



The 9th International Symposium on Mobile Mapping Technology  
MMT2015, 9-11 December 2015, Sydney, Australia

# MMT2015 Technical Program

[www.mmt2015.org](http://www.mmt2015.org)

Sponsored by



## Welcome to MMT2015

It is my great pleasure to welcome you to the 9th International Symposium on Mobile Mapping Technology (**MMT2015**), being held from Wednesday the 9th to Friday the 11th December 2015, in the beautiful harbourside city of Sydney, Australia.

Since the first International Symposium on Mobile Mapping Technology was held by The Ohio State University, Columbus, Ohio, USA, in 1995, this Symposium has become the largest international conference dedicated to mobile mapping technology and applications. The MMT Symposium is the primary event jointly sponsored by the International Society of Photogrammetry and Remote Sensing (**ISPRS**), International Association of Geodesy (**IAG**) and the International Federation of Surveyors (**FIG**). In addition, for the first time, another two major international organisations, the International Society of Mine Surveying (**ISM**) and the International Cartographic Association (**ICA**), Australian Surveying and Spatial Sciences Institute (**SSSI**), and Spatial Industries Business Association (**SIBA**), Australian Robotics and Automation Association (**ARAA**) as well as Australian Network of Structural Health Monitoring (**ANSHM**) have also offered the official sponsorships to the MMT2015.

The MMT-2015 is an open forum to discuss the most recent technology and its application, to exchange experiences and to promote future research aiming at technological advancement and improved professional practice in the fields related to mobile mapping. The topics of interest range from new mapping concept, the state of the art technology, multi-disciplinary approaches, and new applications, to future trends. I would like to draw your attention to the new developments in the traditional mobile mapping topics as well the new technology trends and novel applications, such as indoor positioning and mapping, UAV/UAS mapping, construction automation, structural health monitoring (SHM), 3D mapping and Building Information Modelling (BIM), etc.

The Symposium features the keynote speakers, expert panel discussions, oral and interactive poster sessions, technical case studies, pre-Symposium workshops and a trade exhibition, as well as a variety of entertaining social events. Such a comprehensive program would be possible with the support and contributions from the authors, symposium committees, sponsors, exhibitors, as well as our student volunteers.

Over the past 20 years of this Symposium series, for the first time, we have set up an “Industry Advisory Committee” for the MMT2015, and invited local and international industry leaders to join the Industrial Advisory Committee, providing valuable inputs for MMT2015. It is also pleasing to see a variety of industry sponsors and exhibitors at our mobile mapping conference.

MMT2015 is hosted at UNSW’s Kensington campus, which is situated near the business hub of Sydney, providing easy access to a wide range of academic, cultural and social activities, and less than 3km from some of the most famous beaches in the world.

On behalf of the organising committee, I appreciate your participation in and support to MMT2015. I wish you enjoy both the technical program and the social events, as well as the beautiful city of Sydney!

Jinling Wang

Convener/General Chair

The 9th International Symposium on Mobile Mapping Technology

[www.mmt2015.org](http://www.mmt2015.org)

## MMT2015 Program Overview

	8 December 2015 (Tuesday) Workshops**	9 December 2015 (Wednesday) MMT2015	10 December 2015 (Thursday) MMT2015	11 December 2015 (Friday) MMT2015
<b>Morning Sessions</b>	<i>Workshops A, B, C (9am-12pm)</i>	<b>9:00am-9:10am</b> Official Opening  <b>9:10am-10:40am</b> Session 1 - Plenary Keynote Speeches  <b>10:40-11:00am</b> Morning Tea & Exhibitions  <b>11:00-12:30pm</b> Session 2 - Plenary -Panel Discussions	<b>8:30am-10:30am</b> Parallel Sessions 5A, 5B, 5C  <b>10:30-11:00am</b> Morning Tea & Exhibitions  <b>11:00am-12:30pm</b> Parallel Sessions 6A, 6B, 6C	<b>8:30am-10:30am</b> Parallel Sessions: 9A, 9B, 9C  <b>10:30-11:00am</b> Morning Tea & Exhibitions  <b>11:00am-12:30pm</b> Parallel Sessions: 10A, 10B, 10C
<b>Lunch Breaks</b>		<b>12:30pm-1:30pm</b> Lunch & Exhibitions	<b>12:30pm-1:30pm</b> Lunch & Exhibitions	<b>12:30pm-1:30pm</b> Lunch & Exhibitions
<b>Afternoon Sessions</b>	<i>Workshops D, E (2pm-5pm)</i>	<b>1:30pm-3:00pm</b> Parallel Sessions 3A, 3B, 3C  <b>3:00pm-3:30pm</b> Afternoon Tea & Exhibitions  <b>3:30pm-5:00pm</b> Parallel Sessions 4A, 4B, 4C	<b>1:30pm-3:00pm</b> Parallel Sessions 7A, 7B, 7C  <b>3:00pm-3:30pm</b> Afternoon Tea & Exhibitions  <b>3:30pm-5:00pm</b> Parallel Sessions 8A, 8B, 8C	<b>1:30pm-3:00pm</b> Parallel Sessions 11A, 11B, 11C  <b>3:00pm-3:30pm</b> Afternoon Tea  <b>3:30pm-4:30pm</b> Session 12: Closing Ceremony
<b>Social Activities</b>		<b>5:15pm-6:45pm</b> Ice Breaker Party	<b>5:30pm-8:00pm</b> Dinner Party (BBQ)	

\*\* Workshop details can be found at: <http://www.mmt2015.org/workshops.htm>

# WEDNESDAY 9TH DECEMBER, 2015

9:00 - 9:10am	<b>Official Opening</b> <b>Room: Mathews Theatre A</b> <b>Chair: Paul Harcombe</b>  Welcome Speech <b>Prof Stephen Foster</b> , Head of School, School of Civil and Environmental Engineering, UNSW Australia		
9:10 – 10:40am	<b>Session 1: Plenary - Keynotes</b> <b>Room: Mathews Theatre A</b> <b>Chair: Norbert Haala</b> <i>"On multi-sensor PNT technologies applied to mobile mapping and other emerging applications"</i> <b>Dorota A. Grejner-Brzezinska</b> THE OHIO STATE UNIVERSITY, USA <i>"Inertial Sensors – State of the Art and Future Trends in Mobile Mapping Systems"</i> <b>Naser El-Sheimy</b> UNIVERSITY OF CALGARY, CANADA <i>"Standards Activities Facilitating the Integration of Outdoor and Indoor Navigation"</i> <b>Scott Simmons</b> OPEN GEOSPATIAL CONSORTIUM (OGC)		
10:40 - 11:00am	<b>Morning Tea &amp; Exhibitions</b>		
11:00 - 12:30pm	<b>Session 2: Plenary – Expert Panel Discussions</b> <b>Room: Mathews Theatre A</b> <b>Chair: Charles Toth</b> <b>Clive Fraser</b> , University of Melbourne, Australia <b>Pierre Grussenmeyer</b> , INSA Strasbourg, France <b>Herry Guo</b> , Leador Spatial Information Technology Co., Ltd., China <b>Grant Kilpatrick</b> , Roads and Maritime Services (RMS), Australia <b>Scott Simmons</b> , Standards Program, Open Geospatial Consortium (OGC), USA		
12:30pm-1:30pm	<b>Lunch &amp; Exhibitions</b>		
1:30 - 3:00pm	<b>Session 3A: Mapping with Smart Phones</b> <b>ROOM: Mathews Theatre A</b> <b>Chair: Antonio Vettore</b> <i>"Towards Mobile Mapping with Smartphones"</i> <b>P190</b> <b>Andrea Masiero and Antonio Vettore</b> UNIVERSITY OF PADOVA, ITALY	<b>Session 3B: Geo-referencing</b> <b>ROOM: Mathews Theatre C</b> <b>Chair: Dorota Grejner-Brzezinska</b> <i>"Robust Estimation of Epoch-to-Epoch Rotation for a Multi-Camera Mobile Mapping System"</i> <b>P75</b> <b>Ayman Habib</b> PURDUE UNIVERSITY, USA <b>Mehdi Mazaheri</b>	<b>Session 3C: Structural Health Monitoring A</b> <b>ROOM: Mathews Theatre D</b> <b>Chair: Bruce Harvey</b> <i>"Web-based Geo-Referenced 3-D Inspection and Monitoring of Bridges with Unmanned Air Systems"</i> <b>P226</b> <b>Christian Eschmann and Timo Wundsam</b> RWTH AACHEN UNIVERSITY, GERMANY
1:30 - 1:45pm			
1:45 - 2:00pm	<i>"Building better collaboration with 'disposable' mobile apps"</i> <b>P60</b> <b>Daniel Mackey</b> ESRI AUSTRALIA, AUSTRALIA	<i>"Accuracies of Position and Orientation Systems on Different Time Scales: Importance and Evaluation"</i> <b>P184</b> <b>Xiaoji Niu, Quan Zhang, Hongping Zhang and Chuang Shi</b> WUHAN UNIVERSITY, CHINA	<i>"Thermal Effects Modelling of Geopolymer Concrete Structures"</i> <b>P281</b> <b>Jin Dang, Xuesong Shen, Arnaud Castel</b> UNSW AUSTRALIA, <b>James Aldred</b> , AECOM, AUSTRALIA
2:00 - 2:15pm	<i>"Motion Pattern Recognition Based on Android"</i> <b>P36</b> <b>Danxun Jiao</b> ORANGE LABS INTERNATIONAL CENTER BEIJING, CHINA <b>Yanzhao Wang, Song Dong, Jiaxin Duan and Dongkai Yang</b>	<i>"Direct Georeferencing for Portable Mapping Systems – In the Air and on the Ground "</i> <b>P44</b> <b>Lasse Klingbeil, Christian Eling, Erik Heinz, Markus Wieland and Heiner Kuhlmann</b> UNIVERSITY OF	<i>"Forecast for Large-span Roof System Deformation Based on Grey Model "</i> <b>P21</b> <b>Hui Deng, Hongyang Li and Yiping Jiang</b> SOUTH CHINA UNIVERSITY OF TECHNOLOGY, CHINA

