

Sunday, 2 June 2024

Time / Room	
	Foyer Leipziger KUBUS
17:00	Registration
18:00	Get Together
	Hall 1
19:00	Life Time Award
	Laudatory speech on Peter Gregory held by Timothy George
	Lecture by the laureate: Peter Gregory <i>Employing roots effectively for societal well-being</i>
	Foyer Leipziger KUBUS
20:00	Get Together continued

Monday, 3 June 2024

Time / Room	Hall 1		
09:00	Welcome		
09:15	Plenary Lecture 1 On roots and carbon <i>Feike Dijkstra, University of Sydney, Australia</i> (Moderation: N.N.)		
10:00	Plenary Lecture 2 How do soil hydraulic properties affect roots under water-limited conditions? <i>Mathieu Javaux, Université Catholique de Louvain, Belgium/Germany</i>		
10:45	Coffee Break		
	Hall 1 AB	Hall 1 CD	Hall 2
	Session 1.2_A Chair: N.N.	Session 1.3_A Chair: N.N.	Session 1.1_A Chair: N.N.
11:15	Session Keynote In situ quantification of the Net C Rhizodeposition in a Mediterranean agroforestry alley cropping system <i>Jeremy Detrey¹; Isabelle Bertrand¹; Jim Rasmussen²; Gabin Piton¹</i> ¹ INRAE, France; ² Aarhus University, DK	Session Keynote The benefit of multiseriate cortical sclerenchyma for drought stress tolerance depends on the environment and expression of other root traits <i>Hannah Schneider¹; Francisco Pinto²; Matthew Reynolds³; Jacinta Gimeno Romeu³; Lynch Jonathan⁴; Cody Depew⁴</i> ¹ Leibniz Institute of Plant Genetics and Crop Plant Research (IPK); ² Wageningen University & Research; ³ International Maize and Wheat Improvement Center (CIMMYT); ⁴ Pennsylvania State University	Session Keynote Can we use X-ray CT to generate 3D penetration resistance data and unravel the impact of local soil strength on root growth? <i>Maxime Phalempin¹; Ulla Roskopf²; Steffen Schlüter¹; Doris Vetterlein¹; Stephan Peth²</i> ¹ Helmholtz Centre for Environmental Research- UFZ; ² Leibnitz Universität Hannover
11:45	Increased C input from maize roots to the soil is offset by accelerated organic matter decomposition through priming. <i>Khatab Abdalla; Johanna Pausch</i> University of Bayreuth, Germany	New hypergravitropic root mutants from the barley TILLMore collection <i>Giuseppe Sangiorgi; Silvio Pierbattista; Francesco Camerlengo; Cristian Forestan; Roberto Tuberosa; Silvio Salvi</i> University of Bologna	How do increased soil compaction and differences in root-soil contact affect root gene expression and diversity of plant beneficial microorganisms? <i>Mika Tarkka; Maxime Phalempin; Eva Lippold; Marie-Lara Bouffaud; Steffen Schlüter; Doris Vetterlein; Henrike Würsig</i> Helmholtz - Centre for Environmental Research - UFZ

12:00	<p>Can we measure in situ root decomposition kinetics with optical scanner? <i>Lorène Siegwart¹; Isabelle Bertrand; Christophe Jourdan; Garynechele Saimpha</i> ¹ University of Copenhagen, Denmark</p>	<p>Root temporal transcriptional response to heterogeneous water availability in <i>Zea mays</i> L. <i>Xuelian Li¹; Virginia Protto; Christophe Maurel; Philippe Nacry</i> ¹ Institute for Plant Sciences of Montpellier (IPSiM)</p>	<p>Can increased cover crop diversity improve root soil binding capacity in the field and restore agroecosystems? <i>Cristina McBride-Serrano¹; Ian Dodd¹; John Quinton¹; Alison Karley²; Timothy George²</i> ¹Lancaster University; ²James Hutton Institute</p>
12:15	<p>In situ quantification of plant carbon allocation to maize roots in a maize-AMF system <i>Kong Wong¹; Keith Duncan¹; Sergey Komarov²; Dierdra Daniels³; Clara Lebow¹; Daniela Floss³; Yuan-Chuan Tai²; Christopher Topp¹</i> ¹ Donald Danforth Plant Science Center; ² Washington University in St. Louis; ³ Valent Biosciences</p>	<p>Unified multi-scale description of soil-root water flows to disentangle cross-scale hydraulic effects <i>Martin Bouda¹; Jan Vanderborght²; Valentin Couvreur³; Vaclav Sipek¹; Mathieu Javaux³</i> ¹ Czech Academy of Sciences; ² Forschungszentrum Juelich/IBG-3; ³ Universite Catholique de Louvain</p>	<p>Leveraging root genetics in maize and cover crops to develop more productive agro-ecosystems that foster soil health and carbon storage <i>Christopher Topp¹; Cody Bagnall; Ivan Baxter; Marcus Griffiths; Alexander Liu; Kong Wong</i> ¹ Donald Danforth Plant Science Center</p>
12:30	<p>Controls of atmospheric carbon transfer to soil by root exudates <i>Melanie Brunn</i> University of Koblenz</p>	<p>Defoliation pauses root penetration of wheat for 20 days <i>Eusun Han¹; John A. Kirkegaard²; Kristian Thorup-Kristensen³</i> ¹Aarhus University; ²CSIRO (Commonwealth Scientific and Industrial Research Organisation); ³University of Copenhagen</p>	<p>Pore scale modeling of the mutual influence of roots and soil aggregation in the rhizosphere <i>Alexander Prechtel¹; Maximilian Rötzer¹; Nadja Ray²</i> ¹ Friedrich-Alexander University Erlangen-Nürnberg; ² Katholische Universität Eichstätt-Ingolstadt</p>
12:45	Lunch Break		
	Hall 1 AB	Hall 1 CD	Hall 2
	Session 1.2_B Chair: N.N.	Session 1.3_B Chair: N.N.	Session 1.1_B Chair: N.N.
14:00	<p>Session Keynote Root exudation in response to phosphorus limitation in upland rice <i>Christiana Staudinger¹; Eva Mundschenk; Vera Benyr; Maire Holz; Uxue Otxandorrena; Jun Wasaki; Matthias Wissuwa; Eva Oburger</i> ¹ University of Natural Resources and Life Sciences (BOKU), Austria</p>	<p>Session Keynote Exploring the Molecular Basis of Maize Nodal Root Growth Maintenance during Drought: An Omics Perspective <i>Akanksha Pareek ; Hallie J. Thompson; Amelia E. Griffith; Priyamvada Voothuluru ; Prof Melvin J. Oliver ; Robert E. Sharp ; Felix B. Fritschi</i> University of Missouri – Columbia</p>	<p>Session Keynote Cluster roots of <i>Hakea laurina</i> up-regulated a malate transporter HaALMT1 under P deficiency, which was activated by aluminum exposure <i>Hirotsuna Yamada¹; Lydia Ratna Bunthara¹; Akira Tanaka²; Takuro Kohama³; Hayato Maruyama⁴; Wakana Tanaka¹; Sho Nishida⁵; Takayuki Sasaki⁶; Jun Wasaki⁷</i> ¹ Graduate School of Integrated Sciences for Life/ Hiroshima University; ² Saga University; ³ School of Integrated Arts and Sciences; ⁴ Hokkaido University; ⁵ Saga University ⁶ Okayama University; ⁷ Hiroshima University</p>

