



UAV-g 2015 PRELIMINARY PROGRAM

(as of 19-AUGUST-2015)

SUNDAY 30 AUGUST 2015		09:15-12:30	LSB 107
Pre-Conference Workshop 1: Inertial Navigation – The Core of Direct Geo-referencing and Navigation Applications Prof. Dr. Naser El-Sheimy, University of Calgary			
10:45-11:05	Health break	LSB Lobby	

12:30-13:30	Lunch	LSB Lobby	
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SUNDAY 30 AUGUST 2015		13:30-18:00	LSB 107
Pre-Conference Workshop 2: Pix4D User Workshop Christina Gkintzou, Pix4D			
15:15-15:35	Health break	LSB Lobby	

LOCATION AND TIME OF CONFERENCE AND WORKSHOPS REGISTRATION:	LSB Lobby
Sunday 30 Aug 2015 / Monday 31 Aug 2015 / Tuesday 1 Sept 2015 / Wednesday 2 Sept 2015	
Registration opens at 08:00 am	

LSB (Life Sciences Building) is building # 90 / LAS (Lassonde Building) is building # 19

York University Keel Campus map: http://www.yorku.ca/web/maps/KEELE_Map.pdf



MONDAY 31 AUGUST 2015		09:15-10:30	LAS Lecture Hall A
<p>Conference opening – Chair Costas Armenakis Opening remarks Prof. Dr. Janusz Kozinski, Dean, Lassonde School of Engineering, York University Prof. Dr. Sushanta Mitra, Assistant Vice President, Research and Innovation, York University</p> <p>Keynote 1: Prof. Dr. Kimon Valavanis, University of Denver Challenges in Unmanned Aircraft Systems: Autonomy, Sense-Detect-and-Avoid, and Formation Control</p>			
10:30-11:00		Health break LSB Lobby	Exhibition Opening LSB Lobby
MONDAY 31 AUGUST 2015		11:00-12:30	
<p>LSB 103 <u>Navigation I</u> Chair: Naser El-Sheimy</p> <p>Fixed-wing micro aerial vehicle for accurate corridor mapping Martin Rehak and Jan Skaloud</p> <p>The direct georeferencing application and performance analysis of UAV helicopter in GCP-free area Cheng-Fang Lo, Meng-Lun Tsai, Kai-Wei Chiang, Chien-Hsun Chu, Guang-Je Tsai, Chen-Kuo Cheng, Naser El-Sheimy and Habib Ayman</p> <p>UAV position estimation based on the use of radio signal measurements Andrea Masiero, Francesca Fissore, Alberto Guarnieri, Francesco Pirotti and Antonio Vettore</p> <p>Direct georeferencing on small unmanned aerial platforms for improved reliability and accuracy of mapping without the need for ground control points Joe Hutton, Omer Mian, James Lutes, Greg Lipa, Erwan Gavelle and Sebastian Borghini</p>	<p>LSB 106 <u>Platforms and sensor calibration and quality</u> Chair: Görres Grenzdoerffer</p> <p>Investigations on the quality of the interior orientation and its impact in object space in UAV-photogrammetry Heidi Hastedt and Thomas Luhmann</p> <p>UAV Image Blur - Its Influence and Ways to Correct it Till Sieberth, Rene Wackrow and Jim H. Chandler</p> <p>The development of the Brican TD100 small UAV and payload trials Brian Eggleston, Brian McLuckie, William Koski, David Bird, Charla Patterson, Denys Bohdanov, Hugh Liu, Gayan Gamage and Tony Mathews</p> <p>SONGBIRD - an innovative UAS combining the advantages of fixed wing UAS and multi rotor UAS Hans-Peter Thamm, Nicolas Brieger, Matthias Meyer, Klaus-Peter Neitzke, Mike Mönninghoff and Rolf Jansen</p>	<p>LSB 105 <u>Mapping and monitoring I</u> Chair: Ayman Habib</p> <p>Common approach to geoprocessing of UAV data across application domains George Percivall, Mark Reichardt and Trevor Taylor</p> <p>Landslide monitoring with the help of unmanned aerial vehicle Vid Peterman</p> <p>The Design and Testing of a lidar platform for a UAV for Heritage Mapping Zhe Li, Yu Yan, Yabing Jing and Shuguang Zhao</p> <p>Implementation of an unmanned aerial vehicle system for large scale mapping Chris Cryderman and Bill Mah</p>	