2:15 - 2:30pm	<p><i>"A Mobile Mapping Approach Developed for Disaster Management System"</i> <b>P99</b></p> <p><b>Amir Saeed Homainejad</b> INDEPENDENT RESEARCH GROUP ON GEOSPATIAL, IRAN</p>	<p>BONN, GERMANY</p> <p><i>"Determination of position and orientation of LiDAR-sensors on multi-sensor platforms"</i> <b>P249</b></p> <p><b>Jens Hartmann</b> UNIVERSITY OF HANNOVER, GERMANY <b>Jens-André Paffenholz and Ingo Neumann</b></p>	<p><i>"Hybrid BD/GPS Positioning for Deformation Monitoring under Restricted Scenarios"</i> <b>P191</b></p> <p><b>Peng Zhenzhong, Li Qianxia and Xia Linyuan</b> SUN YAT-SEN UNIVERSITY, CHINA</p>
2:30 – 2:45pm	<p><i>"Development of Vision Aiding Pedestrian Dead Reckoning with Smartphone for Indoor Navigation"</i> <b>P147</b></p> <p><b>Shih-Huan Huang, Jhen-Kai Liao, Kai-Wei Chiang and Hsiu-Wen Chang</b> NATIONAL CHENG KUNG UNIVERSITY, TAIWAN</p>	<p><i>"A Novel Acquisition and Classification Method of Mobile Laser Scanning Data in City Scene"</i> <b>P116</b></p> <p><b>Liang Huang, Li Yan and Changjun Chen</b> WUHAN UNIVERSITY, CHINA</p>	<p><i>"New Method for Directly Calculating Deformation Based On Point Clouds"</i> <b>P46</b></p> <p><b>Jinjun Xu, Xinwei Guo and Minghui Yu</b> WUHAN UNIVERSITY, CHINA</p>
2:45 – 3:00pm	<p><i>"Indoor Landmarks Mapping and Recognition with Smartphones"</i> <b>P193</b></p> <p><b>Andrea Masiero, Francesca Fissore, Alberto Guarneri, Francesco Pirotti and Antonio Vettore</b> UNIVERSITY OF PADOVA, ITALY</p>	<p><i>"Development of A Real-Time Ins/Gnss/Visual Odometry Integrated Navigation System"</i> <b>P42</b></p> <p><b>Trung Duong, Kai-Wei Chiang and Hsiu-Wen Chang</b> NATIONAL CHENG KUNG UNIVERSITY, TAIWAN</p>	<p><i>"Study of 2G Technique and Method for Millimeter-precision Landslide Monitoring"</i> <b>P110</b></p> <p><b>Changlin Luo</b> WUHAN LAND RESOURCES AND URBAN PLANNING INFORMATION CENTER, CHINA</p>
3:00 - 3:30pm	Afternoon Tea & Exhibitions		
3:30 - 5:00pm (9 December 2015)	<p><b>Session 4A : Image Matching</b></p> <p>ROOM: Mathews Theatre A</p> <p><b>Chairs: Yi-Hsing Tseng</b></p>	<p><b>Session 4B: Mapping and Applications</b></p> <p>ROOM: Mathews Theatre C</p> <p><b>Chairs: Koichi Harada, Jianguo Wang</b></p>	<p><b>Session 4C: Structural Health Monitoring B</b></p> <p>ROOM: Mathews Theatre D</p> <p><b>Chairs: Xuesong Shen</b></p>
3:30 - 3:45pm	<p><i>"Image Based Mobile Mapping for 3D Urban Data Capture"</i> <b>P43</b></p> <p><b>Norbert Haala</b> STUTTGART UNIVERSITY, GERMANY</p>	<p><i>"A Calibration Method of Multi-angle Fisheye Panoramic Camera Based on 3D Control Field"</i> <b>P101</b></p> <p><b>Huichao Shao</b> LEADOR SPATIAL, CHINA <b>Cao Jun and Hong Yong</b></p>	<p><i>"Dynamic Deformation Monitoring for Long-span Bridges under Construction and EMD Denoising Method"</i> <b>P165</b></p> <p><b>Huang Shengxiang, Kang Chao and Zhang Wen</b> WUHAN UNIVERSITY, CHINA</p>
3:45 – 4:00pm	<p><i>"Image Feature Matching for Vision-based Car Localization with Geo-referenced Image Database"</i> <b>P175</b></p> <p><b>Boram Yoon, Hojun Kim and Impyeong Lee</b> THE UNIVERSITY OF SEOUL, KOREA</p>	<p><i>"Vertical surface alignment as a constraint in real-time graph-based Simultaneous Localisation and Mapping"</i> <b>P141</b></p> <p><b>Anton Lohr and Jose Guivant</b> UNSW, AUSTRALIA</p>	<p><i>"Three-dimensional deformation generation of surface in mining area based on multi-track SAR images"</i> <b>P256</b></p> <p><b>Hongdong Fan, Xiaoxiong Gao, Kazhong Deng and Jianguo He</b> CHINA UNIVERSITY OF MINING AND TECHNOLOGY, CHINA</p>
4:00 - 4:15pm	<p><i>"Enhanced Ransac Homography Estimation With Robust Estimation Methods"</i> <b>P275</b></p> <p><b>Xiaolei Li</b> WUHAN UNIVERSITY, CHINA</p>	<p><i>"An Extended Min-Cut Approach for Individual Tree Extraction and Parameters Estimation"</i> <b>P63</b></p> <p><b>Bisheng Yang, Wenxia Dai, Zhen Dong and Yang Liu</b> WUHAN UNIVERSITY, CHINA</p>	<p><i>"A Method of Crack Preprocessing Using Improved Adaptive Pixel Width Template"</i> <b>P128</b></p> <p><b>Jingjing Huang, Peng Tian, Yaming Xu and Cheng Xing</b> WUHAN UNIVERSITY, CHINA</p>
4:15 - 4:30pm	<p><i>"A Keypoint Mismatch Elimination Framework in Visual Mapping and Navigation"</i> <b>P158</b></p> <p><b>Zeyu Li and Jinling Wang</b> UNSW, AUSTRALIA</p>	<p><i>"Algorithm Research to Generate Triangulation Network Based on Quick Convex Hull"</i> <b>P108</b></p> <p><b>Hanbing Wang, Xiaosu Xu and Tao Zhang</b> SOUTHEAST UNIVERSITY, CHINA</p>	<p><i>"A Mobile Deformation Monitoring System for Foundation Pit Based on PDA and WebGIS"</i> <b>P124</b></p> <p><b>Yongming Wang, Mingfeng Li, Ding Tan and Bo Yuan</b> WUHAN UNIVERSITY, CHINA</p>

4:30 – 4:45pm	<p><i>“A Multiview Matching Algorithm for Image Sequences from a Mobile Mapping System”</i> <b>P134</b>  <b>Xiaoliang Zou</b> UNIVERSITY OF WATERLOO, CANADA  <b>Guihua Zhao, Jonathan Li, Yuanxi Yang and Yong Fang</b></p>	<p><i>“Real time Glass Detection with Laser Rangefinders for Robot Navigation and Mapping”</i> <b>P218</b>  <b>Xun Wang and Jianguo Wang</b> UNIVERSITY OF TECHNOLOGY SYDNEY, AUSTRALIA</p>	<p><i>“Analysis and Displacement Monitoring for Large-span Spoke Tension Roof Structure”</i> <b>P22</b>  <b>Hui Deng, Hongyang Li and Cheng Su</b> SOUTH CHINA UNIVERSITY OF TECHNOLOGY, CHINA</p>
4:45 – 5:00pm	<p><i>“Maximum Good Matches for Fisheye Image”</i> <b>P31</b>  <b>Li Jiayuan, Qingwu Hu and Mingyao Ai</b> WUHAN UNIVERSITY, CHINA</p>	<p><i>“Polygonal Model Creation with Reflecting Precise Boundary Edges from the High Density Mobile Mapping Data”</i> <b>P137</b>  <b>Ryuji Miyazaki</b> HIROSHIMA UNIVERSITY, JAPAN  <b>Makoto Yamamoto, Jingxin Su and Koichi Harada</b></p>	<p><i>“LiDAR Sensor Simulation for Precise Close Range Navigation of Unmanned Air Systems in Urban Environments for Inspection and Monitoring”</i> <b>P227</b>  <b>Christian Eschmann</b> RWTH AACHEN UNIVERSITY, GERMANY</p>
5:15pm-6:45pm	Ice Breaker Party, Mathews Pavilions		