	Foyer		
14:30	Postersession 1: Topic 1.1, 1.2, 1.3		
15:30	Coffee Break		
	Hall 1 AB	Hall 1 CD	Hall 2
	Session 1.2_C <i>Chair: N.N.</i>	Session 1.3_C <i>Chair: N.N.</i>	Session 1.1_C <i>Chair: N.N.</i>
16:00	Session Keynote Micronutrient deficiency-dependent phytosiderophore dynamics in plant–soil systems <i>Andreea Spiridon¹; David Aleksza¹; Tim Causon²; Stephan Hann²; Nicolas Kratena³; Christian Stanetty³; Eva Oburger¹</i> ^{1/2} University of Natural Resources and Life Sciences (BOKU) Vienna; ³ Vienna University of Technology	Session Keynote The effect of root hairs on root water uptake <i>Patrick Duddek¹; Mutez Ali Ahmed²; Mathieu Javaux³; Jan Vanderborght³; Goran Lovric⁴; Andrew King⁵; Andrea Carminati¹</i> ¹ ETH Zurich; ² TU Munich; ³ Forschungszentrum Juelich/IBG-3; ⁴ Swiss Light Source, Paul Scherrer Institute; ⁵ Synchrotron SOLEIL	Session Keynote Mangrove species found in contrasting environments show differing phytohormonal responses to variation in soil bulk density <i>Anne Ola; Ian C. Dodd; Catherine E. Lovelock</i>
16:30	Effect of Maize Mucilage on Soil Nutrient Transport <i>Bahareh Hosseini¹; Meysam Cheraghi²; Maire Holz³; Mohsen Zarebanadkouki¹</i> ¹ Technical University of Munich; ² University of Tehran; ³ Leibniz Centre for Agricultural Landscape Research (ZALF)	Targeting root traits to improve tolerance to vegetative drought episodes in pearl millet (<i>Pennisetum glaucum</i> L.) <i>Pablo Affortit¹; Awa Faye²; Dylan Jones³; Ezenwoko Benson³; James Burrige¹; Bassirou Sine²; Sebastian Arenas-Jimenez¹; Princia Nakombo-Gbassault¹; Rahul Bhosale³; Tony Pridmore³; Vincent Vadez¹; Ndjido Kane²; Malcolm Bennett³; Laurent Laplaze⁴; Darren Wells³; Jonathan Atkinson³; Alexandre Grondin¹</i> ¹ IRD; ² ISRA; ³ University of Nottingham; ⁴ Institut de Recherche pour le Développement	Fine root biomass dynamics along soil hydrological gradients: from drained peatland forests to restored peatlands <i>Ivika Ostonen; Gristin Rohula-Okunev; Martin Maddison; Ain Kull</i> <i>University of Tartu</i>
16:45	The root collaboration gradient predicts soil metabolome-mediated plant-soil feedbacks <i>Benjamin Delory¹; Simone Cesarz²; Marina Semchenko³</i> ¹ Utrecht University; ² German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig; ³ University of Tartu	Functional-Structural Plant Modeling Based on Experimental Data Reveals that Soil Phosphorus Status Influences Root System Conductance <i>Felix Maximilian Bauer¹; Guillaume Lobet¹; Dirk Norbert Helmrich²; Mona Giraud¹; Andrea Schnepf¹</i> ¹ Forschungszentrum Jülich, IBG-3: Agrosphere; ² University of Iceland, Reykjavik, Iceland	Ploidy alters root anatomy and shapes the evolution of crop polyploids <i>Jagdeep Singh Sidhu</i> <i>The Pennsylvania State University</i>

