→ MAPPING URBAN AREAS FROM SPACE CONFERENCE

4–5 November 2015 | ESA–Esrin | Frascati, Rome (Italy)

PROGRAMME

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MUAS 2015 Programme	Speaker	Affiliation | Country
09:00 - 09:30 Registration		
09:30 -09:30 **1.0 Opening Session**	Chairs: O. Arino, M. Doherty	ESA, Italy
09:30 - 09:50 Welcome talk	M. Borgeaud	ESA, Italy
09:50 - 10:10 S-1 Products and Mission	P. Potin	ESA, Italy
10:10 - 10:30 S-2 Products and Mission	F. Gascon	ESA, Italy
10:30 - 11:00 Coffee Break		
11:00 - 11:00 **1.1 Global**	Chair: T. Esch	DLR, Germany
11:00 - 11:20 Global Urban Footprint – A Key Step in Characterizing the Global Human Settlements Pattern from Space	Esch, Thomas	DLR, Germany
11:20 - 11:40 The Global Human Settlement Layer	Pesaresi, Martino	EC, JRC, Italy
11:40 -12:00 A Continuous Infrastructure Index for Mapping Human Settlements	Small, Christopher	Columbia University, USA
12:00 -12:20 EO4Urban: Multitemporal Sentinel-1A SAR and Sentinel-2A MSI Data for Global Urban Services	Ban, Yifang	KTH, Sweden

DAY 1	MUAS 2015 Programme	Speaker	Affiliation | Country
12:20 - 12:40	Mapping Infrastructure and Population for Disaster Planning in Urban Areas with Remote Sensing and Census Data	Yetman, Gregory George	Columbia University, USA
12:40 - 13:40	Lunch		
13:40 - 13:40	**1.2 European Regional and National Mapping**	Chair: J.P. Cantou	IGN, France
13:40 - 14:00	Copernicus High Resolution Layer Imperviousness for an operational monitoring of built-up areas throughout Europe	Christian, Schleicher	GeoVille, Austria
14:00 - 14:20	Production and validation of the European Urban Atlas for 2006 and 2012	Sannier, Christophe	SIRS, Switzerland
14:20 - 14:40	A comparative study with the new European Settlement Map	Florczyk, Aneta	EC, JRC, Italy
14:40 - 15:00	Use of satellite imagery for updating the French NSDI	Cantou, Jean-Philippe	IGN, France
15:00 - 15:20	Using Pléiades Data for Large Scale Production of VHR Land Cover in Urban Areas of Austria	Stemberger, Wolfgang	GeoVille, Austria
15:20 - 15:40	National Land Cover Data (CadasterENV Sweden) for Urban Mapping and Monitoring	Jönsson, Camilla	Metria AB, Sweden
15:40 - 16:10	Coffee Break		

DAY 1	MUAS 2015 Programme	Speaker	Affiliation	Country
16:10 - 16:10	**1.3 Tools and Platforms**	Chair: F. Del Frate	University of Rome Tor Vergata, Italy
16:10 - 16:30	TEP Urban - Collaborative Service Platform for Earth Observation-based Exploration and Generation of Thematic Information on the Built Environment	Esch, Thomas	DLR, Germany
16:30 - 16:50	VHR Land Cover Map of Rome Obtained Using a Citizen Science Approach	Del Frate, Fabio	University of Rome Tor Vergata, Italy
16:50 - 17:10	EO-Based Derivation of Surface Models to Support Urban Development Activities	Uttenthaler, Andreas	GAF AG, Germany
17:10 - 17:30	Big Data Analytics for Detailed Urban Mapping	Espinoza-Molina	DLR, Germany
17:30 - 19:30	**1.4 POSTER SESSION - DRINK**		

MUAS 2015 Programme	Speaker	Affiliation | Country
09:00 **2.5 Urban Climate**	Chair: I. Keramitsoglou	NOA, Greece
09:00 - 09:20 Continuous Thermal Monitoring of Cities from Space	Keramitsoglou, Iphigenia	NOA, Greece
09:20 - 09:40 Urban Energy Budget Estimation from Sentinels: The URBANFLUXES Project	Chrysoulakis, Nektarios	FORTH, Greece
09:40 - 10:00 Mapping urban surface characteristics for urban energy flux modelling	Heldens, Wieke	DLR, Germany
10:00 - 10:20 Local Climate Zones as a new standard for mapping urban areas?	Bechtel, Benjamin	University of Hamburg, Germany
10:20 - 10:40 Earth Observation for Urban Climate: Mapping the Local Climate Zones	Mitraka, Zina	FORTH, Greece
10:40 - 11:10 Coffee Break		