THURSDAY 10TH DECEMBER, 2015			
8:30 – 10:30pm	Session 5A: New Mapping Techniques	Session 5B: LIDAR	Session 5C: UAV Mapping A
	ROOM: Mathews Theatre A Chairs: <b>Michael Chapman, Ramin Rafiei</b>	ROOM: Mathews Theatre C Chairs: <b>Bisheng Yang, Nobuyoshi Yabuki,</b>	ROOM: Mathews Theatre D Chairs: <b>Ayman Habib, Hongxing Sun</b>
8:30 - 8:45am	<i>“A long-range depth camera with configurable field of view and resolution”</i> <b>P61</b> <b>Sebastian Montabone, David Wood, Ramin Rafiei and Mark Bishop</b> OCULAR ROBOTICS, AUSTRALIA	<i>“Full Waveform LiDAR in PulseWaves”</i> <b>P14</b> <b>Martin Isenburg</b> RAPIDLASSO GMBH, GERMANY	<i>“Rigorous Strip Adjustment of UAV-based Laserscanning Data Including Time-dependent Correction of Trajectory Errors”</i> <b>P251</b> <b>Philipp Glira, Norbert Pfeifer and Gottfried Mandlbürger</b> VIENNA UNIVERSITY OF TECHNOLOGY, AUSTRIA
8:45 - 9:00am	<i>“Hologram Room - Mind-blowing technology to bring scan data into the Office”</i> <b>P159</b> <b>John Nolan, Todd Keating and Rod Eckels</b> MNG SURVEYS, AUSTRALIA	<i>“Adaptive Down Sampling of Planar Regions in Image and LiDAR-Based Point Clouds”</i> <b>P56</b> <b>Yun-Jou Lin and Ayman Habib</b> PURDUE UNIVERSITY, USA	<i>“Dynamic Site Layout Planning through use of Unmanned Aerial Vehicles”</i> <b>P286</b> <b>Ahmed Hammad, Ali Akbarnezhad, David Rey, Xuesong</b> UNSW
9:00 - 9:15am	<i>“Practical Experience of Mobile Mapping of the entire city/state of Singapore”</i> <b>P217</b> <b>Brian Nicholls</b> AAM PTY LTD, AUSTRALIA	<i>“A Robust System of Building Facades Extraction From Mobile Lidar Data at Street Level”</i> <b>P145</b> <b>Kai Sun</b> LEADOR SPATIAL ,CHINA <b>Li Li and Jian Yao</b>	<i>“Statistical Selection Of Parameters To Model Systematic Errors In 3D UAV Mapping”</i> <b>P274</b> <b>Muwaffaq Alqurashi, Jinling Wang and Ali Almagbile</b> UNSW, AUSTRALIA
9:15 - 9:30am	<i>“Mobile Mapping in China”</i> <b>P303</b> <b>Herry Guo</b> LEADOR SPATIAL, CHINA	<i>“The role of full-waveform LiDAR features in improving urban scene classification”</i> <b>P235</b> <b>Mohsen Azadbakht, Clive S. Fraser and Kourosh Khoshelham</b> UNIVERSITY OF MELBOURNE, AUSTRALIA	<i>“Factors Affecting the Quality of Photogrammetric Mapping with Small Unmanned Aircraft Systems”</i> <b>P284</b> <b>Robert Dicker</b> UNSW, AUSTRALIA
9:30 – 9:45am	<i>“Adjustment of PPIMS Spherical Panorama Images”</i> <b>P88</b> <b>Yi-Hsing Tseng and Lin Kuan-Ying Bundle</b> NATIONAL CHENG KUNG UNIVERSITY, TAIWAN	<i>“Computation of tree volume from terrestrial LiDAR data”</i> <b>P53</b> <b>Jules Morel</b> IFP, INDIA <b>Alexandra Bac and Cédric Vega</b>	<i>“Study on the Application of UAV Remote Sensing Technology in Land Consolidation”</i> <b>P92</b> <b>Gao Shan, Li Zonghua and Pan Chenling</b> WUHAN LAND RESOURCES AND PLANNING INFORMATION CENTER, CHINA



9:45 – 10:00am	<p>“DEM Generation Base on Vehicle-borne Laser Cloud Points” <b>P152</b>  <b>Jie Zhang</b>, LEADOR SPATIAL, CHINA</p>	<p>“Analysis of Multipass method for collection and processing of mobile scan data” <b>P65</b>  <b>John Nolan</b> MNG SURVEY, AUSTRALIA <b>Rod Eckels</b>, <b>Michael Olsen</b>, Ty Lasky, Kin S. Yen and Bahram Ravani</p>	<p>“Assessment of the applicability of Unmanned Aerial Vehicle (UAV) for real-time crowd management in Hajj season ” <b>P171</b>  <b>Ali Al-Shaery</b> UMM AL-QURA UNIVERSITY, SAUDI ARABIA <b>Ali Almagbile</b>, Muwaffaq Alqurashi, Jinling Wang, Hasan Khalil and Mohammed Alzahrani</p>
10:00 – 10:15am	<p>“The Optimization of the GNSS/INS Integrated System for the Application in Railway Geometry Status Regularity” <b>P163</b>  <b>Hongxing Sun</b> GEOSUN NAVIGATION TECHNOLOGY CO.,LTD, CHINA <b>Xuwen Ding</b> and <b>Fanxiao Meng</b></p>	<p>“Generating a hazard map of dynamic objects using LiDAR mobile mapping” <b>P224</b>  <b>Alexander Schlichting</b> and <b>Claus Brenner</b> UNIVERSITY OF HANNOVER, GERMANY</p>	<p>“Automatic Registration of UAV LIDAR Data and Sequent Images using Local Pattern Similarity” <b>P47</b>  <b>Chi Chen</b>, Bisheng Yang, Shuang Song and Yifei Zhan WUHAN UNIVERSITY, CHINA</p>
10:15 – 10:30am	<p>“Nonparametric Belief Propagation for Mobile Mapping Sensor Fusion” <b>P148</b>  <b>Joshua Hollick</b>, Petra Helmholtz and David Belton CURTIN UNIVERSITY, AUSTRALIA</p>	<p>“Semantically Enhanced 3D Building Model Reconstruction from Terrestrial Laser Scanning Data” <b>P27</b>  <b>Qian Yu</b>, Petra Helmholtz, David Belton and Geoff West CURTIN UNIVERSITY, AUSTRALIA</p>	<p>“The Precise Multi-GNSS Positioning for UAV and Its Application in The Low-Altitude Photogrammetry” <b>P168</b>  <b>Hongxing Sun</b> GEOSUN NAVIGATION TECHNOLOGY CO.,LTD, CHINA</p>
<b>10:30 - 11:00am</b>			
<b>11:00 - 12:30pm (10 Dec 2015)</b>	<p><b>Session 6A: Indoor Positioning &amp; Mapping A</b>  ROOM: Mathews Theatre A  <b>Chairs: Impyeong Lee; Ling Pei</b></p>	<p><b>Session 6B: Inertial Technology A</b>  ROOM: Mathews Theatre C  <b>Chairs: Allison Kealy</b></p>	<p><b>Session 6C: UAV Mapping B</b>  ROOM: Mathews Theatre D  <b>Chairs: Ali Al-Shaery, Christian Eschmann</b></p>
11:00 - 11:15am	<p>“Feature Point Extraction Using Extended 2D Line Simplification Algorithms for Indoor Mapping” <b>P223</b>  <b>Wenzheng Fan</b> and <b>Wenzhong Shi</b> THE HONG KONG POLYTECHNIC UNIVERSITY, HONG KONG</p>	<p>“Overcoming the limits of GNSS – inertial sensor fusion and tight-coupling techniques” <b>P247</b>  <b>Iain Clarke</b> OXFORD TECHNICAL SOLUTIONS, UK</p>	<p>“Performance Evaluation of LiDAR, Deployed on UAS Platform” <b>P78</b>  <b>Grzegorz Jozkow</b>, Charles Toth and Dorota Grejner-Brzezinska OHIO STATE UNIVERSITY, USA</p>
11:15 – 11:30am	<p>“3D Indoor Surveying: Accuracy and utility of the Structure sensor” <b>P204</b>  <b>Mohsen Kalantari</b> UNIVERSITY OF MELBOURNE, AUSTRALIA</p>	<p>“Sample-wise aiding in GPS/INS ultra-tight integration for high-dynamic high-precision tracking” <b>P39</b>  <b>Yanhong Kou</b> and <b>Han Zhang</b> BEIHANG UNIVERSITY, CHINA</p>	<p>“UAS Technology – Aside from being fun, what can you really do with it?” <b>P220</b>  <b>Amy Steiger</b> CARDNO, AUSTRALIA</p>
11:30 - 11:45am	<p>“Indoor Modeling Using a Rotating Stereo Frame Camera System for Indoor Location-Based Services” <b>P170</b>  <b>Jeongin Kang</b>, Sojung Oh, Kyoungah Choi and Impyeong Lee THE UNIVERSITY OF SEOUL, KOREA</p>	<p>“Research on Rapid Transfer Alignment Method Based on ‘Velocity Plus Attitude’ Matching” <b>P28</b>  <b>Sun Jin</b> SOUTHEAST UNIVERSITY, CHINA</p>	<p>“UAV-based 3D Reconstruction Using Low-cost Digital Cameras with Large Field-of-View” <b>P76</b>  <b>Fangning He</b> and <b>Ayman Habib</b> PURDUE UNIVERSITY, USA</p>
11:45 - 12:00pm	<p>“Laser Scanning for Proactive Construction Safety Management” <b>P278</b>  <b>Henry Li</b> and <b>Xuesong Shen</b> UNSW AUSTRALIA</p>	<p>“Contrastive Analysis of Sampling Quantization and Filtering Influence on Coning Compensation Algorithms ” <b>P40</b>  <b>Ya Wang</b>, Wenqi Wu and Maosong Wang NATIONAL UNIVERSITY OF DEFENSE TECHNOLOGY, CHINA</p>	<p>“The Influence of Different Cost Functions on the Mosaicking Procedure for True-Orthophoto Generation from UAV Data” <b>P132</b>  <b>Henrique Oliveira</b> SÃO PAULO STATE UNIVERSITY (UNESP), BRAZIL <b>Ayman Habib</b>, Aluir Dal Poz and <b>Mauricio Galo</b></p>
12:00 – 12:15pm	<p>“Stochastic modelling for vision-based indoor</p>	<p>“Methods of Accelerometer Scale Factor Real-time</p>	<p>“Automatic stitching of Unmanned Aerial Vehicles</p>

