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2012 IEEE International Conference on Multisensor Fusion and Integration for Intelligent Systems (MFI)

Technical Program for Thursday September 13, 2012

ThB1	Room 120
Information Fusion (I)	Regular Sessions
Chair: Xiao, Jizhong	The City Coll. of New York
Co-Chair: Liu, Ming	ETH Zurich
10:20-10:45, Paper ThB1.1	
<i>A Sensor Fusion Approach for Localization with Cumulative Error Elimination</i>	
Zhang, Feihu	TU München
Staehele, Hauke	Tech. Univ. Munich
Chen, Guang	Tech. Univ. of Munich
Chen, Chao	fortiss GmbH
Simon, Carsten	fortiss GmbH
Buckl, Christian	fortiss
Knoll, Alois	TU Munich
10:45-11:10, Paper ThB1.2	
<i>DP-Fusion: A Generic Framework for Online Multi Sensor Recognition</i>	
Liu, Ming	ETH Zurich
Wang, Lujia	The Chinese Univ. of Hong Kong
Siegwart, Roland	ETH Zurich
11:10-11:35, Paper ThB1.3	
<i>Real-Time Pose Estimation with RGB-D Camera</i>	
Dryanovski, Ivan	The Graduate Center, The City Univ. of New York (CUNY)
Morris, William	I Heart Engineering
Kaushik, Ravi	The City Univ. of New York
Xiao, Jizhong	The City Coll. of New York
11:35-12:00, Paper ThB1.4	

<i>Towards Real-Time Multi-Sensor Information Retrieval in Cloud Robotics System</i>	
Wang, Lujia	The Chinese Univ. of Hong Kong
Liu, Ming	ETH Zurich
Meng, Max Q.-H.	The Chinese Univ. of Hong Kong
Siegwart, Roland	ETH Zurich
ThB2	Room 121
Tracking and Localization (I)	Regular Sessions
Chair: Ma, Shugen	Ritsumeikan Univ.
Co-Chair: Xiao, Junhao	Univ. of Hamburg
10:20-10:45, Paper ThB2.1	
<i>Estimation of Occupant Distribution by Detecting the Entrance and Leaving Events of Zones in Building</i>	
Wang, Hengtao	Tsinghua Univ.
Jia, Qing-Shan	Tsinghua Univ.
Lei, Yulin	Tsinghua Univ.
Zhao, Qianchuan	Tsinghua Univ.
Guan, Xiaohong	Xian Jiaotong Univ.
10:45-11:10, Paper ThB2.2	
<i>Fast and Robust Detection of Runway Incursions Using Localized Sensors</i>	
Schönefeld, Janis	Univ. of Hamburg, Chair of Computer Engineering
11:10-11:35, Paper ThB2.3	
<i>3D Point Cloud Registration Based on Planar Surfaces</i>	
Xiao, Junhao	Univ. of Hamburg
Adler, Benjamin	Univ. of Hamburg
Zhang, Houxiang	Aalesund Univ. Coll.
11:35-12:00, Paper ThB2.4	
<i>Localizability Estimation for Mobile Robots Based on Probabilistic Grid Maps and Its Applications to Localization</i>	
Liu, Zhe	Shanghai Jiao Tong Univ.
Chen, Weidong	Shanghai Jiao Tong Univ.
Wang, Yong	Shanghai Jiao Tong Univ.
Wang, Jingchuan	Shanghai Jiao Tong Univ.
ThB3	Room 122
Grasping (I)	Regular Sessions
Chair: Sun, Fuchun	Tsinghua Univ.

Co-Chair: Bimbo, Joao	King's Coll. London
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10:20-10:45, Paper ThB3.1	
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Dexterous Robotic Hand Grasp Modeling Using Piecewise Linear Dynamic Model ~~XXXXXXXXXX~~ G

Xiao, Wei	Department of Computer Science and Technology, Tsinghua University,
Sun, Fuchun	Tsinghua Univ.
Liu, Huaping	Tsinghua Univ.
Liu, Heyu	Tsinghua Univ.
He, Chao	Coll. of Information Engineering, Taiyuan Univ. of Technology

10:45-11:10, Paper ThB3.2	
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Modeling and Control Architecture for the Competitive Networked Robot System Based on POMDP ~~XXXXXXXXXX~~ I

Li, Yan	Nankai Univ.
Liu, Jingtai	Nankai Univ.
Li, Haifeng	Nankai Univ.
Lu, Xiang	Nankai Univ.
Sun, Lei	Nankai Univ.