MONDAY 31 AUGUST 2015		15:30-17:00
<p>LSB 103 <u>Point cloud generation</u> Chair: Derek Lichti</p> <p>A robust matching method for unmanned aerial vehicle images with different viewpoint angles based on regional coherency Zhenfeng Shao, Congmin Li and Nan Yang</p> <p>UAV-based point cloud generation for open-pit mine modelling Mozhddeh Shahbazi, Gunho Sohn, Jérôme Théau and Patrick Ménard</p> <p>Experiments with UAS imagery for the automatic modeling of power lines 3D geometry Grzegorz Jozkow, Ben Vander Jagt and Charles Toth</p> <p>Planar Constraints for an Improved UAV-image-based Dense Point Cloud Generation Fangning He, Ayman Habib and Abdullah Al-Rawabdeh</p>	<p>LSB 106 <u>Mapping and monitoring II</u> Chair: Bisheng Yang</p> <p>A new technique based on mini-UAS for estimating water and bottom radiance contributions in optically shallow waters Martin Montes, Cristina Barrado and Enric Pastor</p> <p>Mission-oriented sensor arrays and UAVs - A case study on environmental monitoring Nina Figueira, Izabela Lyon Freire, Onofre Trindade and Eduardo Simões</p> <p>Monitoring water quality in micro-watersheds using drones and remote sensing applications. Case study: Teusaca river, La Calera, Colombia. Nataly Saenz, Daniel Paez and Cesar Arango Gomez</p> <p>Multi rotor UAV at different altitudes for slope mapping studies Khairul Nizam Tahar</p> <p>Accuracy assessment in Structure From Motion 3D reconstruction from UAV-born images: the influence of the data processing methods. Gabriella Caroti, Andrea Piemonte and Isabel Martínez-Espejo Zaragoza</p>	<p>LSB 105 <u>Education and Regulations</u> Chair: Maureen Mountjoy</p> <p>Integrating UAV into geomatics curriculum Raid Al-Tahir</p> <p>Special Presentation: Regulatory requirements for Canadian airspace UAV air operations Mathieu Boulianne, Spectral Aviation</p>



MONDAY 31 AUGUST 2015

17:15-18:30

Poster Session LSB West Lobby

Remote spectral imaging using a low cost UAV system, Catherine Tsouvaltsidis, Naif Zaid Al Salem, Guy Benari, Danny Vrekalic and Brendan Quine

Assessment of the influence of AV image quality on the orthophoto production, Damian Wierzbicki, Michal Kedzierski and Anna Fryskowska

Preliminary results from the portable imagery quality assessment test field (PIQuAT) of UAV imagery for imagery reconnaissance purposes, Rafal Dabrowski, Agnieszka Jenerowicz, Agata Orych and Piotr Walczykowski

Portable imagery quality assessment test field for UAV sensors, Rafal Dabrowski and Agnieszka Jenerowicz

Overview of UAV activities in Wageningen unmanned aerial remote sensing facility, Juha Suomalainen, Niels Anders, Jappe Franke, Harm Bartholomeus, Corjan Nolet, Marinka Van Puijenbroek, Henk Kramer, Saskia Keesstra, Sander Mucher and Lammert Kooistra

Leaf area index estimation in vineyards from UAV hyperspectral data, 2D image mosaics and 3D canopy surface models, Ilias Kalisperakis, Christos Stentoumis, Lazaros Grammatikopoulos and Konstantinos Karantzalos

Single image dehazing for visibility improvement, Yishu Zhai and Dongjiang Ji

Review of methods for determining the spatial resolution of UAV sensors, Agata Orych

A new survey on self-tuning integrated low-cost GPS/INS vehicle navigation system in harsh environment, Neda Vidi

Automatic geo-referencing mobile laser scanning data to UAV images, Yunlong Gao, Xianfeng Huang, Fan Zhang, Zhengwen Fu and Chong Yang

New model of a solar wind airplane for geomatic operations, Abdelali Achachi and Djamel Benatia

UAV photogrammetry for mapping and monitoring of northern permafrost landscapes, Robert Fraser, Ian Olthof, Matthew Maloley, Richard Fernandes, Christian Prevost and Jurjen van der Sluijs

Design and development of a low-cost mobile mapping system for multi-purpose applications, Carlos Acevedo Pardo, Mercedes Farjas Abadía and Harald Sternberg

Digital elevation model from non-metric camera in uas compared with lidar technology, Dayamit Ojeda Martinez and Pedro Martinez Fernandez

Comparison between multicopter uav and total station for estimating stockpile volumes, Cesar Arango Gomez and Andres Camilo Morales

Multi-criteria analysis of UAVs regulations in 6 countries using the analytical hierarchical process and expert knowledge, Andres Morales, Daniel Paez and Cesar Arango Gomez

MONDAY 31 AUGUST 2015

18:30-20:30

Welcome reception LSB Lobby

**TUESDAY 1 SEPTEMBER 2015****Technology Demonstration Day at Markham Airport**

09:15-09:30	Bus Boarding York U to Markham Airport
10:15-10:30	Introduction and Guidelines
10:30-12:00	UAS Demonstrations and Exhibition
12:00-13:45	Lunch / Exhibition
13:45-15:30	UAS Demonstrations and Exhibition
15:30-15:45	Bus Boarding Markham Airport to York U and Downtown Toronto