	navigation" <b>P203</b> <b>Kai Chen and Jinling Wang</b> UNSW, AUSTRALIA	Feedback Adjusting for Gravity Gradiometer of Rotating Accelerometer" <b>P35</b> <b>Xuewu Qian, Tijing Cai and Li Ma</b> SOUTHEAST UNIVERSITY, CHINA	images" <b>P252</b> <b>Adel Moussa</b> UNIVERSITY OF CALGARY, CANADA
12:15 – 12:30pm	"An indoor and outdoor seamless positioning method based on the mutual assistance of base station and GNSS positioning technique" <b>P186</b> <b>Xiangwei Zhu, Jingyuan Li, Hang Gong and Gang Ou</b> NATIONAL UNIVERSITY OF DEFENSE TECHNOLOGY, CHINA	"A Modified Two-Filter Smoothing Method for SDINS/GPS Integrated System" <b>P12</b> <b>Xiaolin Gong and Shuai Zhang</b> SCIENCE AND TECHNOLOGY ON INERTIAL LABORATORY, CHINA	"Application of UAS as a Mobile Mapping" <b>P87</b> <b>Nina Homainejad</b> UNSW, AUSTRALIA <b>Chris Rizos and Rhys Bittner</b>
<b>12:30pm-1:30pm</b>	<b>Lunch &amp; Exhibitions</b>		
<b>1:30 - 3:00pm</b> <b>(10 Dec 2015)</b>	<b>Session 7A: Indoor Positioning &amp; Mapping B</b> ROOM: Mathews Theatre A <b>Chairs: Wenzhong Shi</b> "Indoor Positioning and Mapping of High Value Asset" <b>P82</b> <b>Chris Taylor</b> MAPDATA SERVICES, AUSTRALIA	<b>Session 7B: Inertial Technology B</b> ROOM: Mathews Theatre C <b>Chairs: Wenqi Wu, Xiaoji Niu</b> "Cooperative Localization of Unmanned Aerial Systems Using Low Cost GNSS and MEMS Inertial Sensors" <b>P79</b> <b>Allison Kealy</b> UNIVERSITY OF MELBOURNE, AUSTRALIA <b>Salil Goel, Guenther Retscher, Vassilis Gikas, Charles Toth, Dorota Brzezinska and Bharat Lohani</b>	<b>Session 7C: Image Analysis and Applications</b> ROOM: Mathews Theatre D <b>Chairs: Gabriel Scarmana, Aiwen Lin</b> "Towards grape-vine management based on mapping of airborne hyperspectral images" <b>P104</b> <b>Uwe Knauer</b> FRAUNHOFER IFF, GERMANY <b>Everard Edwards, Andrew McGrath, Wolfgang Lieff, Jorg Hacker and Udo Seiffert</b>
1:30 - 1:45pm			
1:45 - 2:00pm	"Indoor positioning and mapping with a research system, evaluation of extended and unscented Kalman filters and different system models" <b>P54</b> <b>Friedrich Keller and Harald Sternberg</b> HAFENCITY UNIVERSITY, GERMANY	"On Misalignment between Magnetometer and Inertial Sensors" <b>P73</b> <b>Yuanxin Wu</b> SHANGHAI JIAO TONG UNIVERSITY, CHINA <b>Shitu Luo</b>	"Towards land cover map updating with ground-level panoramic photos" <b>P197</b> <b>Nehla Ghouaiei, Nailja Bogrova and Sébastien Lefèvre</b> IRISA, FRANCE
2:00 - 2:15pm	"Bluetooth technology based indoor mobile mapping and Bigdata collection of exhibition personnel" <b>P258</b> <b>Xiaojun Li</b> GUANGZHOU INSTITUTE OF GEOGRAPHY, CHINA <b>Shuisen Chen, Longjun Peng and Zong Wang</b>	"Performance Evaluation of a Tightly-Coupled RTK/INS Algorithm Using Centralized Kalman Filter" <b>P69</b> <b>Tuan Li, Hongping Zhang, Xiaoji Niu and Quan Zhang</b> WUHAN UNIVERSITY, CHINA	"The Automatic Mass Production of Land Surface Temperature Retrieval Product Using LANDSAT Data" <b>P267</b> <b>Yaqing Bai and Guojin He</b> CHINESE ACADEMY OF SCIENCES, CHINA
2:15 - 2:30pm	"Seamless indoor-outdoor localization utilizing PDOP and map matching" <b>P51</b> <b>Wei Yang, Dongkai Yang, Chundi Xiu and Yuanfeng Du</b> BEIHANG UNIVERSITY, CHINA	"Inertial pedestrian navigation with a window-recursive approach for walk status detection" <b>P80</b> <b>Ling Yang, Yunzhong Shen and Bofeng Li</b> TONGJI UNIVERSITY, CHINA	"Mapping air temperature based on RS and GIS data" <b>P268</b> <b>Mengmeng Wang, Guojin He, Zhaoming Zhang and Guizhou Wang</b> CHINESE ACADEMY OF SCIENCES, CHINA
2:30 – 2:45pm	"Geometric Analysis of Mapping and Navigation based on reality-based 3D maps" <b>P161</b> <b>Zeyu Li and Jinling Wang</b> UNSW, AUSTRALIA	"Inertial Aided GPS Ultra-Tightly Integrated Navigation for High Dynamic Circumstances" <b>P120</b> <b>Yaojun Li, Yanfeng Liu, Tao Fei and Jianghua Zhang</b> XI'AN ELECTRONIC ENGINEERING RESEARCH INSTITUTE, CHINA	"Controlled Blurring-Deblurring method for Improved Image Storage and Transmission" <b>P259</b> <b>Gabriel Scarmana</b> UNIVERSITY OF SOUTHERN QUEENSLAND, AUSTRALIA



2:45 – 3:00pm	<p><i>“3D Mobile Mapping and 6-DOF Self-Localization in Building Interiors using Multiple Mobile Platforms”</i> <b>P32</b></p> <p><b>Chenglu Wen, Siyu Pan, Cheng Wang and Jonathan Li</b> XIAMEN UNIVERSITY, CHINA</p>	<p><i>“Vision/INS Autonomous Navigation Based on RatSLAM for Land Vehicles”</i> <b>P121</b></p> <p><b>Xiaofeng He, Lilian Zhang, Junxiang Lian and Zhiwen Xian</b> NATIONAL UNIVERSITY OF DEFENSE TECHNOLOGY, CHINA</p>	<p><i>“Change Detection from Very High Resolution Imagery Oriented to Geographical Conditions Monitoring”</i> <b>P222</b></p> <p><b>Zhenzhen Zhao, Aiwen Lin and Yuling Peng</b> WUHAN UNIVERSITY, CHINA</p>
3:00 - 3:30pm	<b>Afternoon Tea &amp; Exhibitions</b>		
3:30 - 5:00pm (10 Dec 2015)	<p><b>Session 8A: Indoor Positioning &amp; Mapping C</b></p> <p>ROOM: Mathews Theatre A</p> <p><b>Chairs: Naser El-Sheimy</b></p>	<p><b>Session 8B: Inertial Technology C</b></p> <p>ROOM: Mathews Theatre C</p> <p><b>Chairs: Yanhong Kou</b></p>	<p><b>Session 8C: Geodetic Aspects of Mapping</b></p> <p>ROOM: Mathews Theatre D</p> <p><b>Chairs: Craig Roberts and Daniel Jaksa</b></p>
3:30 - 3:45pm	<p><i>“Positioning Slow Moving Platforms by UWB technology in GPS-Challenged Areas”</i> <b>P77</b></p> <p><b>Charles Toth, Greg Jozkow, Steven Ostrowski and Dorota Grejner-Brzezinska</b> THE OHIO STATE UNIVERSITY, USA</p>	<p><i>“Development of A Real-time IMU/GPS/visual odometry integrated navigation system”</i> <b>P277</b></p> <p><b>Thanh Trung Duong, Kai-Wei Chiang, Guang-Je Tsai and Hsiu-Wen Chang</b> NATIONAL CHENG KUNG UNIVERSITY, TAIWAN</p>	<p><i>“A Modern Datum for a Future Australia”</i> <b>P236</b></p> <p><b>Daniel Jaksa</b> GEOSCIENCE AUSTRALIA, AUSTRALIA</p>
3:45 – 4:00pm	<p><i>“An Automatic Calibration Localization Method for Hardware Variance Problem”</i> <b>P173</b></p> <p><b>Lifei Han, Changqing Xu and Ling Pei</b> SHANGHAI JIAOTONG UNIVERSITY, CHINA</p>	<p><i>“Comparison of MEMS-based and FOG-based IMUs in the context of sensor orientation determination on an unmanned aircraft system (UAS)”</i> <b>P153</b></p> <p><b>Deepak Gautam</b> UNIVERSITY OF TASMANIA, AUSTRALIA <b>Arko Lucieer, Zbyněk Malenovsky and Christopher Watson</b></p>	<p><i>“Theory and Method of Mobile Precise Trigonometric Leveling System Based on Land Vehicle”</i> <b>P50</b></p> <p><b>Zou Jingui, Zhu Yongchao, Li Qin and Xu Yaming</b> WUHAN UNIVERSITY, CHINA</p>
4:00 - 4:15pm	<p><i>“Floor Plan Generation Using Portable Indoor Mobile Mapping Systems”</i> <b>P144</b></p> <p><b>Guang-Je Tsai, You-Liang Chen, Chien-Hsun Chu, Hsiu-Wen Chang, Kai-Wei Chiang and Thanh-Trung Duong</b> NATIONAL CHENG KUNG UNIVERSITY, TAIWAN</p>	<p><i>“Laser Aided INS Odometer Navigation System for Subway Track Irregularity Measurement”</i> <b>P151</b></p> <p><b>Qingquan Li, Zhipeng Chen and Qingwu Hu</b> WUHAN UNIVERSITY, CHINA</p>	<p><i>“The Study of the Landslide Monitoring Network Construction within Unified Datum in the Three Gorges Reservoir Area and its Application”</i> <b>P154</b></p> <p><b>Huang Shengxiang, Luo Li and Kang Chao</b> WUHAN UNIVERSITY, CHINA</p>
4:15 - 4:30pm	<p><i>“Characteristics of Geometric Dilution of Precision (GDOP) for Indoor Pseudolite Positioning”</i> <b>P41</b></p> <p><b>Yunlong Teng</b> UNIVERSITY OF ELECTRONIC SCIENCE AND TECHNOLOGY, CHINA <b>Jinling Wang and Qi Huang</b></p>	<p><i>“Study of Maglev Gyro Noise Eliminating Method based on Two-position Data Characteristics and Model reconstruction”</i> <b>P172</b></p> <p><b>Zhen Shi, Zhiqiang Yang and Ji Ma</b> CHANG’AN UNIVERSITY, CHINA</p>	<p><i>“Study on Calculating Projected Distortion of Measured Length on Gaussian Plane”</i> <b>P169</b></p> <p><b>Xiaolong Wu, Zhiqiang Yang and Zhen Tian</b> CHANG’AN UNIVERSITY, CHINA</p>
4:30 – 4:45pm	<p><i>“Mobile Tunnel Mapping in a GNSS-denied Environment”</i> <b>P244</b></p> <p><b>Michael Chapman</b> RYERSON UNIVERSITY, CANADA <b>Liping Zhang</b></p>	<p><i>“High-Order Noncommutativity Error Compensation for SINS”</i> <b>P6</b></p> <p><b>Maosong Wang and Wenqi Wu</b> NATIONAL UNIVERSITY OF DEFENSE TECHNOLOGY, CHINA</p>	<p><i>“Study on the Optimization Methods of Maglev Gyro-side Adjustment in the Unequal Precision Measurement of Long tunnel”</i> <b>P179</b></p> <p><b>Ji Ma, Zhiqiang Yang and Zhen Shi</b> CHANG’AN UNIVERSITY, CHINA</p>
4:45 – 5:00pm	<p><i>“A Preliminary Study of Image-based Indoor Navigation with Panoramic Camera”</i> <b>P91</b></p> <p><b>Tsung Che Huang and Yi-Hsing Tseng</b> NATIONAL CHENG KUNG UNIVERSITY, TAIWAN</p>	<p><i>“A Simple and Effective Low Cost DR System And Its Trajectory Smoothing”</i> <b>P282</b></p> <p><b>Gang Sun</b> NATIONAL EARTHQUAKE RESPONSE SUPPORT SERVICE, CHINA <b>and Jianfeng Yuan</b></p>	<p><i>“A Coordinate System Transformation Method for GB-SAR Data”</i> <b>P125</b></p> <p><b>Cheng Xing, Peng Wang, Yaming Xu and Jingjing Huang</b> WUHAN UNIVERSITY, CHINA</p>
5:30pm-8:00pm	<b>Dinner Party (BBQ), Mathews Pavilions</b>		