<p>17:00</p>	<p>Modelling carbon and nitrogen exchanges at the soil-root interface: from local exchanges to whole-plant architected growth <i>Tristan Gérault¹; Romain Barillot²; Christophe Pradal³; Marion Gauthier⁴; Céline Richard-Molard¹; Bruno Andrieu¹; Alexandra Jullien¹; Frédéric Rees¹</i> ¹INRAE - AgroParisTech, Université Paris-Saclay; ²INRAE; ³Univ. Montpellier; ⁴L'Institut Agro</p>	<p>Rootstock mediation of scion transpiration response to evaporative demand? <i>Vasileios Giannakopoulos¹; Will Harris¹; Milan Urban²; <u>Ian Dodd</u>¹</i> ¹Lancaster University; ²CIAT</p>	<p>The biomechanics of path of least resistance of roots in heterogeneous substrates <i>Jiaojiao Yao¹; Jonathan Barès²; Evelyne Kolb³; Lionel Dupuy⁴</i> ¹Université PSL, Sorbonne Université, Université Paris Cité, France / University of the Basque Country, Spain / Neiker, Spain; ²Université de Montpellier, France; ³Université PSL, Sorbonne Université, Université Paris Cité, France; ⁴Neiker and Ikerbasque, Basque Foundation for Science, Spain</p>
<p>17:15</p>	<p>Using aboveground proxies for root phenotyping in field experiments <i>Fatou Gning ; Kristian Thorup-Kristensen</i> University of Copenhagen</p>	<p>Mucilage facilitates root water uptake under drought <i>Mohanned Abdalla ; Mutez Ahmed</i> Technical University Munich</p>	<p>Nutritropism and its mechanism <i>Kiyoshi Yamazaki¹; Nashir Uddin¹; Yoshihiro Ohmori¹; Hirokazu Takahashi²; Atsushi Toyoda³; Yutaka Sato³; Mikio Nakazono²; <u>Toru Fujiwara</u>¹</i> ¹Univ. Tokyo; ²Nagoya University; ³National Institute of Genetics</p>

Tuesday, 4 June 2024			
Time / Room	Hall 1		
09:00	Plenary Lecture 3 Going underground: How root-microbe interactions affect ecosystem functioning under climate change <i>Franciska de Vries, University of Amsterdam, The Netherlands</i>		
09:45	Plenary Lecture 4 How does root biology fit into a rice breeding program? <i>Amelia Henry, International Rice Research Institute (IRRI), Philippines</i>		
10:30	Coffee Break		
	Hall 1 AB	Hall 1 CD	Hall 2
	Session 1.5_A Chair: N.N.	Session 1.4_A Chair: N.N.	Session 1.6_A Chair: N.N.
11:00	Session Keynote Enhanced root traits plasticity doesn't guarantee greater competitiveness in wild durum wheat ancestors compared to modern varieties <i>Florian Fort</i> <i>L'Institut Agro Montpellier</i>	Session Keynote Adaptive signature and genetic basis of root development and microbiome assemblage <i>Peng Yu¹; Ruairidh Sawers²; Xinping Chen³; Jochen Reif⁴; Frank Hochholdinger¹; Tianyu Wang⁵</i> <i>¹INRES, University of Bonn; ²Penn State University; ³Southwest University; ⁴IPK Gatersleben; ⁵Chinese Academy of Agricultural Sciences</i>	Session Keynote Exploring the secrets of hyphosphere of arbuscular mycorrhizal fungi: processes and ecological functions <i>Gu Feng</i> <i>China Agricultural University (CAU)</i>
11:30	Genetic control of root adaptive plasticity in pearl millet <i>Alexandre Grondin ¹; Sebastian Arenas-Jimenez¹; Princia Nakombo-Gbassault¹; Pablo Affortit¹; Bassirou Sine²; Vincent Segura³; Hannah Schneider⁴; Philippe Cubry¹; Laurent Laplaze</i> <i>¹UMR DIADE; ²CERAAS; ³UMR AGAP Institut; ⁴Leibniz Institute for Plant Genetics and Crop Plant Research (IPK)</i>	Synergistic effects of root associated mycorrhizal fungi and green compost on tomato growth and salt stress tolerance <i>Soumaya Zaidi; Mohammad-Reza Hajirezaei</i> <i>Leibniz Institute of Plant Genetics and Crop Plant Research (IPK)</i>	Understanding the Rhizosphere: Opportunities for Manipulating the Soil Root Interface <i>Tim George ¹; Lawrie Brown</i> <i>¹The James Hutton Institute</i>
11:45	Genetic and molecular dissection of root system architecture in maize	How does the combination of root-contrasted phenotypes influence the microbial community and nutrient flow under different water regimes?	The impact of soil structure and EPS content on water retention and liquid connectivity in the rhizosphere