11:10-11:35, Paper ThB3.3	
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Object Pose Estimation and Tracking by Fusing Visual and Tactile Information ~~XXXXXXXXXXXXXXXXXXXX~~ I

Bimbo, Joao	King's Coll. London
Rodríguez-Jiménez, Silvia	Univ. Carlos III de Madrid
Liu, Hongbin	King's Coll. London
Song, Xiaojing	King's Coll. London
Burrus, Nicolas	Univ. Carlos III de Madrid
Seneviratne, Lakmal	Kings Coll. London
Abderrahim, Mohamed	Carlos III Univ.
Althoefer, Kaspar	Kings Coll. London

11:35-12:00, Paper ThB3.4	
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Hand Gesture Recognition Using Color and Depth Images Enhanced with Hand Angular Pose Data ~~XXXXXXXXXX~~ F

Trindade, Pedro	Inst. of Systems and Robotics - Univ. of Coimbra
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Lobo, Jorge	Univ. of Coimbra
Barreto, João P.	Univ. of Coimbra

ThC1	Room 120
Information Fusion (II)	Regular Sessions
Chair: Rao, Nageswara	Oak Ridge National Lab.
Co-Chair: Adler, Benjamin	Univ. of Hamburg

13:30-13:55, Paper ThC1.1

Towards Autonomous Airborne Mapping of Urban Environments

Adler, Benjamin	Univ. of Hamburg
Xiao, Junhao	Univ. of Hamburg

13:55-14:20, Paper ThC1.2

Navigation Information Fusion for an AUV in Rivers

Rao, Jinjun	Shanghai Univ.
Chen, Jinbo	Shanghai Univ.
Ding, Wei	Shanghai Univ.
Gong, Zhenbang	Shanghai Univ.

14:20-14:45, Paper ThC1.3

Heterogeneous Feature Based Correspondence Estimation

Tamas, Levente	Tech. Univ. of Cluj-Napoca
Majdik, Andras	Tech. Univ. of Cluj-Napoca

14:45-15:10, Paper ThC1.4

On State Fusers Over Long-Haul Sensor Networks

Brigham, Katharine	Carnegie Mellon Univ.
Vijaya Kumar, B.V.K	Carnegie Mellon Univ.
Rao, Nageswara	Oak Ridge National Lab.
Liu, Qiang	Stony Brook Univ.
Wang, Xin	Stony Brook Univ.

ThC2	Room 121
Cognitive Systems	Regular Sessions
Chair: Henderson, Thomas C.	Univ. of Utah
Co-Chair: Hao, Qi	Univ. of Alabama

13:30-13:55, Paper ThC2.1

Symmetry As a Basis for Perceptual Fusion

Henderson, Thomas C.	Univ. of Utah
Cohen, Elaine	Univ. of Utah

Grant, Edward	North Carolina State Univ.
Draelos, Mark	North Carolina State Univ.
Deshpande, Nikhil	North Carolina State Univ.
Joshi, Anshul	Univ. of Utah
13:55-14:20, Paper ThC2.2	
<i>Development of a Fuzzy Inclusion Measure for Investigating Relations between Visual and Tactile Perception of Textile Products</i>	
Xue, Zhebin	ENSAIT
Zeng, Xianyi	ENSAIT
Koehl, Ludovic	ENSAIT
Chen, Yan	Soochow Univ.
14:20-14:45, Paper ThC2.3	
<i>Smoke and Mirrors—Virtual Realities for Sensor Fusion Experiments in Biomimetic Robotics</i>	
Bauer, Johannes	Univ. Hamburg
Davila-Chacon, Jorge	Univ. Hamburg
Strahl, Erik	Univ. Hamburg
Wermter, Stefan	Univ. of Hamburg
14:45-15:10, Paper ThC2.4	
<i>Buffon's Needle Model Based Walker Recognition with Distributed Binary Sensor Networks</i>	
Ma, Rui	Univ. of Alabama
Hao, Qi	Univ. of Alabama
ThC3	Room 122
Grasping (II)	Regular Sessions
Chair: Dias, Jorge	Univ. of Coimbra
Co-Chair: Zhang, Jun	Shenzhen Inst. of Advanced Technology, Chinese Academy of Sciences
13:30-13:55, Paper ThC3.1	
<i>Improving Robustness of Robotic Grasping by Fusing Multi-Sensor</i>	
Zhang, Jun	Shenzhen Inst. of Advanced Technology, Chinese Academy of Sciences
Song, Caixia	Hunan Univ.
Hu, Ying	Shenzhen Inst. of Advanced Tech. Shenzhen, China
Yu, Bin	Shenzhen Inst. of Advanced Tech. Chinese Acad. of Sciences