## Friday 11TH DECEMBER, 2015

8:30 – 10:30pm	Session 9A: Mapping for Transportation A	Session 9B: Location Based Services	Session 9C: GNSS A
	ROOM: Mathews Theatre A <b>Chairs: Rod Eckels</b> "Guidelines for the Use of Mobile LiDAR in Transportation Applications" <b>P129</b> <b>Michael Olsen</b> OREGON STATE UNIVERSITY, USA and <b>Gene Roe</b>	ROOM: Mathews Theatre C <b>Chairs: Laszlo Zentai, Linyuan Xia</b> "Making Any GIS-produced Map Or Image Usable on Mobile Devices For On and Off-line Use" <b>P248</b> <b>Ted Florence</b> AVENZA SYSTEMS INC., CANADA	ROOM: Mathews Theatre D <b>Chairs: Bofeng Li, Sheng Long Kao</b> "Instantaneous GPS/BDS Ambiguity Resolution for Precise Kinematic Positioning" <b>P210</b> <b>Ming Yang, Kuan-Yu Chiang and Feng-Yu Chu</b> NATIONAL CHENG KUNG UNIVERSITY, TAIWAN
8:30 - 8:45am			
8:45 - 9:00am	"A User Assistance and Guidance Service for Multi-modal Public Transit Situations Based on Cooperative Positioning" <b>P20</b> <b>Guenther Retscher and Franz Obex</b> VIENNA UNIVERSITY OF TECHNOLOGY, AUSTRIA	"Location Privacy Concern and the impacts on the Future Markets for Location-Based Services" <b>P189</b> <b>Anahid Basiri, Terry Moore and Chris Hill</b> THE UNIVERSITY OF NOTTINGHAM, UK	"Study on comparison of zenith tropospheric delay correction models" <b>P94</b> <b>Maohua Ding, Wusheng Hu and Xuebiao Shen</b> SOUTHEAST UNIVERSITY, CHINA
9:00 - 9:15am	"Intelligent Urban Road Infrastructure Management System Based on the Mobile Measurement Technology" <b>P81</b> <b>Kai Sun, Xin Chen, Huajian Ni and Qiang Gao</b> LEADOR SPATIAL, CHINA	"Interactive Panoramic VideoMap" <b>P7</b> <b>Haiting Li, Houzhi Wang, Yanhong Li</b> WUHAN GEOMATICS INSTITUTE, CHINA , <b>Inah Okon and Jason Moller</b>	"Partial Ambiguity Resolution In Multi-Frequency, Multi-System RTK Applications" <b>P139</b> <b>Bofeng Li</b> TONGJI UNIVERSITY, CHINA <b>Zhen Li and Yu'An Tan</b>
9:15 - 9:30am	"Development of Localization Technique for Large-scale KML data processing" <b>P67</b> <b>Jihun Kang, Hyeondeok Kim and Sunghyun Yeon</b> KOREA LAND AND GEOSPATIAL INFORMATIX CORPORATION, KOREA	"A New Panoramic Station Visualization Method Of Street View And Its Applications" <b>P213</b> <b>Du Meng, Wen Yuan, Jianhua Liu, Mingyi Du, and Guang Zhu</b> BEIJING UNIVERSITY OF CIVIL ENGINEERING AND ARCHITECTURE, CHINA	"Real-Time Precise Point Positioning Augmented with Single GNSS Beacon Station" <b>P178</b> <b>Chengfa Gao and Wang Gao</b> SOUTHEAST UNIVERSITY, CHINA
9:30 – 9:45am	"A low-cost RFID/Wi-Fi positioning solution for parking facilities management" <b>P127</b> <b>Vassilis Gikas</b> NATIONAL TECHNICAL UNIVERSITY OF ATHENS, GREECE <b>Guenther Retscher, Allison Kealy, Harris Perakis and Thanassis Mpimis</b>	"The hotspots clustering and visualization analysis of indoor pedestrian positioning data" <b>P180</b> <b>Yu Dengbo</b> WUHAN UNIVERSITY, CHINA	"A Preliminary Result of Real-Time GPS Precise Point Positioning-Supported Aerial Triangulation" <b>P71</b> <b>Junbo Shi, Xi Jiang, Gaojing Wang, Xiuxiao Yuan and Yang Cai</b> WUHAN UNIVERSITY, CHINA
9:45 – 10:00am	"Automated Road Markings Extraction from Mobile Laser Scanning and Imagery Data" <b>P115</b> <b>Hua Liu</b> WUHAN UNIVERSITY, CHINA <b>Li Yan, Changjun Chen and Boyi Wu</b>	"Semantic Cognition on Ubiquitous Trajectories for LBS" <b>P192</b> <b>Xia Linyuan, Li Qianxia, Huang Qiumei and Xia Yixiong</b> SUN YAT-SEN UNIVERSITY, CHINA	"GNSS High-rate Clock Determination Algorithm Based on Robust Estimation" <b>P119</b> <b>Li Yang</b> ZHENGZHOU INSTITUTE OF SURVEYING AND MAPPING, CHINA <b>Zhuoxi Ma, Rengui Ruan and Xiaolin Jia</b>
10:00 – 10:15am	"Mobile mapping system for street lamp detection" <b>P90</b> <b>Tamas Lovas, Bence Molnar, Arpad Somogyi and Arpad Barsi</b> BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS, HUNGARY	"Cartography 2.0: visualization of spatial tracking data in sport" <b>P176</b> <b>Laszlo Zentai</b> EÖTVÖS UNIVERSITY, HUNGARY	"Kinematic Mapping using BDS and GPS" <b>P123</b> <b>Jiming Guo, Gaojing Wang, Jing Cai and Junbo Shi</b> WUHAN UNIVERSITY, CHINA

