



EARSeL Urban Joint Workshop (26-28 May, 2020)

Conference Preliminary programme	
Date: Tuesday, 26/May/2020	
8:00am - 5:00pm	Registration (registration desk)
9:00am - 10:15am	<p>PLENARY 1: WELCOME By Organizers and EARSeL President</p> <p>Keynote Speech: The Rise of Artificial Intelligence for Earth Observation (AI4EO) Pierre-Philippe Mathieu (ESA)</p>
10:15am - 11:15am	<p>PLENARY 2: Deep Learning for Urban Mapping</p> <p>Fully Convolutional Networks For Landcover Classification From Historical Black And White Aerial Photographs Of Central Africa Nicholus Mboga, Tais Grippa, Stefanos Georganos, Sabine Vanhuyse, Eléonore Wolff, Moritz Lennert Université Libre de Bruxelles, Department of Geosciences, Environment and society, Belgium</p> <p>Land Cover Semantic Segmentation Of SPOT-6/7 And Sentinel-2 Data Using CNN Arnaud Le Bris, Olivier Stocker Univ. Gustave Eiffel, IGN-ENSG, LaSTIG, France</p> <p>Towards Automated Urban Map Revision Using Deep Neural Networks on Airborne Lidar and Hyperspectral Data Øivind Due Trier Norwegian Computing Center, Norway</p> <p>Weak Supervision Of Fully Convolutional Network For Yearly Land Cover Mapping Over Wallonia, Belgium Tais Grippa, Nicholus Mboga, Stefanos Georganos, Sabine Vanhuyse, Eléonore Wolff, Moritz Lennert Université libre de Bruxelles (ULB), Department of Geosciences, Environment & Society, Belgium</p>
11:15am - 11:40am	Coffee Break
11:40am - 1:10pm	<p>PLENARY 3: Remote Sensing of Urban Green</p> <p>Monitoring Tree Health with Sentinel-2 Images with a New Methodology Adapted to Urban Areas Carlos Granero-Belinchon¹, Karine Adeline¹, Aude Lemonsu², Xavier Briottet¹ ¹ONERA-DOTA, University of Toulouse, FR-31055 Toulouse, France; ²CNRM, Météo-France-CNRS, FR-31057 Toulouse, France</p> <p>Mapping Settlement And Vegetation Continuous Fields At National Scale In A Temperate Environment Using Sentinel-2 Franz Schug¹, David Frantz¹, Akpona Okujeni¹, Sebastian van der Linden^{1,2}, Patrick Hostert^{1,3} ¹Earth Observation Lab, Humboldt-Universität zu Berlin, Germany; ²Institute of Geography and Geology, Universität Greifswald, Germany; ³Integrative Research Institute on Transformations of Human-Environment Systems (IRI THESys), Humboldt-Universität zu Berlin, Germany</p> <p>Copernicus Land Monitoring Service new High Resolution Layer 2015: the Small Woody Features – research, development and production story Antoine Masse, Loïc Fauqueur, Nathalie Morin, Pierre-Yves Rémy, Justine Hugé, Fabrice Dazin, Christophe Sannier SIRS, France</p> <p>Mapping Functional Urban Green Types With The Combined Use Of Hyperspectral, Multispectral And LiDAR Data</p>

	<p>Jeroen Degerickx^{1,2}, Martin Hermy², Ben Somers² ¹VITO, Belgium; ²Division of Forest, Nature and Landscape, KULeuven, Belgium</p> <hr/> <p>Mapping Of Tree Species In The City: Challenges Of The Application Project Dominik Kopeć^{1,2}, Jan Niedzielko¹, Adam Kania³, Justyna Wylazłowska¹, Anna Halladin-Dąbrowska¹, Jakub Charyton¹, Łukasz Sławik^{1,4} ¹MGGP Aero Sp. z o.o.; ²University of Lodz; ³Definity Sp. z o.o.; ⁴University of Warsaw</p> <hr/> <p>Green Growth? On The Relation Between Population Density, Land Use And Vegetation Cover Fractions In A City Using A 30-Years Landsat Time Series. Thilo Wellmann^{1,2}, Franz Schug¹, Dagmar Haase^{1,2}, Dirk Pflugmacher¹, Sebastian van der Linden^{1,3} ¹Humboldt-Universität zu Berlin, Germany; ²UFZ Leipzig, Germany; ³University of Greifswald, Germany</p>
