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**Gold Coast, Australia
26-28 June 2013**

Editors:

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Content List of 2013 IFAC Intelligent Autonomous Vehicles Symposium

Technical Program for Wednesday June 26, 2013

WeA1		Sorrento Room
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Yang, Xilin		Queensland Univ. of Tech.
Mejias Alvarez, Luis		Queensland Univ. of Tech.
Garratt, Matthew		UNSW Canberra
Pota, Hemanshu R.		Univ. Coll. Univ. of New South Wales
11:50-12:10		WeA1.2
<i>Energy-Based Positioning Control of Underactuated Vehicles Using Manifold Regulation</i> , pp. 9-16.		
Renton, Christopher		Univ. of Newcastle
Perez, Tristan		The Univ. of Newcastle
12:10-12:30		WeA1.3
<i>Flight Test Results of a 2D Snapshot Hover</i> , pp. 17-22.		
Garratt, Matthew		UNSW Canberra
Scott, Lachlan Kenneth		Univ. of New South Wales at the Australian Defence Force Ac
Lambert, Andrew John		UNSW Canberra
Li, Ping		Univ. of New South Wales, Australian Defence Force Acad.
12:30-12:50		WeA1.4
<i>Flight Test of a Polarisation Compass Integrated into an Unmanned Aerial Vehicle Autopilot</i> , pp. 23-27.		
Chahl, Jvaan		Univ. of South Australia
Burke, Mitchell		Defence Science and Tech. Organisation
Rosser, Kent		Defence Science and Tech. Organisation
Mizutani, Akiko		Odonatrix Pty Ltd
WeB1		Sorrento Room
Autonomous Road Vehicles & Traffic Control (Regular Session)		
Chair: Hansen, Karl Damkjær		Aalborg Univ.
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Rezapour, Ehsan		Norwegian Univ. of Science and Tech. (NTNU)
Liljebäck, Pål		NTNU
14:20-14:40		WeB1.2
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Kim, Junsoo		Hanyang Univ.
Jo, Kichun		Hanyang Univ.
Kim, Dongchul		Hanyang Univ.
Chu, Keonyup		Hanyang Univ.
Sunwoo, MyoungHo		Hanyang Univ.
14:40-15:00		WeB1.3
<i>Autonomous Vehicle Navigation in Semi-Structured Urban Environment</i> , pp. 42-47.		
Chaves Magalhães, André		Univ. of São Paulo
Prado, Marcos		Univ. of São Paulo
Grassi Jr, Valdir		Univ. of São Paulo
Wolf, Denis Fernando		Univ. of Sao Paulo
15:00-15:20		WeB1.4
<i>Cooperative Intersection Negotiation for Multiple Autonomous Platoons</i> , pp. 48-53.		
Lam, Stanley		Univ. of New South Wales
Katupitiya, Jayantha		Univ. of New South Wales
15:20-15:40		WeB1.5
<i>Using FUZZY Logic to Control Vehicles Velocity in Traffic System</i> , pp. 54-59.		
AlGhamdi, Ahmed		Curtin Univ.

