Herwynen

Wisconsin Agri-Business Association

Wisconsin Turfgrass Association

Mr. Wright and Ms. Wright

Research Corner.....	2
Student Profile	2
Bockheim Lectureship.....	2
Alumni Updates.....	2
Recent Graduates	2
Staff Profile.....	3
Department News.....	3
Welcome.....	4

ANTIGO SILT LOAM

RESEARCH CORNER: THE SUSTAINABLE SOIL MANAGEMENT LAB (SSML)



Agriculture is an important sector of Wisconsin's economy. However, agricultural production has an impact on the environment, especially water quality. My research program revolves around soil and water management and conservation issues in agriculture. Current research projects include 1) determining the impact of above-ground cover crop biomass on sediment and nutrient losses, 2) investigating advanced phosphorus characterization techniques to improve our understanding of the environmental impacts of phosphorus on freshwater, 3) comparing the performance of runoff and erosion models (RUSLE2 vs. WEPP) during winter events, 4) establishing optimum nitrogen fertilizer rates for reduced tillage practices, 5) impacts of woodlands conversion to silvopasture on soil carbon sequestration and health, 6) effect of harvest operations on soil compaction and alfalfa productivity, 7) role of tillage on soil aggregation and compactability, among several other projects. The SSML team is currently composed of Francisco Arriaga (Associate Professor), Nick Bero (Research Specialist), Geoff Siemerling (Outreach Specialist), Walker Crane (MS candidate), Gloria Ambrowiak (PhD candidate) and Chee Thao (PhD candidate). The most rewarding part of research is collaborating with others in Soil Science, Agronomy, Biological Systems Engineering, Civil and Environmental Engineering, Wisconsin Geological & Natural History Survey, and multiple other colleagues around the state. In short, we are a small group of soil scientists trying to live the Wisconsin Idea while having fun doing science.

STUDENT PROFILE: BROOKE PROPSON

After graduating with a BS in Ecology, Evolution, and Biodiversity from the University of Michigan in 2019, Brooke spent 2.5 years conducting research and living out of a remote cabin in the Northwoods of Northern Michigan as a research assistant. Here, she discovered her passion for soil science and biogeochemistry and knew she had found the research path to her career. Brooke is now a first year PhD student and National Science Foundation Fellow in Dr. Zac Freedman's Environmental Microbial Ecology and Sustainability lab. She is broadly interested in studying climate change impacts on Northern Temperate Forest biogeochemistry by linking microbial structure and function to large-scale ecological processes, namely C and N storage and fluxes. She is currently working on a Hatch-funded project that has sought to assess Northern Temperate Forest response to elevated levels of anthropogenic N deposition in the very backwoods of Northern Michigan that she recently called home. After the termination of 20+ years of N additions, Brooke's emerging role in the project is to assess the forest's transition into subsequent recovery via assessing changes in C and N storage and microbial community composition.



BOCKHEIM LECTURESHIP



The Department was delighted to host the **James G. Bockheim Distinguished Lectureship** after last year's hiatus. Dr. Raquel Portes, Visiting Assistant Professor in Earth and Climate Sciences at Bates College was our guest presenter. Her presentation entitled, *Soil Formation and Slope Stability on Post-Glacial Landscapes* was well received by the faculty, staff, and students in attendance as well as those watching remotely.

The lectureship is made possible by the generosity of Jim and Julie Bockheim to this Distinguished Lectureship in Soil Science Fund.

ALUMNI UPDATES

After 14 years employed with The Maschhoffs, **Nancy Bohl Bormann (MS, 2006)** started her PhD program last January at the University of Minnesota in the Soil, Water, and Climate Department working with Drs. Melissa Wilson and Erin Cortus.

Roger A. Greiten (BS, 1955) retired as Superintendent of Parks, Monroe County Parks Department in Rochester, New York.

Edward "Jon" Jackson (MS, 1987) joined the Facilities Planning and Management Environmental Health & Safety Department at UW-Madison in April 2020.

Following 43 years in academia, **Manuel T. Oliveira (MS, 1981)** has retired from Universidade Tras-os-Montes e Alto Douro.

Steven Strenger (BS, 1974. Natural Resources-Soil Science) retired this past January after a career including 3 years as an Indiana DNR-Soil Scientist, 13 years as a Soil Scientist for the Bureau of Land Management, and 29 years as a Terrestrial Ecological Unit Inventory Project Leader, USDA Forest Service, Southwestern Region.

Carl Soren Hoveland (BS 1950, MS 1952) passed away July 4, 2021. His career spanned more than 48 years including 22 years in research and teaching at Auburn University followed by a faculty appointment in the Department of Agronomy at the University of Georgia. He was a Terrel Distinguished Professor and retired in 2006.

RECENT GRADUATES

Kettner, Kyle D. - MS, 2021

Soil Science (Arriaga)

Changes in crop management systems in Dane County: Extracting more value from roadside transect surveys.

STAFF PROFILE: MATT HAHNE



Matt was first hired on campus by Genetics in 2016. He grew to love working under the CALS umbrella and could not wait to join Soil Science as our new Department Administrator. He received his bachelor's degree from UW-Platteville in Business Administration with an emphasis in Management. He held previous positions in retail for 9 years before joining the UW.