1:10pm - 2:15pm	Lunch
2:15pm - 3:30pm	<p>PLENARY 4: Hyperspectral Urban Mapping and Spectral Libraries</p> <p>Analysing the Robustness of Sampling in Gradient Analysis of Urban Material Mixtures Chaonan Ji^{1,2}, Marianne Jilge¹, Uta Heiden¹, Marion Stellmes³, Hannes Feilhauer^{3,4} ¹German Aerospace Center, Germany; ²Humboldt-Universität zu Berlin, Germany; ³Freie Universität Berlin, Germany; ⁴FAU Erlangen-Nürnberg, Germany</p> <hr/> <p>Towards a Generic Spectral Library for Urban Mapping Applications Frederik Priem¹, Marianne Jilge², Uta Heiden², Ben Somers³, Frank Canters¹ ¹Vrije Universiteit Brussel, Cartography and GIS Research Group, Belgium; ²Deutsches Zentrum für Luft- und Raumfahrt, Earth Observation Center, Germany; ³KU Leuven, Division of Forest, Nature and Landscape, Belgium</p> <hr/> <p>Blue-green Microstructures - Detection of Geometrical and Permeability Features of Microstructures Agnieszka Kuras¹, Øivind Due Trier², Thomas Kringlebotn Thiis¹, Vette Jonassen³, Niki Gaitani⁴, Chris Rogass⁵, Ingunn Burud¹ ¹Norwegian University of Life Sciences, Norway; ²Norwegian Computing Center; ³Terratec AS; ⁴Norwegian University of Science and Technology; ⁵Helmholtz Center Potsdam</p> <hr/> <p>Regression-based Unmixing Of Urban Land Cover Across Multiple Cities – Evaluating Multi-site Libraries And Gaussian Process Uncertainties For Model Generalization Akpona Okujeni¹, Sam Cooper¹, Patrick Hostert^{1,2}, Sebastian van der Linden³ ¹Earth Observation Lab, Humboldt-Universität zu Berlin; ²Integrative Research Institute on Transformations of Human-Environment Systems (IRI THESys), Humboldt-Universität zu Berlin; ³Institute of Geography and Geology, Universität Greifswald</p> <hr/> <p>Bridging GIS And Spectral Data Analysis For Urban Land Cover Mapping: The EnMAP-Box 3 Sebastian van der Linden¹, Akpona Okujeni², Sam Cooper², Benjamin Jakimow², Andreas Rabe², Fabian Thiel¹, Patrick Hostert² ¹University of Greifswald, Department of Geography and Geology, Germany; ²Humboldt-Universität zu Berlin, Geography Department, Germany</p>
3:30pm - 3:50pm	Coffee Break
3:50pm - 5:05pm	<p>PLENARY 5: Urban Sustainable Development Goals</p> <p>UrbanTEP – EO Data Processing, Integrative Data Analysis and Monitoring for SDG Reporting Felix Bachofer¹, Thomas Esch¹, Jakub Balhar², Martin Boettcher³, Enguerran Boissier⁴, Mattia Marconcini¹, Annetkatrin Metz-Marconcini¹, Michal Opletal², Fabrizio Pacini⁴, Tomas Soukup², Vaclav Svaton⁵, Julian Zeidler¹ ¹German Aerospace Center (DLR), Germany; ²GISAT s.r.o., Czech Republic; ³Brockmann Consult GmbH, Germany; ⁴Terradue Srl., Italy; ⁵IT4Innovations, VSB-Technical University of Ostrava, Czech Republic</p> <hr/> <p>COPERNICUS Global Land Products and Services and the Sustainable Development Goals</p>

