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Current Weather

Saskatoon, SK

Current	Thu Aft
 13°C Partly cloudy	 21°C A mix of sun and clouds

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For more information, or to be a sponsor, contact:

info@rhizo5.org

Tuesday July 9, 2019

Morning sessions

Keynote address (8:30 - 9:30; Salon B & C)

Yakov Kuzyakov: Microbial Hotspots & Hot Moments in the Rhizosphere

Poster pitches (9:30 - 10:00; Salon B & C)

Health break (10:00 - 10:30)

Parallel sessions (10:30 - 12:30)

7. Climate change, abiotic stress in the rhizosphere (Gallery A)

Chairs: Louise Nelson

- 10:30 - 11:00 Microbe-to-plant signals: A way to develop climate change resistant agriculture
D. Smith
- 11:00 - 11:15 Developing a trait-based framework for predicting microbial response to extreme climate events
O. Nicolitch
- 11:15 - 11:30 Pseudomonas sp. strains mrbp4 and mrbp13 isolated from maize rhizosphere soil, extenuates drought stress in inoculated maize (zea mays L.) plants
O.B. Ojuederie
- 11:30 - 11:45 Response of the wheat microbiome to three years of rainfall manipulations
H. Azarbad
- 11:45 - 12:00 The effect of strigolactones on the microbiome of rice
B. Kim
- 12:00 - 12:15 The role of arbuscular mycorrhiza in adaptation to abiotic stress in wheat
S. Ravnskov
- 12:15 - 12:30 Microbial community impacts plant performance based on drought history
J. Munoz-Ucros



8. Carbon dynamics in the rhizosphere (Gallery B)

Chairs: Bobbi Helgason & Jemaneh Habtewold

- 10:30 - 10:45 Hot or not? Effect of rhizosphere hotspots on total soil respiration
M. Holz
- 10:45 - 11:00 Impact of root hairs and temperature on microbial carbon utilization and energy production in the rhizosphere
X. Zhang
- 11:00 - 11:15 Carbon and nitrogen cycling in the rhizospheres of different grassland species
A. Leptin
- 11:15 - 11:30 Coordination of soil microbes with root functional traits and implications for soil respiration in riparian agroecosystems
K.A. Borden
- 11:30 - 11:45 Monitoring spatial and temporal carbon dynamics in nodulated roots by co-registration of Magnetic Resonance Imaging and Positron Emission Tomography
R. Koller
- 11:45 - 12:00 NanoSIMS: Opportunities to study carbon and nitrogen transformation and cycling in plant-microbial-soil systems
X.H. He

9. Rhizosphere processes for sustainable agriculture (Gallery C)

Chair: Melissa Arcand

- 10:30 - 11:00 Functional rhizomicrobiome: Role of benign below-ground microbes in modulating above-ground plant fitness and survival
H. Bais
- 11:00 - 11:15 Does the genotype of wheat play a role in soil structural dynamics?
S. Schmidt
- 11:15 - 11:30 Bacterial microbiomes and plant genotypes: what drives phenotypic variation among canola lines?
S.D. Mamet
- 11:30 - 11:45 Root-associated microbiome of maize genotypes with contrasting phosphorus use efficiency
E.A. Gomes
- 11:45 - 12:00 The rhizomicrobiome of Sorghum: Impact on plant growth and stress tolerance
E.E. Kuramae
- 12:00 - 12:15 Two distinct gene-coexpression networks, mycorrhizal module and phosphate-starvation module, are independently regulated in the field
T. Ezawa

Technical session (10:30 - 11:20)

PreSens Precision Sensing GmbH

"Illuminate the root-soil interface: Non-invasive imaging of O₂, pH and CO₂ in soil science"

Lunch, Poster & exhibit viewing, and Campus tours (12:30 - 14:00)

Afternoon sessions

Keynote address (14:00 - 15:00; Salon B & C)

Etienne Yergeau: Understanding and engineering the rhizosphere microbiome

Parallel sessions (15:15 - 16:45)

10. Climate change, abiotic stress in the rhizosphere (Gallery A)

Chairs: Louise Nelson & Don Smith

- 15:15 - 15:30 Disentangling the role of root traits in the rhizosphere communication network and their response to climate change
A. Williams
- 15:30 - 15:45 Responses of tree interactions to climate change and invasive species
J. Simon
- 15:45 - 16:00 Fine root carbon exudation and morphology effects in different nitrogen sources and air humidity treatments
M. Sell
- 16:00 - 16:15 Rhizosphere legacy: amelioration of micro-biophysical properties of compacted soil
B.S. Razavi
- 16:15 - 16:30 Plasticity as the key ability of roots for adaptation to various types of water stresses in rice plants
A. Yamauchi
- 16:30 - 16:45 Role of root plasticity on response to soil compaction
J. Correa

11. Negative soil-plant-microbe interactions: Pests and pathogens (Gallery B)

Chair: Lori Phillips

- 15:15 - 15:30 Unraveling the mechanism behind plant and beneficial microbes interaction leading to disease suppression
K.H. Hooshmand
- 15:30 - 15:45 Possible role of bacterial communities in modulating abundance of common scab pathogen in rhizosphere and geocaulosphere of potatoes
C. Goyer
- 15:45 - 16:00 Root rot alters the structure of the pea root and rhizosphere microbiomes
Z. Hossain
- 16:00 - 16:15 Developing beneficial rhizosphere interactions to suppress above ground insect pests
A. Gaudin

- 16:15 - 16:30 Soil community shaped by long-term organic amendments could alleviate aboveground herbivory damage via enhancing rice plant tolerance and resistance
M. Liu
- 16:30 - 16:45 The potato common scab-inducing pathogen *Streptomyces scabies* degrades suberin, a recalcitrant plant biopolymer
C. Beaulieu

12. Amendments and commercial inoculants (Gallery C)

Chair: Anton Hartmann

- 15:15 - 15:30 Salinity stress tolerance of 'Meyer' lemon trees improved by a consortium of four arbuscular mycorrhizal fungi (*Rhizophagus intraradices*, *Funneliformis mosseae*, *Claroideoglossum etunicatum*, *Glomus aggregatum*)
J. Racsko
- 15:30 - 15:45 Urban agriculture with an emphasis on soil health, mycorrhizal fungi and commercial mycorrhizal inoculants
M. Salomon
- 15:45 - 16:00 Soil amendments affect mycorrhizal colonization, root nodulation and dry matter accumulation in cowpea
I.M. Uzoh
- 16:00 - 16:15 The induction of nitrate uptake in maize plants is counteracted by *Azospirillum brasilense* inoculation
Y. Pii
- 16:15 - 16:30 Protist introduction enhances plant growth by reshaping the rhizosphere microbiome
N. Amacker
- 16:30 - 16:45 Accumulation of mineral elements in the rhizosphere and chickpea leaves: response to phosphorus and rhizobium inoculation
J.B. Ogola

Poster session, exhibits, and drinks (16:45 - 18:00)

Gala Dinner (19:00 - 23:30)

The conference Gala Dinner is in **Centennial Hall at TCU place**. The dinner will be followed by an introduction of the **Student Travel Award recipients** and entertainment from local jazz band **Heidi Munroe & Soul Sensation**.