

UAS4Enviro2018

6th Conference for Unmanned Aerial Systems for Environmental Research

PROGRAMME

June 27 – 29 2018, FESB, Split, Croatia

DAY 1 – Wednesday 27 June 2018	
8:30 – 9:30 Registration	
Opening Session (10:00 – 11:00) Session chair: A. Simic Milas, BGSU, SPLIT Remote Sensing	
9:30 – 9:40	Welcome and Conference Objectives FESB Representative and A. Simic Milas (on behalf of the conference organization)
9:40 – 10:40	Keynote speaker: Small UAS for Environmental Analysis: Technology, Applications, and Issues Robert J. Moorhead II, Professor, Mississippi State University, USA
S1 – Methods and Techniques (11:00 – 12:00) Session Chair: A. Simic Milas and xxx	
10:40-11:00	Deep Convolutional Feature Fusion Based Target Recognition in UAV imagery for Wilderness Search and Rescue Tea Marasović and Vladan Papić
11:00-11:20	UAV-based Thermal Infrared Imagery in Agriculture and Forestry: a Review Luís Pádua, Nuno Silva, Telmo Adão, Emanuel Peres and Joaquim João Sousa
11:20-11:40	Integrating Geospatial Technologies for Monitoring Shoreline Changes: The Furadouro Case Study Gil R. Gonçalves, Sara Santos, Diogo Duarte and José Gomes
11:40-12:00	Hyperspectral Mapping of Danish Streams from Unmanned Aerial Systems Christian Koepl, Peter Bauer-Gottwein, Ursula McKnight and Monica Garcia
12:00-13:00 Lunch	
S2 – Environmental monitoring (13:00 – 15:00) Session Chair: xxx and xxx	
13:00-13:20	UAS Multi-camera Imaging System for Environmental Mapping Damian Wierzbicki
13:20-13:40	A New Low Cost UAV Concept for R&D and Environmental Applications Nuno Silva, Luís Pádua, Raul Morais, Emanuel Peres and Joaquim J. Sousa
13:40-14:00	Biogenic Landforms Mapping with the use of UAV Andrey Medvedev and Dmitry Ponomarenko
14:00-14:20	The use of UAS for Environmental Assessment: the Case Study of Pesqueria River, Northeast Mexico Fabiola Yopez-Rincon, Victor Guerra-Cobian, Adrian Ferrino-Fierro, Ricardo Cavazos-Gonzalez and Carlos Abrego-Gongora
14:20-14:40	Monitoring of abandoned and Fallow Lands based on Ultra-high Resolution Data Andrey Medvedev, Arseny Kudikov and Natalia Telnova
14:40-15:00	The Use of Small UAS for the Characterization of Illegal Micro-dumps: a case study Cesario Vincenzo Angelino, Francesko Tufano, Narco De Mizio and Giuseppe
15:00-15:30 COFFEE BREAK	
S3 – Drones for Geosciences (15:30 – 16:30) Session Chair: xxx and xxx	
15:30-15:50	Investigating the Pedagogical use of Unmanned Aerial Vehicles in Geoscience Fieldwork Education: some preliminary Anthony Cliffe, Fran Tracy and Tim Stott
15:50-16:10	Barrier Properties of Humic Acids Martina Klucakova
16:10-16:30	Understanding Geomorphic Response to Flood Events: Filling the Data Gaps Leonardo Camelo
16:30-16:50	Case study, using UAS in student project at remote location Matjaz Nekrep Perc
16:50-17:10	New Effective and Economical Airborne and Spaceborne methods for Bathymetry Determination (seafloor mapping) Tea Duplančić Leder and Nenad Leder
DAY 2 – Thursday 28 June 2018	
S4 – Agricultural monitoring (13:00 – 15:00)	
Session Chair: xxx and xxx	
S7 – Vegetation monitoring	
Session Chair: xxx and xxx	