WeC1		Sorrento Room
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Chair: Perez Rastelli, Joshue M		INRIA
16:10-16:30		WeC1.1
<i>Counter-Current and Co-Current Guidance of Underactuated Unmanned Marine Vehicles</i> , pp. 60-66.		
Caharija, Walter		NTNU
Pettersen, Kristin Y.	Norwegian Univ. of Science and Tech.	
Gravdahl, Jan Tommy	Norwegian Univ. of Science & Tech.	
16:30-16:50		WeC1.2
<i>Simulator and Control System Design for a Free Floating Surface Effect Ship at Zero Vessel Speed</i> , pp. 67-72.		
Auestad, Øyvind, F.	Norwegian Univ. of Science & Tech. Umoe Mandal	
Gravdahl, Jan Tommy	Norwegian Univ. of Science & Tech.	
Soerensen, Asgeir	Norwegian Univ. of Science and Tech.	
Espeland, Trygve Halvorsen	Umoe Mandal AS	
16:50-17:10		WeC1.3
<i>An Optimised Nonlinear Model Predictive Control Based Autopilot for an Uninhabited Surface Vehicle</i> , pp. 73-78.		
Sharma, Sanjay		Plymouth Univ.
Sutton, Robert		The Univ. of Plymouth
17:10-17:30		WeC1.4
<i>Robust Dynamic Inversion Based on Sliding Mode Control for Autonomous Underwater Vehicles</i> , pp. 79-84.		
Yang, Inseok		Kyungpook National Univ.
Byun, Sungil		Kyungpook National Univ.
Seo, Byungseok		Kyungpook National Univ.
Lee, Dongik		Kyungpook National Univ.
Han, Dong Seog		Kyungpook National Univ.
17:30-17:50		WeC1.5
<i>Feasibility Study of POMDP in Autonomous Amphibious Vehicle Guidance</i> , pp. 85-90.		
Ragi, Shankarachary		Colorado State Univ.
Tan, ChingSeong		Multimedia Univ.
Chong, Edwin K. P.		Colorado State Univ.

Technical Program for Thursday June 27, 2013

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Chair: Sharma, Sanjay		Plymouth Univ.
09:30-09:50		ThA1.1
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Indiveri, Giovanni		Univ. of Salento
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<i>Positioning Algorithm Based on Skylight Polarization Navigation</i> , pp. 97-101.		
Cheng, Zhen		Univ. of Science and Tech. of China
Mei, Tao	Hefei Inst. of Physical Science, China Acad. of Science	
Liang, Huawei	Inst. of Advanced Manufacturing Tech.	
10:10-10:30		ThA1.3
<i>Vehicle Localization System Using Offboard Range Sensor Network</i> , pp. 102-107.		
Ferreira, João Filipe		Inst. Superior Técnico
Vale, Alberto		Inst. Superior Técnico
Ventura, Rodrigo		Inst. Superior Técnico
10:30-10:50		ThA1.4
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Sousa, José		Inst. Superior Técnico
Silva Sequeira, Joao		Inst. Superior Técnico

ThB1		Paradise Rooms 1&2
Autonomous Land Vehicles (Regular Session)		
Chair: Temeltas, Hakan		Istanbul Tech. Univ.
11:20-11:40		ThB1.1
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Jo, Kichun		Hanyang Univ.
Lee, Minchae		Hanyang Univ.
Kim, Dongchul		Hanyang Univ.
Kim, Junsoo		Hanyang Univ.
Jang, Chulhoon		Hanyang Univ.
Kim, Euiyun		Hanyang Univ.
Kim, Sangkwon		Hanyang Univ.
Lee, Donghwi		Hanyang Univ.
Kim, Changsup		Hanyang Univ.
Kim, Seungki		Hanyang Univ.
Huh, Kunsoo		Hanyang Univ.
Sunwoo, Myounggho		Hanyang Univ.
11:40-12:00		ThB1.2
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Perez Rastelli, Joshue M		INRIA
Milanés, Vicente	Center for Automation and Robotics	
Santos, Matilde	Univ. Complutense de Madrid	
12:00-12:20		ThB1.3
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Zhang, Liang	State Key Lab. of Information Engineering in Surveying, Ma	
Li, Qingquan		ShenZhen Univ.
Li, Ming		Wuhan Univ.
Mao, Qingzhou		Wuhan Univ.
Nuchter, Andreas		Jacobs Univ. Bremen gGmbH
12:20-12:40		ThB1.4
<i>A Testbed for Predicting Maneuverability of UGV on Rough Terrain</i> , pp. 132-137.		
Kim, Jayoung		Chungnam National Univ.
Lee, Jihong		Chungnam National Univ.
ThC1		Paradise Rooms 1&2
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Chair: Kalmari, Jouko		Aalto Univ.
13:50-14:10		ThC1.1
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Lazaro, Maria Teresa		Univ. de Zaragoza
Paz, Lina Maria		Univ. of Zaragoza
Pinies, Pedro		Univ. of Zaragoza
Castellanos, Jose A.		Univ. of Zaragoza
14:10-14:30		ThC1.2
<i>Wireless Sensor Networks Clock Synchronization with Selective Convergence Rate</i> , pp. 146-151.		
Lamonaca, Francesco	Dept. of Informatics, Models, Electronic and Systems, Univ.	
Gasparri, Andrea		Univ. of Roma Tre
Garone, Emanuele		Univ. Libre de Bruxelles
14:30-14:50		ThC1.3
<i>Reactive Clustering Method for Platooning Autonomous Mobile Robots</i> , pp. 152-157.		
Hoshino, Satoshi		Utsunomiya Univ.
14:50-15:10		ThC1.4
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Petereit, Janko		Fraunhofer IOSB
Emter, Thomas		Fraunhofer IOSB
Frey, Christian Walter		MRD