	<p>Pietro Ceccato¹, Michael Cherlet², Marie Lang³ ¹SPACEBEL, Belgium; ²EC Joint Research Center, Italy; ³Université de Liège, Belgium</p> <hr/> <p>Earth Observation for Sustainable Development in Urban Areas: Results and Achievements from ESA's EO4SD-Urban project Manuela Hirschmuogl¹, Jan Kolomaznik², Tomas Soukup², Amelie Broszeit³, Carina Sobe¹, Herwig Proske¹ ¹Joanneum Research, Austria; ²GISAT; ³GAF AG</p> <hr/> <p>An Integrated Deprived Area Mapping "System" Monika Kuffer¹, Dana Thomson², Gianluca Boo², Ron Mahabir³, Tais Grippa⁴, Sabine Vanhuysse⁴, Joao Porto de Albuquerque⁵, Ryan Engstrom⁶, Caroline Kabaria⁷, Robert Ndugwa⁸, Jack Makau⁹ ¹University of Twente, ITC, The Netherlands; ²University of Southampton, Geography and Environmental Science UK; ³George Mason University, Department of Computational and Data Sciences, USA; ⁴Université Libre de Bruxelles, IGEAT, Belgium; ⁵Warwick University, Institute for Global Sustainable Development, UK; ⁶George Washington University, Department of Geography, USA; ⁷African Population and Health Research Center, Kenya; ⁸UN-Habitat, GUO, Kenya; ⁹Slum Dwellers International, Kenya</p> <hr/> <p>Automatic Detection Of Urban Vacant Land: An Open-Source Approach For Sustainable Cities Shaojuan Xu^{1,2}, Manfred Ehlers² ¹Research Institute for Regional and Urban Development, Germany; ²Osnabrück University, Germany</p>
<p>5:10pm - 6:00pm</p>	<p>PLENARY 6: Poster Session</p> <hr/> <p>A Random Forest Dasyetric Approach For Mapping The Population Distribution At High Spatial Resolution Eric Hallot¹, Armand Okende^{1,2}, Tais Grippa², Benjamin Beaumont¹ ¹Remote Sensing and Geodata Unit, Institut Scientifique de Service Public, Belgium; ²ANAGEO-DGES, Université Libre de Bruxelles, Belgium</p> <hr/> <p>3D Data On Regional Scale: What Are The Main Mapping Products And Associated Users? Yohann François¹, Nathalie Stephenne², Philippe Lejeune¹, Adrien Michez¹ ¹University of Liège / Gembloux Agro-Bio Tech, Belgium; ²Service Public de Wallonie (SPW), Geomatic Department, Belgium</p> <hr/> <p>Mapping Land Cover Change Using Ensemble Approach Katarzyna Anna Ostapowicz^{1,2}, Mateusz Szczęch¹ ¹Institute of Geography and Spatial Management, Jagiellonian University, Gronostajowa 7, 30-387 Kraków, Poland; ²Department of Environmental Science, Policy & Management, University of California, Berkeley, USA</p> <hr/> <p>A Low-cost Remote Sensing-based System For Mapping, Assessing And Monitoring Land Use / Land Cover Changes In Small Oceanic Islands' Natural Parks Manuel Fernández Urrutia^{1,2}, João Madruga^{2,3}, Artur Gil^{1,4} ¹cE3c & Azorean Biodiversity Group - University of the Azores, Portugal; ²Faculty of Agrarian and Environmental Sciences - University of the Azores; ³ITAA - Instituto de Investigação e Tecnologia da Agronomia e Meio Ambiente - University of the Azores; ⁴Faculty of Sciences and Technology - University of the Azores</p> <hr/> <p>Regional Environment Monitoring Using Copernicus Sentinel-1 SAR Images: Interferometric SAR Coherence as an Indicator of Dynamic Land Cover Changes Dominique Derauw¹, Ludivine Libert^{1,2}, Anne Orban¹, Christian Barbier¹ ¹Centre Spatial de Liège, University of Liège, Belgium; ²Enveo, Austria</p> <hr/> <p>3D City Model Generation From LiDAR Point Clouds In Support Of Smart Cities Gilles-Antoine Nys, Roland Billen, Florent Poux University of Liège, Belgium</p> <hr/> <p>ERATOSTHENES Centre of Excellence (ECoE) for the benefit of Cyprus and Eastern