	Lixing Yuan; Zheng Zhao <i>College of Resources and Environmental Sciences, China Agricultural University (CAU)</i>	<i>Adrian Lattacher¹; Samuel Le Gall²; Chao Gao¹; Moritz Harings²; Ahmet Sircan¹; Youri Rothfuss²; Ellen Kandeler¹; Christian Poll¹</i> ¹ University of Hohenheim; ² Forschungszentrum Juelich GmbH	<i>Pascal Benard¹; Patrick Duddek¹; Norbert Kirchgessner²; Florian Stoll¹; Goran Lovric³; Laura Waldner¹; Andrea Carminati¹</i> ¹ ETH Zurich; ² Crop Science, ETH Zurich; ³ Swiss Light Source, Paul Scherrer Institute
12:00	Neighbour-Induced Alterations in Root Exudate Composition of Cover Crops: Buckwheat and Black Oat and their Impact on Redroot Pigweed <i>Cagla Eroglu¹; Alexandra Bennett²; Teresa Mairinger²; Judith Wirth¹; Stefan Hann²; Aurelie Gfeller¹</i> ¹ Agroscope, Switzerland; ² BOKU, University of Natural Resources and Life Sciences Vienna	Dry – moist – dry: alterations of maize root gene expression and microbiome feedback processes in the field over three years <i>Henrike Würsig¹; Bunlong Yim²; Maria Martin Roldan¹; Negar Ghaderi¹; Marie-Lara Bouffaud¹; Susanne Schreiter¹; Eva Lippold¹; Doris Vetterlein¹; Evgenia Blagodatskaya¹; Kornelia Smalla²; Mika Tapio Tarkka¹</i> ¹ UFZ Halle, Germany; ² Julius Kuehn-Institute (JKI), Federal Research Institute for Cultivated Plants, Braunschweig	Utilization of maize rhizodeposition by the microbiome in an agricultural soil <i>Daniela Niedeggen¹; Lioba Rüger¹; Eva Oburger²; Michael Santangeli²; Ahmed Mutez³; Doris Vetterlein⁴; Sergey Blagodatsky¹; Michael Bonkowski¹</i> ¹ University of Cologne, Germany; ² University of Natural Resources and Life Sciences, Austria; ³ Technical University Munich, Germany; ⁴ UFZ - Helmholtz-Zentrum für Umweltforschung, Germany
12:15	How does belowground facilitation drive overyielding via root-root interaction? <i>Rui-Peng Yu¹; Ran An¹; Ye Su¹; Hans Lambers²; Jasper van Ruijven³; Long Li¹</i> ¹ China Agricultural University; ² University of Western Australia; ³ Wageningen University & Research	Belowground traits and crop performance under stress in field-grown durum wheat mixtures <i>Elisa Taschen¹; Esther Guillot¹; Damien Dezette¹; Erwan Kerbiriou¹; Florian Fort²; H�el�ene Fr�eville¹; Philippe Hinsinger¹</i> ¹ INRAE (Institut national de la recherche agronomique); ² University of Montpellier	Engineering root/rhizosphere interactions for improving nutrient-use efficiency and crop productivity in intensive cropping systems <i>Jianbo Shen¹; Jie Xu; Maoying Wang; Liyang Wang; Jingying Jing; Lingyun Cheng²; Fusuo Zhang</i> ¹ China Agricultural University; ² China
12:30	Lunch Break		
	Hall 1 AB	Hall 1 CD	Hall 2
	Session 1.5_B <i>Chair: N.N.</i>	Session 1.4_B <i>Chair: N.N.</i>	Session 1.6_B <i>Chair: N.N.</i>
14:00	Session Keynote Root trait variation along a Swedish sub-arctic tundra elevational gradient <i>Clydecia Spitzer¹; Paul Kardol; Maja Sundqvist; Michael Gundale; David Wardle²</i> ¹ Swedish University of Agricultural Sciences; ² Ume� University	Session Keynote Short-scale soil heterogeneity impacts mycorrhizal response traits in roots of 23 maize genotypes across a long-term P-fertilizer trial <i>Lidia Campos Soriano¹; Elisa Taschen²; Didier Arnal²; Damien Dezette²; Silvio Salvi³; Blanca San Segundo¹; Philippe Hinsinger²</i> ¹ CIRAD; ² INRAE; ³ Universita di Bologna	Session Keynote Combining an ¹¹C and ¹³C labelling approach to track photosynthates into the root system and rhizosphere microbiota of maize <i>Robert Koller; Sina Schultes¹; Carsten Hinz; Ralf Metzner; Daniel Pflugfelder; Antonia Chlubek; Dagmar van Dusschoten; Gregor Huber; Sara Bauke; Michele Watt; Michael Bonkowski; Claudia Knief¹</i> ¹ University of Bonn

	Foyer		
14:30	Postersession 2: Topic 1.5, 1.6		
15:30	Coffee Break		
	Hall 1 AB	Hall 1 CD	Hall 2
	Session 1.5_C <i>Chair: N.N.</i>	Session 1.4_C <i>Chair: N.N.</i>	Session 1.6_C <i>Chair: N.N.</i>
16:00	<p>Session Keynote Deciphering regulatory networks controlling xylem plasticity under drought <i>Syed Adeel Zafar; Alex Borowsky; Julia Bailey-Serres</i> <i>University of California, Riverside</i></p>	<p>Session Keynote Interactions of root anatomical and architectural phenotypes with root microbiomes in maize under low nitrogen fertilization <i>Tania Galindo¹; Elena Kost; Elias Barmettler; Elena Giuliano; Rafaela Feola Conz; Johan Six¹; Martin Hartmann¹</i> ¹ETH (Zurich)</p>	<p>Session Keynote Deciphering microbial relationships with functionally discrete fine roots <i>William King¹; Suzanne Fleishman²; Michela Centinari²; David Eissenstat²; Marc Goebel³; Taryn Bauerle³; Young-Mo Kim⁴; Christopher Anderton⁴; Terrence Bell⁵</i> ¹University of Southampton; ²The Pennsylvania State University; ³Cornell University; ⁴Pacific Northwest National Laboratory; ⁵University of Toronto Scarborough</p>
16:30	<p>Does future climate create asynchrony in above- and belowground phenology of Norway spruce? <i>Marili Sell ; Priit Kupper; Gristin Rohula-Okunev; Ivika Ostonen</i> <i>University of Tartu</i></p>	<p>Root functional strategies are important determinants of the functional composition of soil fungal communities <i>Justus Hennecke; Alexandra Weigelt</i> <i>Leipzig University / German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig</i></p>	<p>Chemical gradients in the rhizosphere: Too patchy for effective modelling? <i>Eva Lippold¹; Magdalena Landl²; Eric Braatz¹; Steffen Schlüter¹; Rüdiger Kilian³; Robert Mikutta³; Andrea Schnepf²; Doris Vetterlein¹</i> ¹UFZ; ²Forschungszentrum Juelich GmbH; ³Martin Luther University Halle-Wittenberg, Halle (Saale)</p>
16:45	<p>Regional variation in spring root growth of <i>Abies sachalinensis</i> seedlings associated with provenance snow environments <i>Tetsuto Sugai¹; Keita Arakawa²; Wataru Ishizuka³</i> ¹Forestry and Forest Product Institute; ²Hokkaido University; ³Hokkaido Research Organization</p>	<p>Traits that enhance the effectiveness of biological nitrification inhibitors at increasing plant N uptake <i>Christian Kuppe; Johannes Postma</i> <i>Forschungszentrum Jülich GmbH</i></p>	<p>Spatiotemporal patterns of iron and arsenic enrichment in rice rhizosphere under different soil sulfate levels and water regimes <i>Xu Fang¹; Simin Li²; Iso Christl¹; Ruben Kretzschmar¹</i> ¹ETH Zürich; ²Chinese Academy of Sciences</p>