ThD1		Paradise Rooms 1&2
Fault Diagnosis and Fault Tolerance (Regular Session)		
Chair: Visala, Arto		Aalto Univ. ELEC School
15:40-16:00		ThD1.1
<i>A Neural-Network Based Flight Controller for UASs</i> , pp. 164-171.		
Yang, Xilin		Queensland Univ. of Tech.
Mejias Alvarez, Luis		Queensland Univ. of Tech.
16:00-16:20		ThD1.2
<i>Incremental Cholesky Factorization for Least Squares Problems in Robotics</i> , pp. 172-178.		
Polok, Lukas		Brno Univ. of Tech. Faculty of Information Tech.
Solony, Marek		Brno Univ. of Tech.
Ila, Viorela		Brno Univ. of Tech.
Zemcik, Pavel		Department of Computer Graphics and Multimedia
Smrz, Pavel		Department of Computer Graphics and Multimedia
16:20-16:40		ThD1.3
<i>Verifying Performance for Autonomous Robot Missions with Uncertainty</i> , pp. 179-186.		
Lyons, Damian		Fordham Univ.
Arkin, Ron		Georgia Inst. of Tech.
Liu, Tsung-Ming		Fordham Univ.
Jiang, Shu		Georgia Inst. of Tech.
Nirmal, Paramesh		Fordham Univ.
16:40-17:00		ThD1.4
<i>Exception Handling and Detection in Mission Control for Mobile Robots</i> , pp. 187-192.		
Andersen, Thomas Timm		Tech. Univ. of Denmark
Andersen, Nils A.		Tech. Univ. of Denmark
Ravn, Ole		Tech. Univ. of Denmark

Technical Program for Friday June 28, 2013

FrA1		Paradise Rooms 1&2
Navigation I (Regular Session)		
Chair: Garratt, Matthew		UNSW Canberra
10:00-10:20		FrA1.1
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Liu, Cunjia		Loughborough Univ.
Li, Baibing		Loughborough Univ.
Chen, Wen-hua		Loughborough Univ.
10:20-10:40		FrA1.2
<i>Simultaneous Localization and Routing in Sensor Networks Using Shadow Edges</i> , pp. 199-204.		
Pascucci, Federica		Univ. degli Studi Roma Tre
Panzieri, Stefano		Univ. di Roma Tre
Setola, Roberto		Univ. Campus Biomedico
Oliva, Gabriele		Univ. of Roma Tre
10:40-11:00		FrA1.3
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De Marco, Tommaso		Istituto Nazionale di Ottica (INO) - CNR
Distante, Cosimo		CNR
Indiveri, Giovanni		Univ. of Salento
11:00-11:20		FrA1.4
<i>Stereo-Based Autonomous Navigation and Obstacle Avoidance</i> , pp. 211-216.		
Mendes, Caio César Teodoro		Univ. of São Paulo
Wolf, Denis Fernando		Univ. of Sao Paulo
Osorio, Fernando		USP - Univ. of Sao Paulo / ICMC