10:15 – 10:30am	<p><i>“Managing the Survey for WestConnex”, P301</i>  <b>Narelle Underwood</b> ROADS AND MARITIME SERVICES, AUSTRALIA</p>	<p><i>“Data Management And Visualization On Wikiglobe” P114</i>  <b>Hai-Long Tian, Jing-Nong Weng and Teng Lin</b> BEIHANG UNIVERSITY, CHINA</p>	<p><i>“Preliminary assessment of navigation and positioning performance of BeiDou Navigation Satellite System at Zhongshan station, Antarctica” P126</i>  <b>Yujun Du, Zemin Wang, Yunqi Xiong and Jiachun An</b> WUHAN UNIVERSITY, CHINA</p>
10:40 - 11:00am	<b>Morning Tea &amp; Exhibitions</b>		
11:00 - 12:30pm (11 Dec 2015)	<p><b>Session 10A: Mapping for Transportation B</b>  ROOM: Mathews Theatre A  <b>Chairs: Michael Olsen, John Nolan</b>  <i>“Experiences with Mobile Mapping Technology for Road Transport projects within Road and Maritime Services” P302</i>  <b>Armen Dervesvic</b> ROADS AND MARITIME SERVICES, AUSTRALIA</p>	<p><b>Session 10B: Mobile Mapping &amp; Applications A</b>  ROOM: Mathews Theatre C  <b>Chairs: Guenther Retscher, Hsiu-Wen Chang</b>  <i>“Integrating shooting location and posture informations into photos and videos from film sites of movies and dramas” P86</i>  <b>Yoon-Seop Chang, Seong-Ho Lee, Young-Ho Suh and Joonmyun Cho</b> Electronics and Telecommunications Research Institute, Korea</p>	<p><b>Session 10C: GNSS B</b>  ROOM: Mathews Theatre D  <b>Chairs: Ming Yang, Fei Guo</b>  <i>“An efficient method for undifferenced cycle slip detection and repair of triple-frequency BeiDou signals” P140</i>  <b>Bofeng Li, Yanan Qin and Zhen Li</b> TONGJI UNIVERSITY, CHINA</p>
11:00 - 11:15am			
11:15 – 11:30am	<p><i>“How the Queensland Department of Transport and Main Roads developed the current Mobile Laser Scanning Technical Guideline” P237</i>  <b>John Allsopp</b> QUEENSLAND DEPARTMENT OF TRANSPORT AND MAIN ROADS, AUSTRALIA</p>	<p><i>“A 3D Fuzzy Grounding Alert System to Ship Maneuvering Based on Shallow Water Point” P216</i>  <b>Sheng Long Kao, Ki-Yin Chang and Chien-Min Su</b> NATIONAL TAIWAN OCEAN UNIVERSITY, TAIWAN</p>	<p><i>“Performance Evaluations of Advanced RAIM (ARAIM) for LPV-200 Using COMPASS/GNSS” P48</i>  <b>Yun Wu and Jinling Wang,</b> UNSW AUSTRALIA</p>
11:30 - 11:45am	<p><i>“A map matching technique for the pedestrian navigation service using Frechet distance approach” P160</i>  <b>Yoonsik Bang, Mikyeong Moon, Youngmin Lee and Kiyun Yu</b> SEOUL NATIONAL UNIVERSITY, KOREA</p>	<p><i>“Optimal allocation of land resources based on GIS: A case study of Savan District, Laos” P225</i>  <b>Yuling Peng, Aiwen Lin, Ke Wang, Xing Fan, Ying Ji, Qian Yang, Cheng Sun, Zhenzhen Zhao and Ling Zou</b> WUHAN UNIVERSITY, CHINA</p>	<p><i>“Research on the Cloud Storage Method of Massive GNSS Small Files” P38</i>  <b>Li Linyang, Lu Zhiping, Cui Yang, Li Jian, Lv Hao and Wang Yupu</b> INFORMATION ENGINEERING UNIVERSITY, CHINA</p>
11:45 - 12:00pm	<p><i>“Automatic extraction of roadside trees from MMS data using minimum spanning tree” P37</i>  <b>Takashi Michikawa, Kento Moriwaki, Nobuyoshi Yabuki, Tomohiro Fukuda, Keishiro Hara and Shuji Kurimoto</b> OSAKA UNIVERSITY, JAPAN</p>	<p><i>“Improved Global Urban Localization Based on Road Maps and 3D Detection of Road Intersections” P142</i>  <b>Lucas Veronese</b> UNIVERSIDADE FEDERAL DO ESPÍRITO SANTO, BRAZIL and <b>Jose Guivant</b></p>	<p><i>“Precise BDS Satellites Orbit Simulation for Services in Mobile Mapping” P13</i>  <b>Tongyu Che, Chuanding ZHANG, Li YANG, Wei FENG, Haishan ZHAO</b> ZHENGZHOU INSITUTE OF SURVEYING AND MAPPING, CHINA</p>
12:00 – 12:15pm	<p><i>“Pavement Deflection Measurement employing a Mobile Laser Deflectometer” P198</i>  <b>Michael Chapman</b> RYERSON UNIVERSITY, CANADA  <b>Qingquan Li and Qingzhou Mao</b></p>	<p><i>“Shop drawing and As-built Modelling assistance using Hand-Held Lidar Scanners: An Integrated Communication System” P117</i>  <b>Samad M.E. Sepasgozar</b> UNSW, AUSTRALIA <b>Perry Forsythe, Sara Shirowzhan and Samsung Lim</b></p>	<p><i>“A Distributed Processing Strategy for Data of Huge GNSS Networks” P24</i>  <b>Yang Cui</b> INFORMATION ENGINEERING UNIVERSITY, CHINA <b>Zhiping Lu, Yupu Wang, Linyang Li, Dashuang Sun and Zhengsheng Chen</b></p>
12:15 – 12:30pm	<p><i>“Non urban driver assistance with 2D tilting laser reconstruction” P131</i>  <b>Bruno Ricaud, Cyril Joly and Arnaud De La Fortelle</b> MINES PARISTECH, FRANCE</p>	<p><i>“Use of Close-Range Photogrammetry Technology for Plumbing Renovation Projects” P243</i>  <b>Anoop Sattineni and Tyler Baldrige</b> AUBURN UNIVERSITY, USA</p>	<p><i>“Visualization of real time differential GPS performance in Beijing” P26</i>  <b>Muhammad Bilal, Jin Tian and Yuan Heliang</b> BEIHANG UNIVERSITY, CHINA</p>
12:30pm-1:30pm	<b>Lunch &amp; Exhibitions</b>		

1:30 - 3:00pm (11 Dec 2015)	<b>Session 11A: 3D Point Clouds</b> ROOM: Mathews Theatre A <b>Chairs: Petra Helmholz; Cheng Wang</b> “Segmentation of connected street trees from mobile LiDAR point cloud scene” <a href="#">P97</a> <b>Zhanliang Yuan, Xitong Zhang, Huiyun Liu, Yongqiang Li and Lixue Li</b> HENAN POLYTECHNIC UNIVERSITY, CHINA	<b>Session 11B: Mobile Mapping &amp; Applications B</b> ROOM: Mathews Theatre C <b>Chairs: Anoop Sattineni; Feng Lu</b> “Local Government Asset Inventory Using Mobile Mapping Technology” <a href="#">P196</a> <b>Mosheur Rahman</b> WINGECARRIBEE SHIRE COUNCIL, AUSTRALIA	<b>Session 11C: 3D Modelling and BIM</b> ROOM: Mathews Theatre D <b>Chairs: Martin Isenburg, Kiyun Yu</b> “Create As-built BIM and Its Applications” <a href="#">P112</a> <b>Xuefei Zhu and Jinling Wang</b> UNSW, AUSTRALIA
1:30 - 1:45pm	“New Segmentation methods for sparse mobile laser scanning point clouds” <a href="#">P64</a> <b>Hoang Long Nguyen, Petra Helmholz, David Belton and Geoff West</b> CURTIN UNIVERSITY, AUSTRALIA	“The Application of Mobile Mapping Technology in Earthquake Emergency Rescue” <a href="#">P250</a> <b>Gang Sun</b> NATIONAL EARTHQUAKE RESPONSE SUPPORT SERVICE, CHINA <b>Baokun Ning, Jianfeng Yuan and Jingjing Liu</b>	“A MiniUAV-borne Laser Scanner - AOEagle and Its Application on Plot-wise 3D Modeling” <a href="#">P232</a> <b>Haohao Wu</b> CHINESE ACADEMY OF SCIENCES, CHINA <b>Yuwei Chen, Xiaohui Li, Jian Tang, Lingli Tang, Chuanrong Li, Lingling Ma, Fanrong Meng, Teemu Hakala, Juha Hyypä and Ruizhi Chen</b>
1:45 - 2:00pm	“Automatic registration of MLS point clouds and SfM meshes of urban area” <a href="#">P195</a> <b>Reiji Yoshimura, Hiroaki Date, Satoshi Kanai, Ryohei Honma, Kazuo Oda and Tatsuya Ikeda</b> HOKKAIDO UNIVERSITY, JAPAN	“Spatial Consistency Analysis Model of Construction Land: A Case of Wuhan City” <a href="#">P109</a> <b>Changlin Luo</b> WUHAN LAND RESOURCES AND PLANNING INFORMATION CENTER, CHINA <b>Zonghua Li and Qiuying Tong</b>	“A Robust System of Street Facades Extraction from Mobile Lidar Data” <a href="#">P146</a> <b>Li Li</b> WUHAN UNIVERSITY, CHINA <b>Jian Yao and Yong Ding</b>
2:00 - 2:15pm	“An Case Study In Detecting Pole-Like Objects From Mobile Laser Scanning Data” <a href="#">P269</a> <b>Lin Li, You Li, Yaolin Liu and Dalin Li</b> WUHAN UNIVERSITY, CHINA	“Construction Dump Truck Volume Measurements using Photogrammetry” <a href="#">P279</a> <b>Sandy Kwong and Xuesong Shen</b> UNSW AUSTRALIA	“Creating better Digital Surface Models from LiDAR points” <a href="#">P98</a> <b>Martin Isenburg</b> RAPIDLASSO GMBH, GERMANY <b>Anahita Khosravipour, Andrew Skidmore</b>
2:15 - 2:30pm	“Research on Incomplete Point Cloud Models Repairing Of Large-Scale Scene Urban Buildings” <a href="#">P96</a> <b>Yongqiang Li, Lubiao Niu, Zhanliang Yuan, Lixue Li and Xitong Zhang</b> HENAN POLYTECHNIC UNIVERSITY, CHINA	“A local fitting filtering method for rugged forested zone” <a href="#">P59</a> <b>Feifei Tang</b> CHONGQING SURVEY INSTITUTE, CHINA <b>Zejun Xiang, Degui Teng and Bo Hu</b>	“Using Low-cost UAV Photogrammetry For Building Survey Of The Historical Byzantine Aydos Castle And Accuracy Research Of Building Survey” <a href="#">P230</a> <b>Mehmet Zeki Coskun Akropol</b> COMPUTER & ENGINEERING LTD. CO., TURKEY
2:30 – 2:45pm	“The Applications of Robust Estimation Method BaySAC in 3D Indoor Scene Reconstruction fusing KINECT point clouds and videocam images” <a href="#">P239</a> <b>Zhizhong Kang</b> CHINA UNIVERSITY OF GEOSCIENCES, CHINA	“Quantifying Coastal Slope Instability Through Integrated Time-Series Airborne Laser Scanning And Photography” <a href="#">P138</a> <b>Neil Slatcher, Liene Starka, Chris Cox and Carlos Gonzalez</b> 3D LASER MAPPING, UK	“Extraction of Roof Lines From High-resolution Images By a Grouping Method” <a href="#">P233</a> <b>Aluir Dal Poz and Vanessa Fernandes</b> SÃO PAULO STATE UNIVERSITY, BRAZIL
2:45 – 3:00pm			
3:00 - 3:30pm	<b>Afternoon Tea</b>		
3:30 - 4:30pm	<b>Session 12: Closing Ceremony</b> <b>Room: Mathews Theatre A; Chair: Jinling Wang</b> Presentations of Australian National Map Competitions: Dynamic Map Winners MMT Summer School-2016 and MMT2017 Venue Concluding Remarks		

## Poster Sessions

### Poster Session A (9 December 2015)

*"Power Lines Mapping Using a UAV Lidar System"* **P177**  
**Jihee Jeong, Impyeong Lee and Kyoungah Choi**  
 UNIVERSITY OF SEOUL, KOREA

*"Laser Scanning SLAM Integrated with Internal Navigation by Adaptive Extended Kalman Filter"* **P62**  
**Jian Wang, Xinglong Tan and Xin Li** CHINA UNIVERSITY OF MINING & TECHNOLOGY, CHINA

*"Design and implementation of the pedestrian navigation system for transportation vulnerable people"* **P162**  
**Mikyeong Moon, Yoonsik Bang, Youngmin Lee and Kiyun Yu**  
 SEOUL NATIONAL UNIVERSITY, KOREA