<p>17:00</p>	<p>The acclimative value of root trait plasticity and elasticity for the plant energy balance – A theoretical perspective <i>Tino Colombi¹; Bipin K Pandey²; Aakash Chawade³; Malcolm J. Bennett²; Sacha J Mooney⁴; Thomas Keller¹</i> ¹Swedish University of Agricultural Sciences; ² University of Nottingham; ³Swedish University of Agricultural Sciences; ⁴University of Nottingham</p>	<p>Screening historic wheat cultivars for functional root traits to enhance nitrogen use efficiency <i>Maria Hernandez-Soriano¹; Alberto Acedo²; Francisco Ossandon²; Acacia Simpson¹; Luzie Wingen¹; Simon Griffiths¹; Tony Miller¹</i> ¹John Innes Centre; ²Biome Makers</p>	<p>Monitoring changes of O₂ and N₂O concentrations in the rhizosphere of young maize plants by combining O₂ optodes and N₂O microsensors <i>Pauline Sophie Rummel¹; Martin Reinhard Rasmussen²; Theresa Merl²; Tomke S. Wacker³; Klaus Koren²; Per Ambus¹; Carsten W. Mueller⁴</i> ¹ University of Copenhagen, Denmark; ² Aarhus University, Denmark; ³ University of Copenhagen, Denmark; ⁴ Technical University of Berlin, Germany</p>
<p>17:15</p>	<p>Nitric oxide signaling mediated by the bzip transcription factor family regulates root stem cell niche identity <i>Alvaro Sanchez Corrionero¹; Sara Gómez-Jiménez Candidate²; Capilla Mata-Pérez²; Oscar Lorenz</i> ¹Universidad Politécnica de Madrid (UPM), Spain; ²University of Salamanca; ² University of Salamanca</p>	<p>Root microbiome composition under field conditions: Landraces of <i>Zea mays L.</i> respond stronger to reduced precipitation than modern varieties <i>Nicolas Tyborski¹; Tina Koehler²; Franziska Steiner²; Shu-Yin Tung³; Andreas J. Wild¹; Andrea Carminati⁴; Carsten W. Mueller⁵; Alix Vidal⁶; Sebastian Wolfrum³; Johanna Pausch¹; Tillmann Lueders¹</i> ¹University of Bayreuth; ²Technical University of Munich; ³Bavarian State Research Center for Agriculture (LfL); ⁴ETH Zurich; ⁵Technical University of Berlin; ⁶Wageningen University & Research</p>	<p>Boron efficiency mechanisms and how roots respond to boron deficiency stress <i>Thomas Alcock¹; Désirée Bienert¹; Astrid Junker²; Michael Melzer²; Rhonda Meyer²; Nico von Wirén²; Thomas Altmann²; Patrick Bienert¹</i> ¹Technical University of Munich (TUM); ²Leibniz Institute of Plant Genetics and Crop Plant Research (IPK)</p>

Wednesday, 5 June 2024

Time / Room	Hall 1		
09:00	<p>Plenary Lecture 5 Soil or roots? What imposes the main limit to plant water use? <i>Tim Brodribb, University of Tasmania, Australia</i></p>		
09:45	<p>Plenary Lecture 6 Lessons from five years of interdisciplinary research - Rhizosphere spatiotemporal organisation - A key to rhizosphere function <i>Doris Vetterlein, Helmholtz Centre for Environmental Research (UFZ), Germany</i></p>		
10:30	Coffee Break		
	Hall 1 AB	Hall 1 CD	Hall 2
	<p>Session 1.5_D <i>Chair: N.N.</i></p>	<p>Session 1.3_D <i>Chair: N.N.</i></p>	<p>Session 1.4_D <i>Chair: N.N.</i></p>
11:00	<p>Session Keynote Genomic structural variation underlies differential root responses to nitrogen stress in maize <i>Stephanie Klein ; Bimala Acharya; Kaitlin Higgins; Anna Rowzee; Ella Townsend; Conner Valentine; Sarah Anderson</i> <i>Iowa State University</i></p>	<p>Session Keynote A « hydro-reporter » to unravel the early perception of water deficit in roots <i>Yann Boursiac; Yunji Huang</i> <i>INRAE (Institut national de la recherche agronomique)</i></p>	<p>Dynamic interactions of bacterial ACC deaminase trait with plant root exudates <i>Ajay Sorty¹; Fani Ntana²; Martin Hansen¹; Peter Stougaard¹</i> <i>¹Aarhus University, Dep. Environ. Science; ²Bactolife ACS</i></p>
11:30	<p>Tracking dynamic root responses to nitrogen in barley with an automated rhizotron platform <i>Ricardo Giehl¹; Klaus Oldach²; Narendra Narisetti¹; Thorsten Schnurbusch¹; Martin Mascher¹; Evgeny Gladilin¹; Kerstin Neumann¹; Thomas Altmann¹; Nicolaus von Wirén¹</i> <i>¹Leibniz Institute of Plant Genetics and Crop Plant Research (IPK); ²KWS LOCHOW GMBH</i></p>	<p>Root hairs soften the drop in leaf water potential in field grown maize at high vapor pressure deficit even in wet soils <i>Florian Stoll; Osman Mustafa; Andrea Carminati; Mathieu Javaux; Asegidew Akale; Jan Vanderborght; Mutez Ahmed</i></p>	<p>Microbial diversity in intensively managed cropping systems: impact on plant productivity, root traits, and drought stress resilience <i>Amit Kumar¹; Stefanie Schulz²; Vicky Temperton³</i> <i>¹United Arab Emirates University; ²Research Unit Comparative Microbiome Analysis; ³Leuphana University of Lueneburg</i></p>

