

# 6th International Conference on Machine Control and Guidance

1st Conference Day

Monday, 1 October 2018

11:00	<i>Registration (Room H3007)</i>
12:30	<b>Welcoming Address and Opening Remarks (Room H3006)</b>
12:45	<b>Keynote Speech</b> <b>Chances and Challenges of Machine Control and Guidance Systems for Digital Agriculture Applications</b> <i>Prof. P.O. Noack (Agricultural system technology)</i>
13:30	<i>Break</i>
	<b>1<sup>st</sup> Session (Chairperson: Ludger Frerichs)</b> <b>Automation and Assistance Systems (Room H3006)</b>
14:00	<b>Some challenges to address in order to target the second generation of agricultural robots</b> <i>Michel Berducat</i>
14:30	<b>Development of a learning tractor implements coupling application</b> <i>Tobias Blume, Ilja Stasewitsch, Jan Schattenberg and Ludger Frerichs</i>
15:00	<b>Automatic machine and implement identification of an agricultural process using machine learning to optimize farm management information system</b> <i>Thoralf Stein and Henning J. Meyer</i>
15:30	<b>Autonomous phenotyping using a mobile manipulator</b> <i>Camille Dubos, Roland Lenain, Michel Berducat and Frédéric Cointault</i>
16:00	<i>Break</i>
	<b>2<sup>nd</sup> Session (Chairperson: Michel Berducat)</b> <b>Absolute and Relative Positioning (Room H3006)</b>
16:30	<b>Kinematic Positioning in a Real Time Robotic Total Station Network System</b> <i>Gabriel Kerekes and Volker Schwieger</i>
17:00	<b>In-field position accuracy at the millimetre level using a total station: Validation using an industrial robotic arm</b> <i>Dimitris S. Paraforos, Marcus Reutemann, Galibjon Sharipov, Roland Werner and Hans W. Griepentrog</i>
17:30	<b>Representation Learning for Segment Matching for Future Applications in Relative Positioning of Machinery</b> <i>Julian Schmiemann, Jan Schattenberg and Ludger Frerichs</i>
18:00	<b>Cooperative localization based on range-only measurements from robots and infrastructure</b> <i>Cyrille Pierre, Roland Chapuis, Romuald Aufrère, Jean Laneurit and Christophe Debain</i>
19:00	<i>Introduction to the geodesic surveying stand (Geodätenstand) with incentive speech and bonding activities by H2H communication - includes food &amp; drinks</i>

2nd Conference Day  
Tuesday, 2 October 2018

08:15	<i>Registration (Room 3007)</i>
<b>3<sup>rd</sup> Session (Chairperson: Jan Krüger) Control and Guidance (Room H3006)</b>	
08:30	<b>Comparison of controls for a stereo camera based reversing assistance system for vehicle trailer combinations</b> <i>Ilja Stasewitsch, Tobias Blume, Jan Schattenberg and Ludger Frerichs</i>
09:00	<b>Adaptive Control for Guidance of Tracked Vehicles</b> <i>Otto Lerke and Volker Schwieger</i>
09:30	<b>Towards motor control adjustment with inertial sensor measurements for small differential drive robots</b> <i>David Reiser, Marvin Hubl and Hans W. Griepentrog</i>
10:00 <i>Break</i>	
10:30	<b>Keynote Speech</b> <b>Functional Safety for Machine Control Software Development</b> <i>E. Wulf (Control system &amp; software development)</i>
11:00	<b>Keynote Speech</b> <b>Research and development in agricultural robotics: A perspective of digital farming</b> <i>R. Shamshiri (The scientists view on international research in robotics in Ag)</i>
11:45 <i>Break</i>	
<b>4<sup>th</sup> Session (Chairperson: Volker Dworak) Sensors in Plant Production (Room H3006)</b>	
12:30	<b>Concept and first results of a field-robot based on the-go assessment of soil nutrients with ion-selective field effect transistors</b> <i>Vadim Tsukor, Stefan Hinck, Walter Nietfeld, Frank Lorenz, Elena Nadjenko, Andreas Möller, Daniel Mentrup and Arno Ruckelshausen</i>
13:00	<b>Leaf area estimation of reconstructed maize plants using a time-of-flight camera</b> <i>Manuel Vázquez-Arellano, David Reiser, Dimitris S. Paraforos, Miguel Garrido-Izard and Hans W. Griepentrog</i>
13:30	<b>Soil type recognition with artificial intelligence during compaction process</b> <i>Ulrike Nohlen, Robin Popelka and Yann Berquin</i>
14:00	<b>UAV-based Growth Rate Determination in Winter Wheat</b> <i>Diana Becirevic, Lasse Klingbeil, Andreas Honecker, Henrik Schumann, Jens Léon and Heiner Kuhlmann</i>
14:30 <b>Closing Remarks</b>	