

Oct 21, Tuesday | Room 208, International Exchange Center

Opening Session

Moderator: Prof. Zhi Li, Vice dean of the College of Natural Resources and Environment

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| 08:30-09:00 | Opening remarks | Prof. Wei Gehong Vice President of Northwest A&F University; Conference President |
| | | Prof. Xiaohong Tian Dean of the College of Natural Resources and Environment |
| | | Prof. James Tiedje (online) Conference Co-President, Michigan State University, United States |
| | | Prof. Kornelia Smalla Speaker representative, Julius Kühn Institute, Germany |
| Group Photo | | |

Scientific Program

Moderator:

| Time | Title of talk | Speaker |
|--------------------|---|--|
| 09:10-09:40 | Proliferation and Phage-Based Control of Antibiotic-Resistance in Sewage Treatment Plants | Prof. Pedro J. Alvarez Rice University, United States |
| 09:40-10:10 | Using methanotrophic bacteria to refine our understanding of nitrification inhibitors | Prof. Lisa Y. Stein University of Alberta, Canada |
| 10:10-10:30 | Tea Break | |

Moderator:

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| 10:30-11:00 | Novel bioinformatic approaches for reliable metagenome-based abundance estimates and pollution source tracking | Prof. Kostas Konstantinidis Georgia Tech, United States |
| 11:00-11:30 | Genomics and metagenomics reveal that congeneric species and conspecific genomovar replacements are key for their ecological success | Prof. Ramon Rossello-Mora Mediterranean Institute for Advanced Studies, Spain |
| 11:30-12:00 | Using machine learning to predict ancient microbial phenotypes | Prof. Gergely János Szöllősi Okinawa Institute of Science and Technology, Japan |

12:10-13:10

Lunch buffet, Guest House

Moderator:

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| 14:30-15:00 | New approaches to restoring the soil microbiome for One Health | Prof. Gabriele Berg Graz University of Technology, Max Planck Institute of Colloids and Interfaces, Germany |
| 15:00-15:20 | Soil microbiomes and functions in eroded and rehabilitated ecosystems | Prof. Xiaorong Wei Northwest A&F University, China |
| 15:20-15:40 | Tea Break | |

Moderator:

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| 15:40-16:10 | Single-cell behaviors determine the efficiency of metabolic interactions in spatially structured microbial communities | Prof. Miaoxiao Wang University of Electronic Science and Technology, China |
| 16:10-16:40 | Soil Microbiomes as Barriers and Conduits for Antimicrobial Resistance | Prof. Uli Klümper Technische Universität Dresden Germany |

16:40-18:10

Poster Session

18:20-19:30

Dinner buffet, Guest House

Oct 22, Wednesday | Room 208, International Exchange Center

| Moderator: | | |
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| Time | Title of talk | Speaker |
| 08:30-09:00 | Anthropogenic use of antimicrobials and impact on bacterial pathogen evolution -An environmental and soil perspective | Prof. Steven Djordjevic University of Technology Sydney, Australia |
| 09:00-09:30 | Effects of irrigation water quality and soil type on soil and plant associated bacterial communities, abundance, diversity and transferability of antibiotic resistance genes | Prof. Kornelia Smalla Julius Kühn Institute (JKI), Germany |
| 09:30-09:50 | Global Health Risks Lurking in Livestock Resistome | Prof. Xun Qian Northwest A&F University, China |
| 9:50-10:10 | Tea Break | |
| Moderator: | | |
| 10:10-10:40 | Microbial Pathways to Soil Health: Scaling from Genes to Ecosystems | Prof. Bruce A. Hungate Northern Arizona University, United States |
| 10:40-11:00 | Rhizobial 3MST regulates soybean nodulation via persulfidation of host RbohB | Dr. Weiqin Zhang Northwest A&F University, China |
| 11:00-11:30 | Beyond the Root: Microbial Contributions to Plant Growth and Resilience | Prof. Peng Yu Technical University of Munich, Germany |
| 11:30-11:50 | The Many Faces of T6SS: From Bacterial Interactions to Eukaryotic Targeting | Prof. Li Song Northwest A&F University, China |
| 12:00-13:00 | Lunch buffet, Guest House | |
| Moderator: | | |
| 14:30-15:00 | Organic carbon remineralization in some surprising places in Arctic soils | Prof. Karen G. Lloyd University of Southern California, United States |
| 15:00-15:20 | Ants modify carbon cycling and organic matter stability in soil | Prof. Lichao Fan Northwest A&F University, China |
| 15:20-15:50 | Exploring the role of the soil microbiome as predictor of ecosystem multifunctionality in Europe | Dr. Ferran Romero Swiss Federal Institute of Technology Lausanne, Swiss |
| 15:50-16:10 | Tea Break | |
| Moderator: | | |
| 16:10-16:40 | A geological timescale for bacterial evolution and oxygen adaptation | Prof. Tom Williams University of Bath, United Kingdom |
| 16:40-17:00 | Sustainable Biomanufacturing of Aromatic Chemicals by Synthetic Biology | Prof. Ziwei Luo Northwest A&F University, China |
| 17:00-17:30 | Healthy Soils, Healthy Planet: Integrating Microbiomes into One Health Policy | Dr. Ahmed Abdelfattah Leibniz Institute for Agricultural Engineering and Bioeconomy, Germany |
| 17:30-17:50 | Closing Session | |
| 18:10-20:00 | Group Dinner | |