8:40-9:00	Mapping Biophysical and Biochemical Characteristics of Salt-affected Tomato Plants using RGB and Multi-spectral UAV Kasper Johansen, Yoann Malbeteau, Bruno Solorio, Samir Al-Mashharawi, Matthew McCabe, Matteo Ziliani, Yoseline Angellopez, Mitchell	Enhanced Fire Behaviour Prediction in Spinifex Grasslands of Arid Australia using UAS and Landsat imagery Katherine Zdunic, Paul Rampant and Neil Burrows
9:00-9:20	Estimating the Effect of Nitrogen Fertilization on Growth and Yield of Sugarcane using UAV Lidar and Multispectral Imaging Technologies Iurii Shendryk, Jeremy Sofonia, Danielle Skocaj, Catherine Ticehurst and Peter Thorburn	Different Approaches in Estimation of Forest Inventory Values by UAV based on Arc GIS Analyses Martin Slavik, Alzbeta Grznarova, Karel Kuzelka and Peter Surovy
9:20-9:40	Vineyard Mapping in Steep Slope Terrains using High-resolution Aerial Imagery Luís Pádua, Paulo Salgado, Telmo Adão, Emanuel Peres and Joaquim João Sousa	Tree Species Discrimination using RGB Vegetation Indices Derived from UAV Images Sima Sadeghi and Hormoz Sohrabi
9:40-10:00	Mapping Chlorophyll Content of Corn under Different Treatments using UAV Anita Simic Milas	A bird's eye view: enhancing habitat mapping for heathland birds with UAV technologies Catherine Waite
10:00-11:00	INDUSTRY DAY and COFFEE BREAK	
11:00-12:30	OPENING CEREMONY	
	Keynote speaker: Multi-UAV Systems	
	Hermann Hellwagner	
12:30-13:30	LUNCH	
	S5 – Vegetation and Forest monitoring	S8-Digital Elevation Models and Point Clouds
	Session Chair: xxx and xxx	Session Chair: xxx and xxx
13:30-13:50	Trend Change Identification Approach for Forest Regeneration Inspection Karel Kuzelka, Peter Surový, Martin Slavík and Kateřina Sirotková	Surveying the Middle Reaches of Krumeggerbach (Austria) using UAS Imagery Gernot Seier, Matthias Wecht and Wolfgang Sulzer
13:50-14:10	Mosaicking Workflow Enhancement for Vegetation Monitoring using UAVs Petr Dvorak, Tomas Bartalos, Josef Brůna, Michaela Vítková and Jana Mullerová	UAV Survey and Modelling of Doblar Accumulation Basin Klemen Kozmus Trajkovski, Gašper Štebe and Dušan Petrovič
14:10-14:30	Pitfalls of Terrain and Vegetation Structure mapping on a Post-mining site Vítězslav Moudry, Rudolf Urban, Jan Komárek, Jiri Prosek and Milic Solsky	Methodology for Automatic Classification of Point Clouds, obtained with Different Airborne Sensors in UAV William Barragan, Karime Escobar Rey and Gabriel Sanchez
14:30-14:50	Verification of Positional Accuracy of UAS Utilizing RTK in Forest Environment Jozef Výboštok, Martin Mokroš, Ján Merganič, Julián Tomašík and Peter Valent	The UAV-based Photogrammetry for Estimation of Plot-level Structural Parameters of Pedunculate Oak Forests Ivan Balenović, Luka Jurjević, Anita Simic Milas, Mateo Gašparović, Ante Seletković and Hrvoje Marjanović
14:50-15:10	Individual Tree Phenotyping using sUAS-borne LiDAR and RGB Sensors David Pont, Heidi Dungey, Michael Watt, Grahame Stovold and Ben Morrow	How to Achieve Usefull “rapid 3D” Digital Elevation Model for Search and Rescue Mission Strategy Planning Mirjana Bonkovic, Marin Stefan Vidović, Ana Kuzmanic Skelin and Vladan Papic