13:55-14:20, Paper ThC3.2	
<i>Identifying Objects from Hand Configurations During In-Hand Exploration</i>	
Faria, Diego	Univ. of Coimbra
Lobo, Jorge	Univ. of Coimbra
Dias, Jorge	Univ. of Coimbra
14:20-14:45, Paper ThC3.3	
<i>Tactile Image Based Contact Shape Recognition Using Neural Networks</i>	
Liu, Hongbin	King's Coll. London
Greco, Juan	KTH (Kungliga Tekniska högskolan)
Song, Xiaojing	King's Coll. London
Bimbo, Joao	King's Coll. London
Seneviratne, Lakmal	Kings Coll. London
Althoefer, Kaspar	Kings Coll. London
14:45-15:10, Paper ThC3.4	
<i>An Optical Multi-Axial Force/Torque Sensor for Dexterous Grasping and Manipulation</i>	
Sargeant, Ramon	Kings Coll. London
Liu, Hongbin	King's Coll. London
Seneviratne, Lakmal	Kings Coll. London
Althoefer, Kaspar	Kings Coll. London
ThD1	Room 120
Slam (i)	Regular Sessions
Chair: Ma, Shugen	Ritsumeikan Univ.
Co-Chair: Stueckler, Joerg	Univ. of Bonn
15:30-15:55, Paper ThD1.1	
<i>Self-Map Building in Wireless Sensor Network Based on TDOA Measurements</i>	
Liu, Shuanglong	Tsinghua Univ.
Tang, Yuchao	Xi'an Jiaotong Univ.
Zhang, Chun	Tsinghua Univ.
Yue, Shigang	Univ. of Lincoln
15:55-16:20, Paper ThD1.2	
<i>Robust EgoMotion for Large-Scale Trajectories</i>	
Rodriguez Bartolome, Diego	Cranfield Univ.

Aouf, Nabil	Cranfield Univ.
16:20-16:45, Paper ThD1.3	
<i>Integrating Depth and Color Cues for Dense Multi-Resolution Scene Mapping Using RGB-D Cameras</i>	
Stueckler, Joerg	Univ. of Bonn
Behnke, Sven	Univ. of Bonn
16:45-17:10, Paper ThD1.4	
<i>Data Association for a Hybrid Metric Map Representation</i>	
Guo, Shuai	Shenyang Inst. of Automation, Chinese Acad.
Ma, Shugen	Ritsumeikan Univ.
Wang, Minghui	Shenyang Inst. of Automation, Chinese Acad.
Li, Bin	Shenyang Inst. of Automation
ThD2	Room 121
Tracking and Localization (II)	Regular Sessions
Chair: Stolkin, Rustam	Univ. of Birmingham
Co-Chair: Baum, Marcus	Karlsruhe Inst. of Tech. (KIT)
15:30-15:55, Paper ThD2.1	
<i>Flexible Structured Sparse Representation for Robust Visual Tracking</i>	
Bai, Tianxiang	City Univ. of Hong Kong
Li, Y.F.	City Univ. of Hong Kong
Tang, Yazhe	City Univ. of Hong Kong
15:55-16:20, Paper ThD2.2	
<i>Space Encoding Based Compressive Multiple Human Tracking with Distributed Binary Pyroelectric Infrared Sensor Networks</i>	
Lu, Jiang	Univ. of Alabama
Gong, Jiaqi	Univ. of Alabama
Hao, Qi	Univ. of Alabama
Fei, Hu	Univ. of Alabama
16:20-16:45, Paper ThD2.3	
<i>Tracking Ground Moving Extended Objects Using RGBD Data</i>	
Baum, Marcus	Karlsruhe Inst. of Tech. (KIT)
Faion, Florian	Karlsruhe Inst. of Tech.
Hanebeck, Uwe D.	Karlsruhe Inst. of Tech. (KIT)
16:45-17:10, Paper ThD2.4	
<i>Bayesian Fusion of Thermal and Visible Spectra Camera Data for Region Based Tracking with Rapid Background Adaptation</i>	

Stolkin, Rustam	Univ. of Birmingham
Rees, David	Univ. of Birmingham
Talha, Mohammed	Univ. of Birmingham
Florescu, Ionut	Stevens Inst. of Tech.