11:45	<p>Fate of root uptaken citrate in tomato plants suffering phosphorus and iron deficiency <i>Fabio Trevisan¹; Raphael Tiziani¹; Ondřej Hodek²; Thomas Moritz³; Sandra Jämtgård⁴; Stefano Cesco¹; Tanja Mimmo⁵</i> ¹Free University of Bolzano; ²Swedish University of Agricultural Sciences; ³Swedish University of Agricultural Sciences, & University of Copenhagen; ⁴Swedish University of Agricultural Sciences; ⁵Free University of Bolzano</p>	<p>Exploring how plant-growth promoting bacteria colonise the rhizosphere during episodic watering <i>Vicky Waymouth¹; Douglas Brumley¹; Jacob Calabria¹; Hugo Watson¹; Sneha Rajackal Senthil Vel¹; Berit Ebert²; Michelle Watt¹</i> ¹University of Melbourne; ²Ruhr University Bochum</p>	<p>Wheat lines differing in yield, root architecture and mucilage secretion show associated changes in rhizosphere microbiome composition <i>Eric Ober; Emily Marr; Greg Deakin</i> NIAB</p>
12:00	<p>Soil phosphorus and water distribution interact with root architecture: trade-offs and interactions in complex environments <i>Frederik van der Bom¹; Alwyn Williams²; Nelly Raymond¹; Mike Bell²</i> ¹Copenhagen University; ²The University of Queensland</p>	<p>Root exudates help to rewet dry soil and may improve water uptake performance in certain environmental conditions <i>Emma Gomez Peral¹; Andrew Mair¹; Iker Martin Sanchez¹; Mariya Ptashnyk²; Lionel Dupuy¹</i> ¹NEIKER; ²Heriot-Watt University</p>	<p>Leaf photosynthetic physiology and chlorophyll content of soybean response to rhizobial <i>Amit Daisy Mmatladi¹; Mustapha Mohammed²; Felix Dakora¹</i> ¹Tshwane University of Technology; ²University for Development Studies, Ghana</p>
12:15	<p>Dynamic lateral root response to local phosphorus distribution improves phosphorus acquisition by wheat <i>Takuya Koyama¹; Masaaki Hashimoto; Hiromitsu Aoki; Shun Murakami</i> ¹Utsunomiya University</p>	<p>Increasing yield stability in wheat (<i>Triticum aestivum</i> L.) through genetic improvement of root systems <i>Anya Heathcote¹; Charlotte Rambla²; Samir Alahmad²; Hannah Robinson²; Lee Hickey²; Julia Davies³; Eric Ober¹</i> ¹NIAB; ²Queensland Alliance for Agriculture and Food Innovation; ³University of Cambridge</p>	<p>Decoding the impact of novel urease inhibitors on wheat-microbe interactions via Multi-Omics <i>Heber Dias de Oliveira¹; Sneha Gupta²; Benjamin Andrikopoulos²; Uta Wille²; Ulrike Mathesius³; Ute Roessner³</i> ¹The University of Melbourne and the Australian National University; ²The University of Melbourne; ³Australian National University</p>
12:30	Lunch Break		
13:30	<p>Field Trip to Bad Lauchstädt <i>Bus shuttle from UFZ to Bad Lauchstädt</i></p>		
14:00	<p>Guided City Walk <i>Meeting Point: Mendebrunnen at Augustusplatz in the City Center</i></p>		
19:00	<p>Conference Dinner at Moritzbastei</p>		