Time	Programme	Speaker	Affiliation | Country
10:40 - 11:10	Coffee Break		
11:10 - 11:10	**2.6 Sentinel 1 methods**	Chair: P. Gamba	University of Pavia, Italy
11:10 - 11:30	Sentinel-1A SAR Data for Global Urban Mapping: Preliminary Results	Jacob, Alexander	KTH, Sweden
11:30 - 11:50	Mapping Past and Current Urbanization by Means of ESA Radar Data - the SAR4Urban Project	Marconcini, Mattia	DLR, Germany
11:50 - 12:10	Automated updating of urban land cover maps using multitemporal Sentinel-1 data	Riedel, Tanja	Friedrich-Schiller-University, Germany
12:10 - 12:30	Towards a Global Built-up Area Map using Multitemporal Sentinel 1A Data	Salentinig, Andreas	University of Pavia, Italy
12:30 - 12:50	Automatic Generation of Updated Land Cover Maps at Decametric Spatial Resolution for the whole Italian Territory Using Satellite Data	Boutsia, Konstantina	University of Rome Tor Vergata, Italy
12:50 - 14:00	Lunch		

DAY 2	MUAS 2015 Programme	Speaker	Affiliation | Country
14:00 - 14:00	**2.7 Emerging methods**	Chair: Y. Ban	KTH, Sweden
14:00 - 14:20	Characterizing Urbanization Processes in West Africa using Multi-temporal Earth Observation Data	Van der Linden, Sebastian	Humboldt-Universität zu Berlin, Germany
14:20 - 14:40	Earth Observation in support of the City Biodiversity Index	Kleeschulte, Stefan	Space4environment, Luxembourg
14:40 - 15:00	On the use of extended vegetation-impervious-soil maps from simulated EnMAP data for characterizing urban functional areas	Okujeni, Akpona	Humboldt-Universität zu Berlin, Germany
15:00 - 15:20	Mapping Density with Intensity: Spatial Disaggregation of Gridded Population Density using Stable Night Light Brightness	Small, Christopher	Columbia University, USA
15:20 - 15:20	**2.8 CLOSING SESSION**	Chairs: M. Paganini, F.M. Seifert	ESA, Italy
15:20 - 15:40	Wrap up of the sessions by session Chairs		

POSTER SESSION

No	TITLE	Author	Organisation	Country
1	Hierarchical Hybrid Decision Tree Multiscale Fusion for Urban Area Mapping	Iannelli, Gianni Cristian	Università degli studi di Pavia	Italy
2	Integration of historical maps and multi-temporal optical remote sensing data into a GIS system for studying of the large Roman urban system expansion since the early twentieth century	Martino, Luca	Serco Spa	Italy
3	Remote Sensing Analysis In the area around Tanoor and RasoonSpring	Bany Mustafa, Batool Mohammad	Ministry of Water and Irrigaton	Jordan
7	Building's subsidence observed in Mexico City by remote sensing data	Poreh, Dave	University of Napoli Federico II	Italy
9	Mapping the Land Surface Temperature over Urban Areas from Space: a Downscaling Approach	Bonafoni, Stefania	University of Perugia	Italy
11	Copernicus Sentinels for Urban Planning in Russia: The SEN4RUS Project	Chrysoulakis, Nektarios	Foundation for Research and Technology Hellas	Greece
12	A Comparison of Edge Detection Algorithms Used to Map Land Infrastructure Using QGIS Desktop	Hristova, Valentina Ivanova	Todor Kableshkov University of Transport	Bulgaria
13	A Comparison of Segmentation and Classification Algorithms Used to Map Land Infrastructure Using QGIS Desktop	Hristova, Valentina Ivanova	Todor Kableshkov University of Transport	Bulgaria
15	Global Estimates of Urban Surface Albedo Time Series with the Use of Cloud Computing	Benas, Nikolaos	Foundation for Research and Technology - Hellas	Greece

No	TITLE	Author	Organisation	Country
18	Urban Aerosol Concentrations from MERIS/AATSR Synergy: A Preparatory Study for Sentinel 3	Beloconi, Anton	FORTH	Greece
19	Fusion of Sentinel-1A and Sentinel-2A data for land use monitoring over Veneto region (NE Italy)	Delgado Blasco, Jose. Manuel	Progressive Systems Srl	Italy
21	Mapping Urban Areas in Multitemporal SAR RGB Composites Using SOM and Object-Based Processing	Amitrano, Donato	University of Napoli, Federico II	Italy
25	Large scale semi-automated features extraction from very high resolution imagery to assist development and humanitarian efforts	Tigny, Vincent	GIM	Belgium
27	Urban Geometry Effects on Effective Emissivity and Surface Temperature Retrieval, Using the UEM-SVF and TUF-3D Models	Yang, Jinxin	The Hong Kong Polytechnic University	Hong Kong S.A.R. (China)
29	An urban expansion model for African cities using combined multi temporal SAR and optical data	Lopez Herreros, Juan Fran	Royal Military Academy	Belgium
32	Earth Observation for Urban Sustainable Management – the DECUMANUS project	Marconcini, Mattia	DLR	Germany
33	Validation of Imperviousness High Resolution Layer 2006 and 2009 in Slovakia	Hurbanek, Pavol	Catholic University in Ruzomberok	Slovak Republic
35	An open-source, object-based, unsupervised change detection tool for urban expansion monitoring	Dell'Acqua, Fabio	Università di Pavia	Italy
37	Identifying Seasonal Urban Thermal Environment in Urban Settings of Abha-Khamish Mushyet Twin Cities (Saudi Arabia) Using Remotely Sensed Data	Al Wadei, Hussein	King Khalid University	Saudi Arabia