ThD3	Room 122
Bio-Based Systems (I)	Regular Sessions
Chair: Lee, Gordon	San Diego State Univ.
Co-Chair: Yang, Simon X.	Univ. of Guelph

15:30-15:55, Paper ThD3.1	
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A Smart Transmission Scheme for Emergency Data from a Network of Bio-Sensors on the Human Body

Vohra, Aliabbas	San Diego State Univ.
Sarkar, Sweta	San Diego State Univ.
Lee, Gordon	San Diego State Univ.

15:55-16:20, Paper ThD3.2	
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A Design and Simulation of Aircraft Drilling End-Effector Based on Bionics

Yuan, Peijiang	Beihang Univ.
Wang, Tianmiao	Beihang Univ.
Fucun, Ma	Beijing Univ. of Aeronautics & Astronautics
Gong, Maozhen	Beihang Univ.

16:20-16:45, Paper ThD3.3	
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Using Multi-Dimensional Dynamic Time Warping for TUG Test Instrumentation with Inertial Sensors

Al-Jawad, Ahmed	Inst. für Mikrotechnik und Informationstechnik der Hahn-Schickard
Adame, Miguel Reyes	Department of Biomedical Engineering, Hochschule Furtwangen Univ.
Romanovas, Michailas	Hahn-Schickard-Gesellschaft Inst. of Microsystems and Inform
Hobert, Markus	Hertie Inst. for Clinical Brain Res. Department of Neur
Maetzler, Walter	Hertie Inst. for Clinical Brain Res. Department of Neur
Traechtler, Martin	Hahn-Schickard-Gesellschaft Inst. of Microsystems and Inform
Moeller, Knut	Department of Biomedical Engineering, Hochschule Furtwangen Univ.
Manoli, Yiannos	Fritz Huettinger Chair of Microelectronics, Department of

		Micros
16:45-17:10, Paper ThD3.4		
<i>A Fuzzy Logic Based Bio-Inspired System for Mobile Robot Navigation</i>		
Wang, Lei		Univ. of Guelph
Yang, Simon X.		Univ. of Guelph
Biglarbegan, Mohammad		Univ. of Guelph

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2012 IEEE International Conference on Multisensor Fusion and Integration for Intelligent Systems (MFI)

Technical Program for Friday September 14, 2012

FrB1	Room 120
Information Fusion (III)	Regular Sessions
Chair: Curio, Cristóbal	Max Planck Inst. for Biological Cybernetics
Co-Chair: Vasudevan, Shrihari	Univ. of Sydney
10:20-10:45, Paper FrB1.1	
<i>Information Fusion in Multi-Task Gaussian Process Models</i>	
Vasudevan, Shrihari	Univ. of Sydney
Melkumyan, Arman	The Univ. of Sydney
Scheding, Steven	The Univ. of Sydney
10:45-11:10, Paper FrB1.2	
<i>Distributed Optimal Fusion Estimation for Multi-Sensor Systems Subject to Random Delay and Packet Drop</i>	
Sun, Jiabing	Shandong Univ. at Weihai
Zhang, Chengjin	Shandong Univ.
11:10-11:35, Paper FrB1.3	
<i>Unified Mixture-Model Based Terrain Estimation with Markov Random Fields</i>	
Tse, Rina	Cornell Univ.
Ahmed, Nisar	Cornell Univ.
Campbell, Mark	Cornell Univ.
11:35-12:00, Paper FrB1.4	
<i>Monocular Heading Estimation in Non-Stationary Urban Environment</i>	
Curio, Cristóbal	Max Planck Inst. for Biological Cybernetics
Herdtweck, Christian	Max-Planck-Inst. fuer biologische Kybernetik
FrB2	Room 121
Sensors (I)	Regular Sessions
Chair: Deshpande, Nikhil	Istituto Italiano di Tecnologia
Co-Chair: Zhang, Yu	Univ. fo Lincoln
10:20-10:45, Paper	