FrB1		Paradise Rooms 1&2
Autonomous Vehicles (Regular Session)		
Chair: Veres, Sandor M		Univ. of Sheffield
11:50-12:10		FrB1.1
<i>An Autonomous Robotic System for Mapping Weeds in Fields</i> , pp. 217-224.		
Hansen, Karl Damkjær		Aalborg Univ.
Garcia-Ruiz, Francisco		Copenhagen Univ.
Kazmi, Wajahat		Aalborg Univ.
Bisgaard, Morten		Aalborg Univ.
la Cour-Harbo, Anders		Aalborg Univ.
Rasmussen, Jesper		Univ. of Copenhagen
Andersen, Hans Jørgen		Aalborg Univ.
12:10-12:30		FrB1.2
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Silva, Jorge Bruno		Univ. of Minho
Silva Sequeira, Joao		Inst. Superior Tecnico
Santos, Cristina		Univ. of Minho
12:30-12:50		FrB1.3
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Chahl, Javaan		Univ. of South Australia
Dorrington, Graham		RMIT Univ.
Premachandran, Sarah		Defence Science and Tech. Organisation
Mizutani, Akiko		Odonatrix Pty Ltd
12:50-13:10		FrB1.4
<i>Design Elements of a Bio-Inspired Micro Air Vehicle</i> , pp. 235-241.		
Palmer, Jennifer L.		Defence Science and Tech. Organisation
Jones, Malcolm B.		Defence Science and Tech. Organisation
Drobik, Jan		Defence Science and Tech. Organisation
FrC1		Paradise Rooms 1&2
Navigation II (Regular Session)		
Chair: Chung, Chung Choo		Hanyang Univ.
14:20-14:40		FrC1.1
<i>SEIF Based 6D-SLAM Using Planar Features in Large Scale and Outdoor Environment</i> , pp. 242-247.		
Ulas, Cihan		TUBITAK
Temeltas, Hakan		Istanbul Tech. Univ.
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<i>Feature Based Modeling and Mapping of Tree Trunks and Natural Terrain Using 3D Laser Scanner Measurement System</i> , pp. 248-255.		
Hyyti, Heikki Sakari		Aalto Univ.
Visala, Arto		Aalto Univ. ELEC School
15:00-15:20		FrC1.3
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Bresson, Guillaume		Inst. Pascal - Blaise Pascal Univ.
Aufrère, Romuald		Inst. Pascal - Blaise Pascal Univ.
Chapuis, Roland		Inst. Pascal
15:20-15:40		FrC1.4
<i>The Frame Alignment Problem in Formations of Multi-Agent Systems</i> , pp. 262-267.		
Veres, Sandor M		Univ. of Sheffield
Caicedo, Carlos		NA
15:40-16:00		FrC1.5
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Alpen, Mirco		Helmut-Schmidt-Univ.
Frick, Klaus		Helmut-Schmidt-Univ.
Horn, Joachim		Helmut-Schmidt-Univ. / Univ. of the Federal Armed Forc

FrD1		Paradise Rooms 1&2
Estimation, Control and Motion Planning (Regular Session)		
Chair: Chahl, Javaan		Univ. of South Australia
16:30-16:50		FrD1.1
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Kalmari, Jouko		Aalto Univ.
Hyyti, Heikki Sakari		Aalto Univ.
Visala, Arto		Aalto Univ. ELEC School
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Kim, Bo-Ah		Hanyang Univ.
Son, Youngseop		MANDO
Lee, Seung-Hi		Hanyang Univ.
Chung, Chung Choo		Hanyang Univ.
17:10-17:30		FrD1.3
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Lee, Seung-Hi		Hanyang Univ.
Son, Youngseop		MANDO
Kang, Chang Mook		Hanyang Univ.
Chung, Chung Choo		Hanyang Univ.
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Fouque, Clément	Clermont Univ. Univ. Blaise Pascal, Inst. Pascal	
Marmoitton, François		Inst. Pascal