Thursday 6 June 2024

Time / Room	Hall 1		
09:00	<p>Plenary Lecture 7 Uncovering how roots sense soil stresses using hormone signals <i>Malcom Bennett, University of Nottingham, UK</i></p>		
09:45	<p>Plenary Lecture 8 Mechanisms of heavy metal uptake, detoxification and how roots avoid heavy metal stress <i>Fang-Jie Zhao, Nanjing Agricultural University, China</i></p>		
10:30	Coffee Break		
	Hall 1 AB	Hall 1 CD	Hall 2
	<p>Session 2.3_A Chair: N.N.</p>	<p>Session 2.4_A Chair: N.N.</p>	<p>Session 2.1_A Chair: N.N.</p>
11:00	<p>Session Keynote Adapting rice to climate change: Root traits for rapid seedling establishment and drought recovery <i>Matthias Wissuwa¹; Lukas Krusenbaum¹; Lam Thi Dinh²</i> ¹University of Bonn; ²Hirosaki University, Japan</p>	<p>Session Keynote Temporal variability of rhizospheric P cycling in rice grown under different water management <i>Sara Martinengo¹; Maria Martin¹; Angelia Seyfferth²; Daniel Said-Pullicino¹; Luisella Celi¹</i> ¹University of Turin; ²University of Delaware</p>	<p>Session Keynote Root phenotyping from lab to the field: challenge for the development of climate-resilient crops <i>Yusaku Uga; Shota Teramoto</i> NARO</p>
11:30	<p>Interpreting source/sink limitations to growth through high frequency field root observations <i>Richard Nair¹; Marion Schruppf²; Martin Strube²; Mirco Migliavacca³</i> ¹Trinity College, University of Dublin; ²Max Planck Institut for Biogeochemistry Jena; ³JRC, European Commission</p>	<p>The economic trade-off between root hairs and mycorrhizal partners - from individuals to whole plant communities <i>Elsa Matthus; Joana Bergmann; Karla Barfuss; Tilo Henning</i> Leibnitz Centre for Agricultural Landscape Research, ZALF</p>	<p>Adaptation of arable cropping to reduced tillage in the Maritime North: West of Europe: Do we need to breed different cultivars? <i>Tracy Valentine ; Kirsty Binnie; James Grieves; Adrian Newton</i> The James Hutton Institute</p>
11:45	<p>Enhanced phosphorus-fertilizer-use efficiency in intercropping is partly driven by belowground facilitation <i>Ran An ¹; Rui-Peng Yu ¹; Yi Xing¹; Hans Lambers²; Long Li¹</i> ¹ China Agricultural University (CAU); ² The University of Western Australia</p>	<p>Understanding soil resource acquisition strategies and drought adaptation in temperate landraces and modern cultivars of maize <i>Andreas J. Wild¹; Franziska Steiner²; Marvin Kiene¹; Nicolas Tyborski¹; Shu-Yin Tung³; Tina Koehler¹; Andrea Carminati⁴; Barbara Eder³; Jennifer Groth³; Wouter K. Vahl³; Sebastian Wolfrum³; Tillmann Lueders¹; Christian</i></p>	<p>Engineering legume plants for improved water and nutrient acquisition Shaun Curtin USDA - Agricultural Research Service</p>

		<p><i>Laforsch¹; Carsten W. Mueller⁵; Alix Vidal⁶; Johanna Pausch¹</i> ¹University of Bayreuth; ²Technical University of Munich (TUM); ³Bavarian State Research Center for Agriculture; ⁴ETH Zurich; ⁵Technische Universitaet Berlin; ⁶Wageningen University</p>	
12:00	<p>Expanding insights into belowground competition: applying multi-omics to deep roots <i>Suzanne Fleishman¹; David Eissenstat; Melanie Massonnet; Dario Cantu; Terrence Bell; William King; Michela Centinari</i> ¹Penn State University</p>	<p>Optimizing root systems for yield and soil health in perennial grain crops <i>Molly Hanlon¹; Matthew Rubin¹; Allison Miller²</i> ¹Donald Danforth Plant Science Center; ²Donald Danforth Plant Science Center, Saint Louis University</p>	<p>RaspberryPi Dark Chamber (RaPiD-chamber): introducing a live-imaging chamber to track dynamic root growth adaptation in darkness <i>Katarzyna Retzer</i></p>
12:15	<p>Evaluation of root system architecture diversity in field pennycress (<i>Thlaspi arvense</i> L.) and genetic dissection using genome-wide association mapping studies <i>Marcus Griffiths; Alexander E Liu; Vanessa Jawahir; Sumeet Mankar; Tanner Smith; Kong M Wong; Dmitri A Nusinow; Christopher N Topp</i> Donald Danforth Plant Science Center</p>	<p>Insights into orchid mycorrhiza functioning from stable isotope signatures of fungal pelotons <i>Franziska E. Zahn¹; Erik Söll¹; Thomas K. Chapin²; Deyi Wang³; Sofia I. F. Gomes⁴; Nicole A. Hynson²; Johanna Pausch¹; Gerhard Gebauer¹</i> ¹University of Bayreuth; ²University of Hawai'i at Mānoa; ³Naturalis Biodiversity Center, Leiden; ⁴Leiden University</p>	<p>Root-induced pH increase in the rhizosphere utilizes phosphorus from deficient soils: Across-scale evidence from greenhouse to field, and model simulations <i>Congcong Zheng ; Christian W. Kuppe; Johannes A. Postma</i> IBG-2, Forschungszentrum Jülich</p>
12:30	Lunch Break		
	Hall 1 AB	Hall 1 CD	Hall 2
	Session 2.3_B <i>Chair: N.N.</i>	Session 2.4_B <i>Chair: N.N.</i>	Session 2.1_B <i>Chair: N.N.</i>
14:00	<p>Session Keynote Maize (<i>Zea mays</i> L.) root exudation profiles change in composition and abundances during plant development - a field study <i>Michael Santangeli¹; Teresa Steininger-Mairinger¹; Doris Vetterlein²; Stephan Hann¹; Eva Oburger¹</i> ¹BOKU, University of Natural Resources and Life Sciences Vienna; ²UFZ - Helmholtz-Zentrum für Umweltforschung</p>	<p>Session Keynote The impact of soil, year and genotypic vigour on the release of allelopathic metabolites by wheat <i>Pieter-Willem Hendiks¹; Peter R Ryan²; Paul Weston³; Emmanuel Delhaize⁴; Saliya Gurusinghe³; Leslie Weston³; Gregory Rebetzke²</i> ¹Lincoln University; ²CSIRO (Commonwealth Scientific and Industrial Research Organisation) ; ³Charles Sturt University; ⁴The Australian National University</p>	<p>Session Keynote Can measuring barley root systems at early growth stages in the lab or field predict mature root growth in the field? <i>Charlotte White; Pete Berry</i> ADAS</p>