FrB2.1	
<i>The Kinect up Close: Adaptations for Short-Range Imaging</i>	
Draelos, Mark	North Carolina State Univ.
Deshpande, Nikhil	Istituto Italiano di Tecnologia
Grant, Edward	North Carolina State Univ.
10:45-11:10, Paper FrB2.2	
<i>Multi Sensors Based Ultrasonic Human Face Identification: Experiment and Analysis</i>	
Xu, Yong	Inst. of Acoustics, Chinese Acad. of Sciences
Wang, Jingyao	Inst. of Acoustics, Chinese Acad. of Sciences
Cao, Benxi	Inst. of Acoustics, Chinese Acad. of Sciences
Yang, Jun	Inst. of Acoustics, Chinese Acad. of Sciences
11:10-11:35, Paper FrB2.3	
<i>Multiple Active Speaker Localization Based on Audio-Visual Fusion in Two Stages</i>	
Li, Zhao	Telecommunications Lab. IVCI, Saarland Univ.
Herfet, Thorsten	Saarland Univ.
Grochulla, Martin	Max-Planck-Inst. Informatik
Thormaehlen, Thorsten	MPI Informatik
11:35-12:00, Paper FrB2.4	
<i>Applied Sensor Fault Detection and Validation Using Transposed Input Data PCA and ANNs</i>	
Zhang, Yu	Univ. of Lincoln
Bingham, Chris	Univ. of Lincoln
Gallimore, Michael	Univ. of Lincoln
Yang, Zhijing	School of Engineering, Univ. of Lincoln, Lincoln, LN6 7TS
Chen, Jun	School of Engineering, Univ. of Lincoln
FrB3	Room 122
Bio-Based Systems (II)	Regular Sessions
Chair: Jin, Haiyang	Shenzhen Graduate School, Harbin Inst. China
Co-Chair: Richter, Eugen	Univ. of Hamburg
10:20-10:45, Paper FrB3.1	
<i>Intraoperative State Recognition of a Bone-Drilling System with Image-Force Fusion</i>	

Jin, Haiyang	Shenzhen Graduate School, Harbin Inst.
Hu, Ying	Shenzhen Inst. of Advanced Tech. ShenZhen, China
Luo, Huoling	Shenzhen Inst. of Advanced Tech. Acad. of
Zheng, Tianyi	Univ. of Science and Tech. of China.
Zhang, Peng	Shenzhen Inst. of Advanced Tech.
10:45-11:10, Paper FrB3.2	
<i>Study on Impedance Generation Using an Exoskeleton Device for Upper-Limb Rehabilitation</i>	
Song, Zhibin	Graduate School of Kagawa Univ. Japan
Guo, Shuxiang	Kagawa Univ.
11:10-11:35, Paper FrB3.3	
<i>Data Fusion of Electromyography Signals from Intraoperative Nerve Monitoring and Position Information from Surgical Navigation</i>	
Shi, Jiayi	Tech. Univ. München
Lueth, Tim C.	Tech. Univ. München
11:35-12:00, Paper FrB3.4	
<i>Mind-Controlled Micro-Biomanipulation with Position Sensing Feedback: System Integration and Validation</i>	
Luo, Yudong	Univ. of Nevada, Reno
Shen, Yantao	Univ. of Nevada, Reno
FrC1	Room 120
Information Fusion (IV)	Regular Sessions
Chair: Luo, Ren	National Taiwan Univ.
Co-Chair: Rigatos, Gerasimos	Harper Adams Univ. Coll.
13:30-13:55, Paper FrC1.1	
<i>Derivative-Free Distributed Filtering for Integrity Monitoring of AGV Navigation Sensors</i>	
Rigatos, Gerasimos	Harper Adams Univ. Coll.
13:55-14:20, Paper FrC1.2	
<i>The Hypothesizing Distributed Kalman Filter</i>	
Reinhardt, Marc	Karlsruhe Inst. of Tech.
Noack, Benjamin	Karlsruhe Inst. of Tech. (KIT)
Hanebeck, Uwe D.	Karlsruhe Inst. of Tech. (KIT)
14:20-14:45, Paper FrC1.3	
<i>Multisensor Methods to Estimate Thermal Diffusivity</i>	
Henderson, Thomas C.	Univ. of Utah

Knight, Gwen	Univ. of Utah
Grant, Edward	North Carolina State Univ.