*"Temperature Error Suppression for Vibratory Micromachined Gyroscope Using Kalman Filter Based Angular Rate Estimation Technique"* **P72**  
**Ancheng Wang** INFORMATION ENGINEERING UNIVERSITY, CHINA **Xiaofeng He, Jiansheng Li, Xiangyang Hao and Songlin Liu**

*"Comparative Analysis of the Performance of Spatial-Domain, Parameter-Domain, and Hybrid Approaches for LiDAR Data Segmentation"* **P74**  
**Yun-Jou Lin** PURDUE UNIVERSITY, USA **Chang Jae Kim and Ayman Habib**

*"Analysis of Spatial Characteristics of Urban Facilities based on POIs"* **P102**  
**Shiwei Shao, Xin Huang and Mingjun Pen** WUHAN LAND RESOURCE AND URBAN PLANNING INFORMATION CENTER, CHINA

*"Automatic robust registration of MLS point clouds of urban area"* **P201**  
**Hiroaki Date, Shungo Takai, Satoshi Kanai, Ryohei Honma, Kazuo Oda and Tatsuya Ikeda** HOKKAIDO UNIVERSITY, JAPAN

### Poster Session B (10 December 2015)

*"Mapping forest fuel load and structure from airborne LiDAR data"* **P84**  
**Narsimha Garlapati, Albert Van Dijk, Marta Yebra and Geoffrey Cary** AUSTRALIAN NATIONAL UNIVERSITY, AUSTRALIA

*"Accurate Lane Extraction from LiDAR and Panoramic Image Using Mobile Mapping System (MMS)"* **P183**  
**Jia Fan and Yuchun Huang** WUHAN UNIVERSITY, CHINA

*"Denoising Airborne Gravity Data Using Radial Basis Function of Poisson Wavelet"* **P185**  
**Lei Zhao, Meiping Wu, Kaidong Zhang and Juliang Cao**  
 NUDT, CHINA

*"Comparative analysis of airborne/terrestrial mobile mapping systems and unmanned aerial vehicles (UAVs) for 3D modelling applications"* **P135**  
**Zahra Lari and Naser El-Sheimy** UNIVERSITY OF CALGARY, CANADA

*"An real-time indoor pseudolite positioning system based on software receiver"* **P246**  
**Peng Zhang, Fuyu Sun, Yaming Xu and** WUHAN UNIVERSITY, CHINA; **Jinling Wang**

*"System Development and Distribution Technology Research of Geo-Data using the Text-Based Public Open Geographic Data"* **P150**  
**Sunghyun Yeon, Jihun Kang and Insu Lee** LX SPATIAL INFORMATION RESEARCH INSTITUTE, KOREA

*"An low-cost parameter estimation for zenith tropospheric delay based on GNSS clock error prediction"* **P8**  
**Ye Ren, Xiaohui Li, Haitao Wu, Longxia Xu and Feng Zhu**  
 National Time Service Center, Chinese Academy of Sciences, CHINA

### Poster Session C (11 December 2015)

*"Instrumental Biases and their Compensation Models for Multi-GNSS"* **P228**  
**Fei Guo, Xiaohong Zhang and Jinling Wang** UNSW, AUSTRALIA

*"Classification Techniques For Lidar Data"* **P231**  
**Tri Dev Acharya, Dong Ha Lee and In Tae Yang** KANGWON NATIONAL UNIVERSITY, KOREA

*"The Research for High-geometric Resolution Remote Sensing Images Denoising Algorithm Based on Improved Anisotropic Diffusion"* **P257**  
**Liting Zhang and Longhua Wu** EAST CHINA UNIVERSITY OF TECHNOLOGY, CHINA

*"Smart City Connotation: A Development Perspective"* **P234**  
**Qian Yang, Aiwen Lin, Yuling Peng, Ling Zou and Cheng Sun**  
 WUHAN UNIVERSITY, CHINA

*"The Anatomy Of Low-cost Unmanned Aerial Systems For Photogrammetry"* **P241**  
**Mehmet Zeki Coskun** ISTANBUL TECHNICAL UNIVERSITY, TURKEY

*"Ground movement and deformation Information fast and mobile measurement system based on Mult-measurement and Mobile GIS"* **P238**  
**Fuyang Ke** NANJING UNIVERSITY OF INFORMATION SCIENCE AND TECHNOLOGY, CHINA **Xuexiang Yu and Pengwei Si**

*"Modeling the Colored Noise of Inertial Sensors in GNSS/SINS Integrated Navigation"* **P219**  
**Youlong Wu** JINLING INSTITUTE OF TECHNOLOGY, CHINA **Zhong Yang, Jinling Wang and Gang Sun**



*"Autonomous Surveying Boat (ARIBot): System Configuration and Accuracy of Surveying"* **P229**  
**Mehmet Zeki Coskun and Abdullah Arslan** ISTANBUL  
TECHNICAL UNIVERSITY, TURKEY

*"Performance of TOA and FOA estimation for the new generation COSPAS-SARSAT Search and Rescue signals"* **P155**  
**Chuanyu Zhou, Jingyuan Li and Yangbo Huang** NUDT CHINA

*"Research of Single body modeling in 3D Urban Model Based on Oblique Photograph"* **P34**  
**Tan Renchun, Wang Houzhi and Peng Qingshan** WUHAN  
GEOMATIC INSTITUTE, CHINA

*"Feasibility Analysis of Deep Space Positioning by Inter Satellite Link's Wide Beam Signal"* **P68**  
**Lei Chen, Yangbo Huang, Yingxiang Liu, Baiyu Li and Gang Ou** NATIONAL UNIVERSITY OF DEFENSE TECHNOLOGY, CHINA

*"Study on interoperability of GNSS reference frame"* **P205**  
**Xinhui Zhu** ZHENGZHOU INSTITUTE OF SURVEYING AND  
MAPPING, CHINA **Ren Wang, Li Yang**

*"Integrity Analysis under the Presence of Multiple Faults in Integrated GNSS/INS Systems"* **P167**  
**Ali Almagbile** UNSW, AUSTRALIA **Sattam Alshogoor, Jinling Wang, Ali Al-Shaery and Muwaffaq Alqurashi**

*"Ionosphere Constrained Precise Point Positioning (IC-PPP) Based on Multi-GNSS Dual-frequency Raw Observations"* **P208**  
**Shuyang Cheng, Peiyuan Zhou and Jinling Wang** UNSW,  
AUSTRALIA

*"How to Determine Proper Clustering Level by Zoom Level of Mobile LBSNS Data"* **P100**  
**Youngmin Lee, Yoonsik Bang, Mikyeong Moon and Kiyun Yu** SEOUL NATIONAL UNIVERSITY, KOREA

*"Determination of Uncalibrated Phase Delays to Enhance Precise Point Positioning"* **P212**  
**Peiyuan Zhou and Jinling Wang** UNSW, AUSTRALIA

*"Precise Calibration and Error Modeling for 3D Modelling Sensors"* **P214**  
**Wu Chen, Walid Darwish, Shengjun Tang and Wenbin Li** HONG KONG POLYTECHNIC UNIVERSITY, HONG KONG

*"Image Matching Based On A Valid Region Using Vanishing Point Information During 3d Building Reconstruction"* **P9**  
**Yuning Xie and Yunfan Wang** SOUTHEAST  
UNIVERSITY, CHINA

*"Choosing Ground Control Points via Recursive Deep Learning in UAV Photogrammetric Application"* **P240**  
**Yuhan Zhou, Zhichao Zhang and Zhouyan Qiu** WUHAN  
UNIVERSITY, CHINA

*"Effects of different ocean tide models on GPS baseline solutions in coast area, East Antarctica"* **P245**  
**Dongchen E, Shengkai Zhang and Jintao Lei** WUHAN  
UNIVERSITY, CHINA

*"Accuracy Comparison Of D-INSAR With Different Dem In Mining Area"* **P255**  
**Huang Jilei, Deng Kazhong and Fan Hongdong** CHINA UNIVERSITY OF MINING AND TECHNOLOGY, CHINA

*"The Performance Analysis Of Multi-platform Indoor Mobile Mapping Systems"* **P174**  
**Guang-Je Tsai, Hsiu-Wen Chang, Kai-Wei Chiang, ChienHsun Chu, You-Liang Chen and Thanh-Trung Duong** NATIONAL CHENG KUNG UNIVERSITY, DEPARTMENT OF GEOMATICS, TAIWAN

*"Concrete Rebar Detection Using Ultra-wideband Wall Penetrating Radar"* **P280**  
**Jinrui Zhang and Xuesong Shen** UNSW AUSTRALIA

*"Low Cost Mobile Mapping Using Smartphones"* **P45**  
**Naif Alsubaie and Naser El-Sheimy** UNIVERSITY OF CALGARY,  
CANADA

*"A planning support system for evaluating land use impact on transport"* **P103**  
**Peng Mingjun** WUHAN LAND RESOURCES AND URBAN  
PLANNING INFORMATION CENTER, CHINA **Li Zonghua, Zhou Haiyan and Meng Cheng**



## **Symposium Convener/General Chair**

Jinling Wang, UNSW Australia

## **Scientific Committee**

Norbert Haala, (Chair) University of Stuttgart, Germany  
Naser El-Sheimy, (Co-Chair) University of Calgary, Canada  
Dorota Grejner-Brzezinska, (Co-Chair) The Ohio State University, USA  
Georg Gartner, Vienna University of Technology, Austria  
Ayman Habib, Purdue University, USA  
Jonathan Li, University of Waterloo, Canada  
Qingquan Li, Shenzhen University, China  
Charles Toth, The Ohio State University, USA