TUESDAY 1 SEPTEMBER 2015**Conference Dinner Cruise**

17:45-18:00	Bus Boarding York U to Toronto Harbor
19:30-22:30	Conference Dinner Cruise, Toronto harbor
22:30-22:45	Bus Boarding Toronto Harbor to York U



WEDNESDAY 2 SEPTEMBER 2015		09:15-10:30	LAS Lecture Hall A
Chair: Costas Armenakis Keynote 2: Prof. Dr. Michael Jenkin, York University Flying Underwater: Some Results with an Amphibious Robot Keynote 2: Prof. Dr. David Bird, McGill University Applications of Unmanned Vehicle Systems to Wildlife Research and Management in the 21st Century			
10:30-11:00		Health break	

WEDNESDAY 2 SEPTEMBER 2015		11:00-12:30	
<p>LSB 103 <u>Tracking, sense and avoid</u> Chair: Jan Skaloud</p> <p>Robust aerial object tracking in high dynamic flight maneuvers Andreas Nussberger, Helmut Grabner and Luc Van Gool</p> <p>Evaluation of stereo algorithms for obstacle detection with fisheye lenses Nicola Krombach, David Droschel and Sven Behnke</p> <p>A feasibility study on using ViSP's 3D model-based tracker for UAV pose estimation in outdoor environments Julien Li-Chee-Ming and Costas Armenakis</p> <p>Why the horizon is important for airborne sense-and-avoid applications Cyrus Minwalla and Kristopher Ellis</p>	<p>LSB 106 <u>3D reconstruction</u> Chair: Gunho Sohn</p> <p>Region-based 3D surface reconstruction using images acquired by low-cost UAV systems Zahra Lari, Abdulla Al-Rawabdeh, Fangang He, Naser El-Sheimy and Ayman Habib</p> <p>Model-based building detection from low-cost optical sensors onboard unmanned aerial vehicles Konstantinos Karantzas, Panagiotis Koutsourakis, Ilias Kalisperakis and Lazaros Grammatikopoulos</p> <p>Automated DSM extraction from UAV images and performance analysis Sooahm Rhee and Taejung Kim</p> <p>On the use of UAVs in mining and archaeology - geo-accurate 3D reconstructions using various platforms and terrestrial views Alexander Tscharf, Markus Rumpler, Friedrich Fraundorfer, Gerhard Mayer and Horst Bischof</p>	<p>LSB 105 <u>Species monitoring</u> Chair: Martin Montes</p> <p>Development and evaluation of a UAV based mapping system for remote sensing and surveying applications Christian Eling, Markus Wieland, Christophe Hess, Lasse Klingbeil and Heiner Kuhlmann</p> <p>Unmanned Aerial Vehicles for alien plant species detection and monitoring Petr Dvořák, Jana Müllerová, Tomáš Bartaloš and Josef Brůna</p> <p>Indicator species population monitoring in Antarctica with UAV Anna Zmarz, Malgorzata Korczak-Abshire, Rune Stovold, Miroslaw Rodzewicz and Izabella Kedzierska</p> <p>Wildlife multispecies remote sensing using visible and thermal infrared imagery acquired from an unmanned aerial vehicle Louis-Philippe Chrétien, Jerome Theau and Patrick Ménard</p>	



12:30-13:30 **Lunch break** **LSB Lobby**

WEDNESDAY 2 SEPTEMBER 2015		13:30-14:45
<p>LSB 103 <u>Navigation II</u> Chair: Charles Toth</p> <p>The performance analysis of an indoor mobile mapping system with RGB-D sensor Guang-Je Tsai, Kai-Wei Chiang, Chien-Hsun Chu, You-Liang Chen, Naser El-Sheimy and Ayman Habib</p> <p>Performance characteristic MEMS-based IMUs for UAVs navigation Haytham Mohamed, Jakob Hansen, Mohamed Elhabiby, Abu Sesay and Naser El-Sheimy</p> <p>Photogrammetric mission planner for RPAS Florian Gandor, Martin Rehak and Jan Skaloud</p>	<p>LSB 106 <u>DSM and Orthoimagery</u> Chair: Taejung Kim</p> <p>Detection of occlusion areas based on the height gradient method using dataset from uav mission Henrique Oliveira, Ayman Habib, Aluir Dal Poz and Mauricio Galo</p> <p>Ortho-rectification of narrow band multi-spectral imagery assisted by DSLR RGB imagery acquired by a fixed-wing UAS Jiann-Yeou Rau, Yun-Ping Jhan and Cho-Ying Huang</p> <p>Integrating terrestrial lidar with point clouds created from unmanned aerial vehicle imagery Michael Leslar</p>	
14:45-15:00		Health break LSB Lobby

WEDNESDAY 2 SEPTEMBER 2015	15:00-16:30	LAS Lecture Hall A
Closing session – Chair: Costas Armenakis Panel discussion: UAV-g progress and future directions, Lead: Prof. Dr. Wolfgang Förstner, University of Bonn Poster paper Awards UAV-g 2017 Venue Closing remarks		

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