14:45-15:10, Paper FrC1.4

Multi-Sensor Fusion Based Hand Sign Recognition for Human-Robot Interaction for Service Robot

Luo, Ren	National Taiwan Univ.
Wu, Yen-Chang	National Taiwan Univ.

FrC2 Room 121

Tracking and Localization (III) Regular Sessions

Chair: Dillmann, Rüdiger	KIT Karlsruhe Inst. for Tech.
Co-Chair: Tang, Yazhe	City Univ. of Hong Kong

13:30-13:55, Paper FrC2.1

Rotating Adaptive Haar Wavelet Transform for Human Tracking in Thermal Omnidirectional Vision

Tang, Yazhe	City Univ. of Hong Kong
Li, Y.F.	City Univ. of Hong Kong
Bai, Tianxiang	City Univ. of Hong Kong
Zhou, Xiaolong	City Univ. of Hong Kong

13:55-14:20, Paper FrC2.2

Robust Visual Tracking Based on Adaptive Depth-Color-Cue Integration Using Range Sensor

Wang, Can	Pekiing Univ.
Liu, Hong	Peking Univ.

14:20-14:45, Paper FrC2.3

Active Sensing Methods for Localization Scenarios with Range-Based Measurements

Wang, Can	Pekiing Univ.
Liu, Hong	Peking Univ.

14:45-15:10, Paper FrC2.4

On Active Sensing Methods for Localization Scenarios with Range-Based Measurements

Trapnauskas, Justinas	Vilnius Gediminas Technical Univ.
Romanovas, Michailas	Hahn-Schickard-Gesellschaft Inst. of Microsystems and Inform
Klingbeil, Lasse	Univ. of Bonn
Al-Jawad, Ahmed	Inst. für Mikrotechnik und Informationstechnik der Hahn-Schickard
Traechtler, Martin	Hahn-Schickard-Gesellschaft Inst. of

	Microsystems and Inform
Manoli, Yiannos	Fritz Huettinger Chair of Microelectronics, Department of Micros
FrC3	Room 122
Slam (ii)	Regular Sessions
Chair: Pathak, Kaustubh	Jacobs Univ. Bremen
Co-Chair: Schwendner, Jakob	German Res. Center for Artificial Intelligence (DFKI)
13:30-13:50, Paper FrC3.1	
<i>Map Segmentation Based SLAM Using Embodied Data</i>	
Swendner, Jakob	German Res. Center for Artificial Intelligence (DFKI)
13:50-14:10, Paper FrC3.2	
<i>3-Axis Magnetic Field Mapping and Fusion for Indoor Localization</i>	
Le Grand, Etienne	Stanford Univ.
Thrun, Sebastian	Stanford Univ.
14:10-14:30, Paper FrC3.3	
<i>Estimation Analysis in VSLAM Based on UAV Application</i>	
Li, Xiaodong	Cranfield Univ.
Aouf, Nabil	Cranfield Univ.
14:30-14:50, Paper FrC3.4	
<i>Utilizing Color Information in 3D Scan-Registration Using Planar-Patches Matching</i>	
Pathak, Kaustubh	Jacobs Univ. Bremen
Vaskevicius, Narunas	Jacobs Univ.
Bungiu, Francisc	Jacobs Univ. Bremen
Birk, Andreas	Jacobs Univ.
14:50-15:10, Paper FrC3.5	
<i>Outdoor Localization with Optical Navigation Sensor, IMU and GPS</i>	
Yun, Youngmok	Korea Inst. of Science and Tech.
Jin, JingFu	Visiting Scientist
Kim, Namhoon	Korea Inst. of Science and Tech.
Yoon, JeongYeon	Korea Inst. of Science and Tech.
Kim, ChangHwan	Korea Inst. of Science and Tech.
FrD1	Room 120
Sensors (II)	Regular Sessions