Mediterranean, Middle East and Northern Africa (EMMENA) Diofantos Hadjimitsis^{1,2}, Gunter Schreier³, Haris Kontoes⁴, Albert Ansmann⁵, Giorgos Komodromos⁶, Kyriacos Themistocleous^{1,2}, Kyriacos Neocelous^{1,2}, Silas Michaelides^{1,2}, Rodanthe Mamouri^{1,2}, Ioannis Papoutsis⁴, Johannes Bühl⁵, Egbert Schwarz³, Stelios Tziortzis⁶, Argyro Nisantzi^{1,2}, Christodoulos Mettas^{1,2}, Christiana Papoutsas^{1,2}, Christos Danezis^{1,2}, George Melillos^{1,2}, Marios Tzouvaras^{1,2}, Athos Agapiou^{1,2}, Phaedon Kyriakides^{1,2}, Nicholas</p>

	<p>Kyriakides^{1,2}, Maria Prodromou^{1,2}, Vincent Ambrosia^{7,8}, Daniel Barok⁹, Eleni Loulli^{1,2}, Marcello Maranesi¹⁰, Lena Halounova¹¹, Peter Zeil¹² ¹Department of Civil Engineering and Geomatics, Faculty of Engineering and Technology, Cyprus University of Technology, Limassol, Cyprus; ²ERATOSTHENES Centre of Excellence, Limassol, Cyprus; ³German Aerospace Center, Germany; ⁴National Observatory of Athens, Greece; ⁵Leibniz Institute for Tropospheric Research, Germany; ⁶Department of Electronic Communications, Ministry of Transport, Communications and Works, Nicosia Cyprus; ⁷NASA, USA; ⁸California State University, Monterey Bay, USA; ⁹Independent Consultant, Israel; ¹⁰Independent Consultant, Italy; ¹¹Czech Technical University, Czech Republic; ¹²Spatial Services GmbH, Austria</p> <hr/> <p>Remote Sensing As Support To Cartography Of The Quality Of Water At The Prefecture Of Mohammedia (Marroco) Rachida El Morabet¹, Larbi Bahrazi², Soufiane Bouhafa³ ¹faculté des lettre et des sciences humaines Mohammedia Maroc; ²faculté des lettre et des sciences humaines Mohammedia Maroc; ³faculté des lettre et des sciences humaines Mohammedia Maroc</p> <hr/> <p>Urban Growth Analysis Using Satellite Data and Socioeconomic Variables in Uyo (Nigeria) Etido Essien, Cyrus Samimi University of Bayreuth, Germany</p>
7:00pm - 9:30pm	Ice Breaker

Date: Wednesday, 27/May/2020

8:00am - 5:00pm	Registration (registration desk)
9:00am - 10:30am	<p>PLENARY 7: Remote Sensing for Urban Social Sciences and Policy</p> <p>Keynote Speech: Urbanization and Sustainability Under Global Change and Transitional Economies: Synthesis from Southeast, East, and North Asia (SENA) Peilei Fan School of Planning, Design, and Construction (SPDC) & Center for Global Change and Earth Observations (CGCEO), Michigan State University, United States of America</p> <p>Keynote Speech: Mapping Urban Population Distribution In Data-Scarce Countries Catherine Linard Université de Namur, Belgium</p> <hr/> <p>Short oral presentations</p> <p>A Spatial Assessment of Low-Income Housing Estate Programs In The Periphery Of Mexico City Using Remote Sensing And Census Data Stéphane Couturier^{1,2}, Adrian Flores³, Roberto Huerta Luna¹, Richard Sliuzas², Monika Kuffer² ¹UNAM, Mexico; ²University of Twente, Netherlands; ³University of Anáhuac, Mexico</p> <hr/> <p>The Potential of SAR and OPTICAL Sentinel Images for the Automatic Monitoring of Redevelopment Sites Sophie Petit¹, Mattia Stasolla², Gerard Swinnen¹, Odile Close¹, Benjamin Beaumont¹, Christophe Rasumny³, Xavier Neyt², Eric Hallot¹ ¹Remote Sensing and Geodata Unit, ISSP, Belgium; ²Royal Military Academy, Belgium; ³Land Planning, Housing, Heritage and