

Presented by the Department of Crop & Soil Sciences and
the College of Agricultural, Human, and Natural Resource Sciences

“Phenomics and the Rhizosphere”

2016 Campbell Mini-Symposium

Friday, October 7th

1:00 to 2:00 PM: Seminar by Dr. Chris Topp

2:30 to 3:30 PM: Seminar by Dr. Volkan Isler

4:00 to 5:00 PM: Panel discussion followed by a reception

Location: CUB Junior Ballroom



Dr. Chris Topp, Danforth Plant Science Center, St. Louis, MO

The Topp Lab takes a phenomics approach to study crop root growth dynamics in response to environmental stress such as drought and rhizosphere competition, and as a consequence of artificial selection for agronomically important traits such as Nitrogen uptake. Studying roots requires the development of imaging technologies, computational infrastructure, and statistical methods that can capture and analyze morphologically complex networks over time and at high-throughput. Thus the lab combines expertise in imaging (optical, X-ray CT, PET, etc.), computational analysis, and quantitative genetics with molecular biology to understand root growth and physiology.

Dr. Volkan Isler, Department of Computer Science, University of Minnesota

We focus on algorithmic and systems aspects of Robotic Sensor Networks (RSNs). Broadly speaking, an RSN is a network of devices equipped with sensing, communication and actuation capabilities. Designing algorithms for robotic sensor networks requires tackling challenging problems that lie at the intersection of robotics, perception and communication. Our group works on a broad set of RSN related problems ranging from theoretical problems such as Pursuit Evasion and Sensor Placement to developing systems in which robots act as Robotic Routers or Data Mules. In recent years, we have been focusing on applications in Environmental Monitoring and Agricultural Robotics.



WASHINGTON STATE
 **UNIVERSITY**
World Class. Face to Face.

The Campbell Lecture was created to help further understanding of environmental soil science. It is named for Dr. Gaylon Campbell, who spent nearly 30 years as a professor of environmental biophysics and soil physics in the WSU's Crop & Soil Sciences department. He retired from WSU in 1998 to become vice president of engineering at Decagon Devices, a local manufacturer of biophysical research instrumentation. The lecture was created through gifts from Campbell Scientific, Inc., and Decagon Devices, Inc.