Chair: Levy, Uri	RAFAEL, Advanced Defense Systems LTD
Co-Chair: Wang, Xiaoyue	Beijing Inst. of Tech.
15:30-15:55, Paper FrD1.1	
<i>A Congestion Will Based Constraints Mechanism of Mobile Sensor Network</i>	
Song, Ping	Beijing Inst. of Tech.
Wang, Yiping	Beijing Inst. of Tech.
Wang, Xiaoyue	Beijing Inst. of Tech.
Pan, Zhiqiang	Eping Electro-Optic Inst. Co., Ltd
15:55-16:20, Paper FrD1.2	
<i>Sensor Fault Detection for Industrial Systems Using a Hierarchical Clustering-Based Graphical User Interface</i>	
Zhang, Yu	Univ. fo Lincoln
Bingham, Chris	Univ. of Lincoln
Gallimore, Michael	Univ. of Lincoln
Yang, Zhijing	School of Engineering, Univ. of Lincoln, Lincoln, LN67TS
Chen, Jun	School of Engineering, Univ. of Lincoln
16:20-16:45, Paper FrD1.3	
<i>Robust Source Localization Using Decision-Directed Algorithm and Confidence Weights in Unattended Ground Sensors System</i>	
Levy, Uri	RAFAEL, Advanced Defense Systems LTD
Hemo, Evyatar	RAFAEL, Advanced Defense Systems LTD
16:45-17:10, Paper FrD1.4	
<i>Estimating the Posture of Pipeline Inspection Robot with a 2D Laser Rangefinder</i>	
Hu, Yuanyuan	China Univ. of Mining and Tech.
Song, Zhangjun	Shenzhen Inst. of Advanced Integration Technology, ChineseAca
Zhu, Jun	South China Univ. of Tech.
FrD2	Room 121
Vision Based Systems	Regular Sessions
Chair: Wang, Hesheng	Shanghai Jiao Tong Univ.
Co-Chair: Stewart, Robert	Univ. of Alberta
15:30-15:55, Paper FrD2.1	

<i>Context Aided Fusion Procedure for Road Safety Application</i> €ï	
Garcia, Fernando	Carlos III Univ.
Armingol, Jose	Univ. Carlos III de Madrid
de la Escalera, Arturo	Univ. Carlos III of Madrid
Jiménez, Felipe	INSIA, Univ. Pol. de Madrid
15:55-16:20, Paper FrD2.2	
<i>Visual Homing for a Mobile Robot Using Direction Votes from Flow Vectors</i> FH	
Stewart, Robert	Univ. of Alberta
Mills, Michael	Univ. of Alberta
Zhang, Hong	Univ. of Alberta
16:20-16:45, Paper FrD2.3	
<i>Tumbling Target Reconstruction and Pose Estimation through Fusion of Monocular Vision and Sparse-Pattern Range Data</i> FJ	
Padial, Jose	Stanford Univ.
Hammond, Marcus	Stanford Univ.
Augenstein, Sean	Skybox Imaging
Rock, Steve	Stanford
16:45-17:10, Paper FrD2.4	
<i>Uncalibrated Fixed-Camera Visual Servoing of Robot Manipulators by Considering the Motor Dynamics</i> G	
Liang, Xinwu	Huazhong Univ. of Science and Tech.
Wang, Hesheng	Shanghai Jiao Tong Univ.
Chen, Weidong	Shanghai Jiao Tong Univ.
FrD3	Room 122
Information Fusion (V)	Regular Sessions
Chair: Lobo, Jorge	Univ. of Coimbra
Co-Chair: Jones, Heather	Carnegie Mellon Univ.
15:30-15:55, Paper FrD3.1	
<i>Position Estimation by Registration to Planetary Terrain</i> HG	
Sheshadri, Aashish	The Univ. of Texas at Austin
Peterson, Kevin M	Carnegie Mellon Univ.
Jones, Heather	Carnegie Mellon Univ.
Whittaker, William	Carnegie Mellon Univ.
15:55-16:20, Paper FrD3.2	
<i>Design of Double Ducted Tilting SUAV Navigation System Based on Multi-Sensor Information Fusion</i> HU	

Gao, Tongyue	Shanghai Univ.
Ge, Hailang	Shanghai Univ.
Gong, Zhenbang	Shanghai Univ.
Luo, Jun	Shanghai Univ.