No	TITLE	Author	Organisation	Country
38	FLIRE: an EO-based DSS for combined flood and fire risk assessment in peri-urban areas	Poursanidis, Dimitris	FORTH	Greece
42	Detecting and analysing informal settlement structures in China by combining high resolution optical and SAR imagery	Wei, Chunzhu	University of Salzburg	Austria
43	An object oriented approach to detect earthquake damage in urban area from VHR optical imagery	Anniballe, Roberta	University of Rome, La Sapienza	Italy
44	Mapping Urban Dumps from Space	Bilotta, Giuliana	University of Venice	Italy
48	Mapping of N'Djamena City for Water Supply and Sanitation Modeling	Bila, Mohammed Danasabe	Lake Chad Basin Commission	Chad
49	The role of multi-temporal satellite imagery for the urban climate study of Bucharest, Romania	Aldea, Mihaela	Technical University of Civil Engineering	Romania
51	Remote Sensing and Spatial Indicators for Detecting Urban Trajectories	Netzband, Maik	Ruhr-University Bochum	Germany
54	Approaching Land cover/Land use Changes using Remote Sensing and Statistical data validation for Urban Policies Improvement	Vlad Sandru, Maria Ioana	Romanian Space Agency	Romania
56	Sentinel-1A SAR Data for Urban Land Cover Mapping with KTH-SEG: Preliminary Results	Ban, Yifang	KTH	Sweden
60	Searching asbestos roofs using satellite imagery	Bilotta, Giuliana	University of Venice	Italy
63	The use of neural networks for non-linear spectral unmixing over urban areas	Mitraka, Zina	University Rome, Tor Vergata	Italy
64	Urban Mapping using Satellite Time Series	Schwarz, Gottfried	DLR	Germany

No	TITLE	Author	Organisation	Country
65	Automated Urban Mapping in a Satellite Ground Segment	Schwarz, Gottfried	DLR	Germany
66	Development of Copernicus and EO Based Products as Input to Urban Regeneration Policies in Europe	Krylov, Vladimir	University of Genoa	Italy
69	Remote Sensing and Object Classification for assessing the Urban Fabric Vulnerability to Heat Waves and UHI	Borfecchia, Flavio	ENEA	Italy
70	The European Settlement Map (ESM), Urban open space and urban green	Ferri, Stefano	JRC	Italy
71	Tools and Resources boosting Urban Monitoring from Space: ESA Research and Service Support	Sabatino, Giovanni	Progressive Systems Srl	Italy
73	Urban Growth Mapping of South-East Asia cities for World Bank	Kolomaznik, Jan	GISAT	Czech Republic
74	Contribution of fused Sentinel-1A SAR and Sentinel-2A MSI data to the city Bioversity Index (CBI)	Haas, Jan	KTH	Sweden
75	Space Applications in Support of Future urban development in Armenia	Alhaddad, Bahaaeddin	Starlab Ltd.	United Kingdom
76	Sentinel-1 and Sentinel-2 for semiautomatic urban mapping	Iasillo, Daniela	Planetek	Italy
77	EO-Based Derivation of Surface Models to Support Urban Development Activities	Häusler, Thomas	GAF AG	Germany
83	Automatic railway instability detection using satellite SAR interferometry	Hanssen, Ramon	TU Delft	The Netherlands
84	Early warnings for imminent sinkhole collapse risks in urban areas	Hanssen, Ramon	TU Delft	The Netherlands

SCIENTIFIC COMMITTEE

Yifang Ban | KTH

J-P Cantou | IGN, France

Fabio Del Frate | University of Tor Vergata

Thomas Esch | DLR

Paolo Gamba | University of Pavia

Iphigenia Keramitsoglou | National Observatory of Athens

Martino Pesaresi | JRC

Catherine Proy | CNES

Christophe Sannier | SIRS

Tomas Soukup | GISAT

C. Steenmans | European Environment Agency

Qihao Weng | Indiana State University, U.S.

Further information and guidelines regarding the registration can be found on the workshop website at:

http://due.esrin.esa.int/muas2015

Sentinel-2A
Natural colour acquired on 30 August 2015.

Sentinel-1A
IW TOPS amplitude image in VV polarisation
acquired on 16/05/2015.