Energy, Service Public de Wallonie, Belgium</p> <hr/> <p>Potential of Green Roofs in the East bank of Liege, Belgium Mitali Yeshwant Joshi, Simon Rohon, Jacques Teller University of Liege, Belgium</p> <hr/> <p>Citizens and Satellites – Multisource Monitoring of Urban Sprawl in Context of Climate Change Adaptation based on Remotely Sensed Time Series and Crowdmapping in German Metropolitan Regions Gohar Ghazaryan¹, Francis Hugenroth², Carsten Jürgens³, Sarah Stickel³, Birte Trampnau³, Anke Valentin¹, Andreas Rienow³ ¹University of Bonn, Germany; ²Science Shop Bonn, Germany; ³Ruhr-University Bochum, Germany</p> <hr/> <p>EO Based Derivation Of Socio-Economic Urban Planning Indicators Gebhard Warth¹, Andreas Braun¹, Oliver Assmann², Volker Hochschild¹ ¹University of Tuebingen, Germany; ²AT-Verband, Germany</p> <hr/> <p>Copernicus for Urban Resilience in Europe: The CURE Project Idea Nektarios Chrysoulakis¹, Zina Mitraka¹, Mattia Marconcini², David Ludlow³, Zaheer Khan³, Brigitte Holt Andersen⁴, Tomas Soukup⁵, Andreas Walli⁶, Alessandra Gandini⁷, Jürgen Kropp⁸, Dirk Lauwaet⁹, Christian Feigenwinter¹⁰ ¹FORTH, Institute of Applied and Computational Mathematics, Remote Sensing Lab, Greece; ²DLR, Deutsches Zentrum für Luft- und Raumfahrt, Germany; ³University of the West of England, Bristol, UK; ⁴Institute of Applied Economics Aps, Denmark; ⁵Gisat S.R.O., Czech Republic; ⁶GeoVille Informationssysteme und Datenverarbeitung GMBH, Austria; ⁷TECNALIA, Fundacion Tecnalia Research & Innovation, Spain; ⁸PIK, otsdam Institut fuer Klimafolgenforschung, Germany; ⁹VITO, laamse Instelling voor Technologisch Onderzoek N.V., Belgium; ¹⁰Universitaet Basel, Switzerland</p> <hr/> <p>Leveraging IDP Sites as Pseudo-administrative Boundaries for Improved Gridded Population Mapping Hannah Rosenblum, John T. Fitzwater, Derek Azar, Joshua Comenetz, Arthur Desch, Nicholas John U.S. Census Bureau</p> <hr/> <p>Multinomial Logistic Regression And Cellular Automata For Modelling Of Urban Sprinkling Lucia Saganeiti¹, Ahmed Mustafa², Beniamino Murgante¹, Jacques Teller³ ¹School of Engineering, University of Basilicata, Potenza, Italy; ²Urban systems lab, the new school, New York, USA; ³LEMA, Urban and Environmental Engineering Department, Liège University, Be</p> <hr/> <p>Relative Timing of Urban Land-Use and Population Change: Northern Taiwan from</p>

	<p>1990-2015 Hsiao-chien Shih, <u>Douglas Alan Stow</u> San Diego State University, United States of America</p> <hr/> <p>Using Sentinel-1/2 Data to Detect New Urban Elements in Agricultural Parcels <u>Alban Jago</u>, Emilie Bériaux, Cozmin Lucau-Danila, Viviane Planchon Walloon Agricultural Research Centre - CRA-W, Belgium</p>
10:30am - 10:50am	Coffee Break
10:50am - 12:15pm	PLENARY 8: Remote Sensing for Urban Social Sciences and Policy (Discussion)
12:15pm - 1:45pm	Lunch