## **International Program Committee**

Charles Toth (Chair), The Ohio State University, USA  
Pedro Arias-Sánchez, University of Vigo, Spain  
Ruizhi Chen, Texas A&M University Corpus Christi, USA  
Wu Chen, Hong Kong Polytechnic University, China  
Clive Fraser, University of Melbourne, Australia  
José Alberto Gonçalves, University of Porto, Portugal  
Pierre Grussenmeyer, INSA Strasbourg, France  
Alberto Guarnieri, University of Padova, Italy  
Martin Isenburg, rapidlasso GmbH and LAsTools, Germany  
Jen-Jer Jaw, National Taiwan University, Taiwan  
Vineet R. Kamat, University of Michigan, USA  
Allison Kealy, University of Melbourne, Australia  
Yukihiro Kubo, Ritsumeikan University, Japan  
Heiner Kuhlmann, University of Bonn, Germany  
Sébastien Lefèvre, University of Bretagne Sud, France  
Samsung Lim, UNSW Australia  
Arko Lucieer, University of Tasmania, Australia  
Terry Moore, University of Nottingham, UK  
Stephan Nebiker, University of Applied Sciences and Arts, Switzerland

Fabio Remondino, FBK Trento, Italy  
Guenther Retscher, Vienna University of Technology, Austria  
Craig Roberts, UNSW Australia  
Roberto Sabatini, RMIT, Australia  
Antonio M.G. Tommaselli, São Paulo State University, Brazil  
Yi-Hsing Tseng, National Cheng Kung University, Taiwan  
Toshiaki Tsujii, Japan Aerospace Exploration Agency (JAXA), Japan  
Ian Turner, UNSW Australia  
Antonio Vettore, University of Padua, Italy  
Cheng Wang, Xiamen University, China  
Geoff West, Curtin University, Australia  
Li Yan, Wuhan University, China  
Bisheng Yang, Wuhan University, China

## **Scientific Publication Committee**

Jan Skaloud (Chair), Swiss Federal Institute of Technology, Switzerland  
Kai-Wei Chiang (Chair), National Cheng Kung University, Taiwan  
Dorota Grejner-Brzezinska, The Ohio State University, USA  
Jinling Wang, UNSW Australia

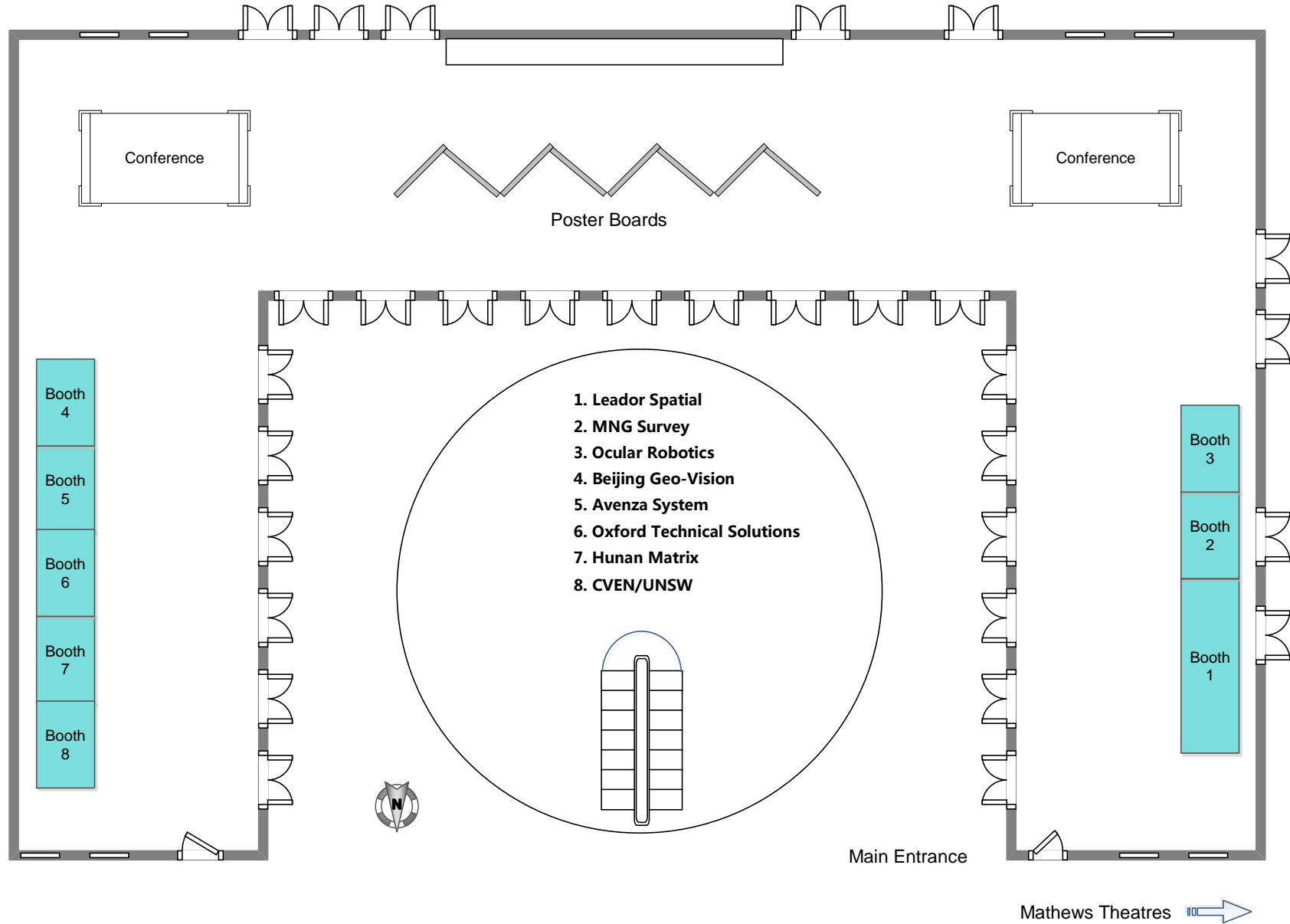
## **Industry Advisory Committee**

Paul Harcombe (Chair), NSW Land & Property Information, Australia  
Ed Garvin, OMNILINK Pty Limited, Australia  
Herry Guo, Ledor Spatial Information Technology Co., Ltd., China  
Grant Kilpatrick, Roads and Maritime Services (RMS), Australia  
Martin Nix, Position Partners, Australia  
David Sinclair, 43 Pty Limited, Australia  
Francisco Urbina, NSW Location Intelligence Industry Advisory Committee  
Gabriel Van Wyk, SSSI NSW Committee/Open Spatial, Australia

## **Local Organising Committee**

Jinling Wang (Chair), UNSW Australia  
Johnson Shen (Co-Chair), UNSW Australia  
Allison Kealy, University of Melbourne, Australia  
Gabriel Van Wyk, SSSI NSW Committee/Open Spatial, Australia

# MMT2015 Exhibition Floor Plan



## Platinum Sponsor



Leador Spatial Information Technology Co. Ltd.  
<http://www.leador.com.cn/>

## Gold Sponsors



MNG Survey  
<http://www.mngsurvey.com.au/>



Ocular Robotics Ltd.  
<http://www.ocularrobotics.com/>



Beijing Geo-Vision Tech. Co.,Ltd.  
<http://www.jx4.com/en/>

## Silver Sponsors



Avenza Systems Inc.  
<http://www.avenza.com/>



Oxford Technical Solutions Ltd.  
<http://www.oxts.com/>

## Government Sponsor



<http://www.trade.nsw.gov.au/business-and-industry-in-nsw/>

## Academic Sponsor



<http://www.engineering.unsw.edu.au/civil-engineering/>



<http://lidarnews.com/>



<http://www.spatialsource.com.au/>



<http://www.gim-international.com/>



<http://www.mycoordinates.org/>



<http://www.geoconnexion.com/>



<http://www.clocate.com/conferences/2015>

# General Information for MMT2015 Participants

## 1) Symposium Registration Desk Hours

Wednesday 9 December 2015, 7:30am-4:00pm  
Thursday 10 December 2015, 8:00am-4:00pm  
Friday 11 December 2015, 8:00am-3:00pm

## 2) Name Badges and Tickets

Your name badge must be worn at all times, as it is your entry to all sessions and inclusive functions. Entry to social events will also not be permitted unless you present the ticket that will be given to you when you register.

## 3) Introduction of Speakers

To assist the brief introduction of speakers, each speaker should prepare a short biography (2-3 lines) which should be handed to the Session Chairs before his/her session starts.

## 4) WiFi Connections at MMT2015 Venue

A Free-WiFi connection is available for all MMT2015 participants. You can set up and activate your visitor account via **UNSW Guest Account Management Portal (with Event Passphrase: MMT2015)** at: <https://goo.gl/kPsRy6> (if this is not working for you, you should visit or MMT2015 website to see more instructions).

After you have set up your WiFi account, open WiFi in your mobile or laptop, and find a WiFi network “**uniwide**” (not “uniwide\_guest”). Enter the account name (Do not forget the letter “v”) and the password you set, then Internet will be connected for your device.

## 5) Dress

A good standard of casual dress is required for attending the MMT2015 symposium.

## 6) Updates for MMT2015 Programs

Due to some unpredicted situations, for example, some speakers have not obtained their visa in time to attend MMT2015, the program could be updated. Such updates will be put on the notice board in the poster area.

## 7) Swimming and working at nearby beaches

Sydney is well known for its clean and beautiful beaches, some of which are close to the MMT2015 venue, only a walk of about 20 minutes! Don't forget to bring your swimming attire for an early morning swim at the beaches. Fresh air is absolutely guaranteed.

## 8) Restaurants

There are an abundant number of restaurants to suit all tastes and budgets to choose from within easy walking distance of the University at Kingsford, Randwick and in the Coogee Bay area.

## 9) Social Events

### Ice Breaker Party/Welcome Reception

(Unlimited drinks with some finger food)

**5:15pm – 6:45pm**, Wednesday, 9 December 2015

The Pavilions, UNSW Kensington Campus, is just the Exhibition area.

(Additional Ticket: \$56 per ticket)

### Dinner (Aussie BBQ) Party

(Corporate quality BBQ, consisting of a variety of delicious salads, meats, seafood, bread, with a supply of wine, beer, soft drink, a little glass desert)

**5:30pm-8:00pm**, Thursday, 10 December 2015

The Pavilions, UNSW Kensington Campus, is just the Exhibition area.

(Additional Ticket: \$96 per ticket)

UNSW Kensington Campus Map