15:10-15:30	Importance of Radiometric Calibration of UAV Collected Images for Vegetation Change Detection Edgar Sepp and Marko Kohv	Testing the UAV-based Point Clouds of Different Densities for Tree- and Plot-level Forest Measurements Luka Jurjević, Ivan Balenović, Mateo Gašparović, Anita Šimić Milas and Hrvoje Marjanović
15:30-16:00	COFFEE BREAK	
	S6 – Urban Areas	S9 – Water and Coastal Monitoring
	Session Chair: xxx and xxx	Session Chair: xxx and xxx
16:00-16:20	Testing Phantompro-4 for Urban Mapping at Parcel Scale Mariana Silva, Ricardo Eger, Yuzi Rosenfeldt and Carlos Loch	Determination of Vegetation Community Characteristics of Freshwater Tidal Flats along the Elbe River with UAS Goerres Grenzdoerffer and Florian Beyer
16:20-16:40	The use of UAS as a Complementary Tool for Urban Green Areas 3D Cartography: the Case Study Escobedo, Northeast Mexico Fabiola Yopez-Rincon and Adrian Ferriño-Fierro	Experimental Study of Freshwater Microalgae Concentration Mapping Using False Color Digital Aerial Photo Wikan Jaya Prihantarto, Sigit Heru Murti, Muhammad Kamal, Frita Kusuma Wardhani, Ikhwanudin Rofi'i and Maulana Yudinugroho
16:40-17:00	Classifying UAV images using Support Vector Machine for Urban Vegetation Mapping Zahra Azizi	Multisensor Data to derive Peatland Vegetation Communities using a Fixed-Wing UAS Florian Beyer and Goerres Grenzdoerffer
18:30	BUS to the City Centre and Guided Tour of Split	
20:45	Conference Dinner and Cocktails in 'Diocletian Palace – Cellar'	
	DAY 3 – Friday 29 June 2018	
	S10 – 3D presentation and SfM	
	Session Chair: xxx and xxx	
8:40-9:00	Development and Performance Assessment of a Low Cost UAV Laser Scanner System (LasUAV) for Forest Monitoring Chiara Torresan, Andrea Berton, Federico Carotenuto, Ugo Chiavetta, Simone Ercoli, Marco Fabbri, Franco Miglietta, Marcello Miozzo, Alberto Simonti, Massimo Torelli, Alessandro Zaldei and Beniamino Gioli	
9:00-9:20	Large-scale Forest Management Inventory of Multi-layered Forests in Russia using UAV Structure from Motion Eugene Lopatin and Evgenii Kuzminskii	
9:20-9:40	Building, Testing, and Analyzing Detailed 3D Models of Individual Trees C. Lane Scher, Emily Griffoul and Charles H. Cannon	
9:40-10:00	Application of Wavelet Analysis in 3D Power lines reconstruction from UAV data Anna Fryskowska	
10:00-10:20	Ground classification of UAV image-based point clouds through different algorithms: open source vs commercial software Petr Klápště, Rudolf Urban and Vítězslav Moudrý	
10:20-10:40	Optimum UAV Image Selection for Rapid and Accurate 3D Reconstruction Mohammadreza Homaei, Mohammad Saadatseresht and Ali Babaei	
11:00-11:30	COFFEE BREAK	
	S11 – Digital Elevation and Digital Surface Models	
11:30-11:50	The applicability of unmanned aerial systems in mountain environments Gernot Seier, Wolfgang Sulzer and Viktor Kaufmann	
11:50-12:10	Accuracy analysis DSM generation with and without GCPS based on aerial images Sharareh Akbarian and Milad Mirzaie	
12:10-12:40	Accuracy assessment and application of UAV-derived digital elevation models in a high mountain environment Johann Müller, Andreas Vieli and Isabelle Gärtner-Roer	
12:40-13:00	Archeology with a little help from lidar and UAS Matjaz Nekrep Perc and Rok Kamnik	
13:00	LUNCH, FAREWELL REMARKS AND DEPARTURE	