1:45pm - 3:15pm	<p>PLENARY 9: Urban Growth Monitoring and Settlement Mapping</p> <p>Keynote speech - Understanding an Urbanizing Planet: Strategic Directions for Remote Sensing <u>Karen Seto</u> School of Forestry & Environmental Studies, Yale University, United States of America</p> <p>Keynote speech - The Complexity of Cities in the Global South from Space <u>Monika Kuffer</u> ITC, University of Twente, The Netherlands</p> <hr/> <p>Short oral presentations</p> <p>Identifying Human Settlement Growth Types Using Symbolic Machine Learning and Geographic Information Systems: Assiut Governorate as a Case Study <u>Mahmoud Abdelkader</u>^{1,2}, Luc Boorboem¹, Richard Sliuzas¹, Jaap Zevenbergen¹ ¹ITC, Twente University, Netherlands, The; ²Faculty of Engineering, Assiut University, Egypt</p> <hr/> <p>Knowledge Gaps In Earth Observation-based Mapping Of Human Settlements: From An Ontological Perspective. <u>Jiong Wang</u>¹, Monika Kuffer² ¹Utrecht University, Netherlands, The; ²University of Twente, Netherlands, The</p> <hr/> <p>Beyond Built-up Land: Towards A More Nuanced Analysis Of Settlement System Changes <u>Jasper van Vliet</u>¹, Mengmeng Li¹, Yuan Wang¹, Peter Verburg^{1,2} ¹VU University Amsterdam, Netherlands, The; ²Swiss Federal Research Institute WSL, Switzerland</p> <hr/> <p>Mapping Megacity Growth with Landsat Time-series Data: a Case of 8 Cities <u>Olena Dubovyk</u>, Simon König, Johannes Loer University of Bonn, Germany</p> <hr/> <p>Global Building Map from Sentinel-1 satellite mission <u>Marco Chini</u>¹, Ramona Pelich¹, Renaud Hostache¹, Patrick Matgen¹, Carlos López-Martínez² ¹Luxembourg Institute of Science and Technology, Luxembourg; ²Univeristat Politecnica de Catalunya</p> <hr/> <p>Continental-scale Mapping and Analysis of 3D Building Structure <u>Mengmeng Li</u>¹, Elco Koks¹, Hannes Taubenböck^{2,3}, Jasper van Vliet¹ ¹VU University Amsterdam, Institute for Environmental Studies, the Netherlands; ²German Aerospace Center (DLR), German Remote Sensing Data Center (DFD), Germany; ³Julius-Maximilians-Universität Würzburg, Institute for Geography and Geology, Germany</p> <hr/> <p>Automated Urban Footprint Mapping Over Large Areas: a Method Implemented for Massive Streams of Sentinel-2 Data <u>Romain Wenger</u>¹, David Michéa², Anne Puissant¹ ¹LIVE CNRS UMR 7362, University of Strasbourg, France; ²ICUBE CNRS UMR 7357, University of Strasbourg, France</p> <hr/> <p>Assessing the Capabilities of Sentinel-1 and 2 for Citywide Slum Mapping with Machine Learning <u>Sabine Vanhuyse</u>¹, Taïs Grippa¹, Monika Kuffer², Stefanos Georganos¹, Nicholus Mboga¹, Eléonore Wolff¹, Moritz Lennert¹</p>

	¹ Université libre de Bruxelles (ULB), Department of Geosciences, Environment and Society, Be; ² University of Twente, ITC, The Netherlands
	Spatial analysis of Slum Characteristics based on the Generic Slum Ontology – Case of two Brazilian cities <u>Divyani Kohli</u> , Monika Kuffer ITC, University of Twente, The Netherlands
3:15pm - 3:35pm	<i>Coffee Break</i>
3:35pm - 5:00pm	<i>PLENARY 10: Urban Growth Monitoring and Settlement Mapping (Discussion)</i>
7:00pm - 10:00pm	<i>Workshop Dinner</i>

Date: Thursday, 28/May/2020