Foyer			
14:30	Postersession 2: Topic 1.6, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6		
15:30	Coffee Break		
	Hall 1 AB	Hall 1 CD	Hall 2
	Session 2.3_C <i>Chair: N.N.</i>	Session 2.4_C <i>Chair: N.N.</i>	Session 2.2_A <i>Chair: N.N.</i>
16:00	Session Keynote Spatio-temporal dynamics of soil foraging by roots, using stable isotopes to link deep root growth to deep resource uptake <i>Kristian Thorup-Kristensen University of Copenhagen, Denmark</i>	Session Keynote Drought stress in maize alters root exudation and soil microbiome composition and root hairs are involved in this response <i>Roman Paul Hartwig¹; Michael Santangeli²; Henrike Würsig³; María Martín Roldán³; Bunlong Yim⁴; Eva Lippold³; Ariel Tasca⁵; Eva Oburger²; Mika Tarkka³; Doris Vetterlein³; Patrick Bienert⁵; Evgenia Blagodatskaya³; Kornelia Smalla⁴; Monika Wimmer¹</i> <i>¹University of Hohenheim (340e); ²University of Natural Resources and Life Sciences (BOKU) Vienna; ³Helmholtz Centre for Environmental Research (UFZ); ⁴Julius Kühn-Institut (JKI); ⁵Technical University of Munich (TUM)</i>	Session Keynote In search of the optimal root diameter! <i>Johannes Postma ; Christian Kuppe Forschungszentrum Juelich GmbH</i>
16:30	3D root system architecture of woody plant can be assessed using Structure from Motion photogrammetry <i>Clément Saint Cast¹; Céline Meredieu¹; Jean-Pascal Tandonnet¹; Frédéric Boudon²; Raphaël Ségura¹; Pascal Mora³; Frédéric Danjon¹</i> <i>¹INRAE - Institut national de la recherche agronomique; ²CIRAD - UMR AGAP; ³University of Bordeaux Montaigne</i>	¹¹ C-labelling in combination with Positron Emission Tomography (PET) for investigating carbon transport dynamics in complex root systems <i>Ralf Metzner¹; Antonia Chlubek¹; Daniel Pflugfelder¹; Gregor Huber¹; Claudia Knief²; Sina Schultes²; Peng Yu²; Robert Koller¹</i> <i>¹Forschungszentrum Jülich GmbH; ²Universität Bonn</i>	A root hydraulic properties database: the link between experimental data and functional-structural models <i>Juan Baca Cabrera; Jan Vanderborght; <u>Guillaume Lobet</u>¹</i> <i>¹Forschungszentrum Juelich/IBG-3</i>
16:45	Root growth in agroforestry systems: Alley cropping of willow with grassland <i>Wanda Burzik; Lena Voßkuhl; Michel Müller; Rüdiger Graß; Miriam Athmann University of Kassel</i>	Community composition of root-associated oomycete and fungi in the south-western Australian hyper-diverse chronosequence ecosystems <i>Duccio Migliorini¹; Felipe Albornoz Ramirez; Treena Burgess; Kosala Ranathunge; Zhao Zhang; Hans Lambers</i> <i>¹University of Western Australia</i>	Multi-scale characterization of the root hydraulic architecture: insights from coupled experiments and modeling <i>Fabrice Bauget; Yann Boursiac INRAE (Institut national de la recherche agronomique)</i>

<p>17:00</p>	<p>Advantages of a high-frequency soil imagery pipeline for observing root-soil fauna interactions and dynamics <i>Christophe Jourdan¹; Nathalie Raymond²; Anysia Vicens²</i> ¹CIRAD; ²SATT-AxLR</p>	<p>Fuelling the underground: A matter of perspectives <i>Imelda Uwase¹; Carsten Müller²; Florian Wichern³; Frédéric Rees⁴</i> ¹University of Reading; ²Technische Universität Berlin; ³Rhine-Waal University of Applied Sciences; ⁴French National Institute for Agriculture, Food, and Environment (INRAE)</p>	<p>Deciphering Maize Root Proliferation Mechanisms in Phosphorus-Rich Patches: Insights into Sucrose Metabolism and Local-P Signal Regulation <i>Lingyun Cheng¹; Sun Yan; Zhang Jinting</i></p>
<p>17:15</p>	<p>How to Improve the Soybean Root Characteristic in No-Tillage Long-Term Trial Under Sugarcane Residue? <i>Denizart Bolonhezi¹; Paulo Sergio Cordeiro²; Olavo Betiol²; Élcio Rios Perez Leal²; Fábio Fiori Ruiz²</i> ¹Agronomic Institute of Campinas - IAC; ²Sao Paulo State University</p>	<p>Discovering how heat stress and water deficit, alone or in combination reconfigure interactions between plant and microbial communities <i>Corentin Maslard¹; Mustapha Arkoun²; Christophe Salon¹; Fanny Leroy³; Lun Jing²; Jingjing Peng⁴; Marion Prudent¹</i> ¹INRAE; ²TIMAC AGRO; ³Normandie Université; ⁴China Agricultural University (CAU)</p>	<p>Unravelling root growth responses to salt stress in barley <i>Megan Shelden; Chris Brien; Diane Mather</i> The University of Adelaide</p>

Friday, 7 June 2024

Time / Room	Hall 1
09:00	Plenary Lecture 9 Successful predicting of crop yield changes following field inoculations with arbuscular mycorrhizal fungi <i>Klaus Schläppi, University of Basel, Switzerland</i>
09:45	Plenary Lecture 10 Title to be announced <i>Jennifer Pett-Ridge, Lawrence Livermore National Laboratory (LLNL), USA</i>
10:30	Coffee Break
11:00	Plenary Discussion
12:00	Closing / Farwell
13:00	Lunch