During Matt's time off, he enjoys spending time with his family and tries to get out on the golf course when he can. With 2 younger boys, he finds himself entertaining them at parks and splash pads throughout the year. He also enjoys watching movies and someday soon will get out to the movie theaters again.

Matt is excited to come to the Department of Soil Science, bringing with him HR and financial experience. He cannot wait to meet everybody and to get to know them and helping everyone with anything they need. Matt's door is always open!

DEPARTMENT NEWS

Jingyi Huang received the Alfred Toepfer Faculty Fellow Award in recognition of his accomplishments to date as well as his potential for continued growth and success.

Happy anniversary to **Phil Barak** who celebrated his 30th year as a faculty member in our department. We appreciate his dedication and commitment to the department, college, and university.

Thea Whitman has received a National Science Foundation CAREER award. These are the NSF's most prestigious awards in support of early career faculty who have the potential to serve as academic role models in research and education and to lead advances in the mission of their department or organization.

We wished farewell to **Joel Pedersen** who left the department in August to join John Hopkins Whiting School of Engineering as a professor in the Department of Environmental Health and Engineering.

Jingyi Huang recently received a USDA NIFA SEED award for his proposal entitled, *Combining affordable multi-functional multi-depth soil sensors and process models for real-time nitrate leaching monitoring and management*.

Thea Whitman has been promoted from assistant professor to associate professor, effective July 1, 2021. Since joining the department in 2016, Thea has demonstrated a strong commitment to the department, college, university, and abroad through her research, teaching, outreach, and committee work.

The North Central Region Sustainable Agriculture Research and Education (NCR-SARE) Program selected **Abigail Augarten** (MS Research Assistant, Ruark) as one of its 24 recipients. Her project is titled *Evaluating the relationships between pasture management, soil health and ecosystem services through on-farm monitoring*.

The **Douglas L. Karlen Soil Research Graduate Fund** was recently established with the generous donation from Douglas Karlen and Judith Beck. This fund will support graduate students interested in soil properties and processes affecting sustainable agriculture and environmental quality.

SAVE THE DATE!

The **Leo M. Walsh Distinguished Lectureship in Soil Science** is scheduled for Wednesday, April 27, 2022. Our guest presenter is Julie Jastrow, an ecologist and soil scientist at the Argonne National Laboratory.

Department of Soil Science at the University of Wisconsin-Madison

I/we wish to join other students/alumni, industry, and friends in enhancing the teaching, research, and outreach programs in the Department of Soil Science by contributing as indicated below.

____\$50 ____\$100 ____\$250 ____\$500 ____\$1,000 ____Other

☐ Checks should be made payable to UW Foundation-Department of Soil Science

☐ Please charge my gift of \$_____ to my (please circle): Mastercard Visa American Express

Card Number: _____

Expiration Date: _____

Cardholder's Name (please print): _____

Cardholder's Signature: _____

Date: _____

Name: _____

Home Phone: _____

Work Phone: _____

Address: _____

City: _____

State: _____

Zip: _____

Mail to: University of Wisconsin Foundation • US Bank Lockbox • P.O. Box 78807 • Milwaukee, WI 53278-0807

Online donation is available on our website <http://soils.wisc.edu/alumni-friends/>

Profiles

Department of Soil Science
Julie Garvin, Editor

University of Wisconsin
1525 Observatory Drive
Madison, WI 53706-1207

Web site: soils.wisc.edu
Email: jgarvin2@wisc.edu

Printing/mailing paid for with
UW Foundation/WALSAA/
Department funds.

Nonprofit Org.
US POSTAGE
PAID
Madison, WI
Permit No. 658

WELCOME

Mauricio Avila

(Researcher, Barak)

Daniel Bidikov

(Software Engineer/Developer II, Good)

Claire Benning

(MS Research Assistant, Ruark)

Walker Crane

(MS Research Assistant, Arriaga)

Zöe Goodrow

(Associate Research Specialist, Freedman)

Salvador Grover

(MS Research Assistant, Freedman)

Matt Hahne

(Department Administrator)

Dana Johnson

(PhD Research Assistant, Whitman)

John Jones

(Research Associate, Laboski)

Mia Keady

(PhD Research Assistant, Whitman)

Kelsey Kruger

(Research Specialist, Whitman)

Mengmeng Luo

(MS Research Assistant, Whitman)

Daniela Orjuela-Diaz

(PhD Research Assistant, Laboski)

Dimitrios Pavlou

(Research Associate, Soldat)

Zampala Pittaki-Chrysodonta

(Research Associate, Huang)

Brooke Propson

(PhD Research Assistant, Freedman)

Annalisa Stevenson

(MS Research Assistant, Hartemink)

Hendri Winanto

(MS Research Assistant, Huang)

Ashley Waggoner

(Research Associate, Ruark)

Alumni Update

We'd love to hear from you! Please complete and return this form
or send your updates via email to: jgarvin2@wisc.edu

Name: _____

Degree(s) and Year(s): BS () MS () PhD () _____

Home Address: _____

Email: _____

Phone No.: _____

Position: _____

Employer: _____

News to share: _____

Return to:

Profiles

Department of Soil Science • University of Wisconsin-Madison
1525 Observatory Drive • Madison WI 53706-1207