16:20-16:45, Paper FrD3.3

Bayesian 3D Independent Motion Segmentation with IMU-Aided RGB-D ~~XXXXXXXXXXXXXXXXXXXX~~ I F
Sensor

Lobo, Jorge	Univ. of Coimbra (NIF/VAT: 501 617 582)
Ferreira, João Filipe	ISR, FCT - Univ. of Coimbra (NIF: 502971142)
Trindade, Pedro	ISR - Univ. of Coimbra
Dias, Jorge	Univ. of Coimbra

16:45-17:10, Paper FrD3.4

A Sensing Cushion Using Simple Pressure Distribution Sensors ~~XXXXXXXXXXXXXXXXXXXX~~ I F

Xu, Lishuang	Shanghai Jiaotong Univ.
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2012 IEEE International Conference on Multisensor Fusion and Integration for Intelligent Systems (MFI)

Technical Program for Saturday September 15, 2012

SaB1	Room 120
Multirobot Systems	Regular Sessions
Chair: Woern, Heinz	Karlsruhe Inst. of Tech. (KIT)
Co-Chair: Klimentjew, Denis	Univ. of Hamburg
10:20-10:45, Paper SaB1.1	
<i>Robustness, Scalability and Flexibility: Key-Features in Modular Self-Reconfigurable Mobile Robotics</i>	
Matthias, Rene	Karlsruhe Inst. of Tech. (KIT)
Bihlmaier, Andreas	Karlsruhe Inst. of Tech. (KIT)
Woern, Heinz	Karlsruhe Inst. of Tech. (KIT)
10:45-11:10, Paper SaB1.2	
<i>Robot3D – a Simulator for Mobile Modular Self-Reconfigurable Robots</i>	
Winkler, Lutz	Karlsruhe Inst. of Tech. (KIT)
Vonasek, Vojtech	Czech Tech. Univ. in Prague
Woern, Heinz	Karlsruhe Inst. of Tech. (KIT)
Preucil, Libor	Czech Tech. Univ. in Prague
11:10-11:35, Paper SaB1.3	
<i>A Multi-Robot Platform for Mobile Robots -- a Novel Evaluation and Development Approach with Multi-Agent Technology</i>	
Rockel, Sebastian	Univ. of Hamburg
Klimentjew, Denis	Univ. of Hamburg
Zhang, Jianwei	Univ. of Hamburg
11:35-12:00, Paper SaB1.4	
<i>Interactive Control Parameter Investigation of Modular Robotic Simulation Environment Based on Wiimote-HCI's Multi Sensor Fusion</i>	
Noeske, Martin	Univ. of Hamburg
Krupke, Dennis	Univ. of Hamburg
Hendrich, Norman	Univ. of Hamburg
Zhang, Jianwei	Univ. of Hamburg
Zhang, Houxiang	Aalesund Univ. Coll.

SaB2	Room 121
Information Fusion (VI)	Regular Sessions
Chair: Julier, Simon Justin	Univ. Coll. London
Co-Chair: Fromm, Tobias	Ravensburg-Weingarten Univ. of Applied Sciences
10:20-10:45, Paper SaB2.1	
<i>Extrinsic Calibration between a Stereoscopic System and a LIDAR with Sensor Noise Models</i>	
Li, You	Univ. de Tech. de Belfort-Montbéliard
Ruichek, Yassine	Univ. of Tech. of Belfort-Montbéliard - France
Cappelle, Cindy	IRTES - SET, UTBM
10:45-11:10, Paper SaB2.2	
<i>Robust Multi-Algorithm Object Recognition Using Machine Learning Methods</i>	
Fromm, Tobias	Ravensburg-Weingarten Univ. of Applied Sciences
Staehe, Benjamin	Ravensburg-Weingarten Univ. of Applied Sciences
Ertel, Wolfgang	Univ. of Applied Sciences, Ravensburg-Weingarten, Germany
11:10-11:35, Paper SaB2.3	
<i>An Architecture for Incremental Information Fusion of Cross-Modal Representations</i>	
Baumgärtner, Christopher	Univ. of Hamburg
Beuck, Niels	Univ. of Hamburg
Menzel, Wolfgang	Univ. of Hamburg
11:35-12:00, Paper SaB2.4	
<i>Fusion of Dependent Information in Posegraphs</i>	
Julier, Simon Justin	Univ. Coll. London
SaB3	Room 122
CareToy Workshop (I)	Regular Sessions
Chair: Cecchi, Francesca	Scuola Superiore S.Anna
SaC1	Room 120
Modeling and Information Fusion Using Gaussian Processes	Regular

	Sessions
Chair: Vasudevan, Shrihari	Univ. of Sydney
SaC3	Room 122
CareToy Workshop (II)	Regular Sessions
Chair: Mihelj, Matjaž	Univ. of Ljubljana