<p>9:00am - 10:30am</p>	<p>PLENARY 11: Using High-resolution Commercial Satellite Data for Urban Studies</p> <p>Keynote speech - Imaging for Land Use Studies to Improve Sustainability of Cities Compton Tucker NASA/GFSC, United States of America</p> <p>Keynote speech - Artificial Intelligence Helps Monitoring Urban Functions Devis Tuja Wageningen University, The Netherlands</p> <hr/> <p>Short oral presentations</p> <p>Assessment of Texture Features' Contribution in Discriminating Natural Bare Areas vs. Artificially Covered Ones: Chania Case Study Ioannis Manakos¹, Adel Ledawi², Chariton Kalaitzidis² ¹Centre for Research and Technology Hellas, Greece; ²International Centre for Advanced Mediterranean Agronomic Studies, Mediterranean Agronomic Institute of Chania, Greece</p> <hr/> <p>Settlement Monitoring For Renewable Energy Provision In Indigenous Communities Of The Ecuadorian Amazon Valerie Graw¹, Javier Muro¹, José Jara², Leo Zurita³, Andreas Rienow⁴, Esteban Calderón², Richard Resi³ ¹University of Bonn, Center for Remote Sensing of Land Surfaces (ZFL), Germany; ²Tratural, energía removable, Cuenca, Ecuador; ³University of San Francisco de Quito (USFQ), Ecuador; ⁴Ruhr-University Bochum, Department of Geography, Germany</p> <hr/> <p>An Open Source Mapping Scheme For Developing Wallonia's INSPIRE Compliant Land Cover And Land Use Datasets. Benjamin Beaumont¹, Tais Grippa², Moritz Lennert², Julien Radoux³, Céline Bassine³, Pierre Defourny³, Eleonore Wolff² ¹Remote Sensing and Geodata Unit, Institut Scientifique de Service Public, Belgium; ²ANAGEO-DGES, Université Libre de Bruxelles, Belgium; ³Earth and Life Institute, Université catholique de Louvain, Belgium</p> <hr/> <p>The Garden Monitor (Garmon) : What is a garden ? Technically... Jo Van Valckenborgh, Stijn Van der Linden, Ben Somers, Jingli Yan, Veerle Strosse Informatie Vlaanderen, Belgium</p> <hr/> <p>Household Wealth in HD: Mapping the Demographic and Health Surveys Wealth Index in Sub-Saharan African Cities with Very-High-Resolution Satellite Data Stefanos Georganos¹, Assane Niang Gadiaga², Catherine Linard², Tais Grippa¹, Sabine Vanhuyse¹, Nicholus Mboga¹, Eléonore Wolff¹, Sébastien Dujardin², Moritz Lennert¹ ¹Université libre de Bruxelles, Belgium; ²University of Namur, Belgium</p> <hr/> <p>Change Detection of Hyperspectral UAV Images Using Recurrent fully Convolutional Network with Multi-scale Filters and Transfer Learning Ahram Song Seoul National University, Korea, Republic of (South Korea)</p> <hr/> <p>Roof Material Mapping: Application Over Liège Using Open-Source Object-Based Supervised Classification Algorithms Coraline Wyard¹, Benjamin Beaumont¹, Rodolphe Marion², Laure Roupioz³, Eric Hallot¹ ¹ISSeP, Belgium; ²CEA, France; ³ONERA, France</p> <hr/> <p>Object-based classification of functional urban green types using multi-temporal PlanetScope and Sentinel 2 imagery: Application to the Brussels Capital Region, Belgium Florian Barette¹, Boud Verbeiren², Frank Canters¹ ¹Vrije Universiteit Brussel, Department of Geography, Belgium; ²Vrije Universiteit Brussel, Department of Hydrology and Hydraulic Engineering, Belgium</p>
<p>10:30am - 10:50am</p>	<p>Coffee Break</p>
<p>10:50am - 12:15pm</p>	<p>PLENARY 12: Using High-resolution Commercial Satellite Data for Urban Studies (Discussion)</p>

12:15pm - 1:30pm	Lunch
1:30pm - 3:00pm	<p>PLENARY 13: Urban Changes Impacts on Climate, Air-quality and Environment</p> <p>Keynote Speech – Four-Dimensional Observations of Urban Changes and Environmental Impact Assessments Son Van Nghiem Jet Propulsion Laboratory, California Institute of Technology, United States of America</p> <p>Keynote: Urban Environmental Change from Space Benjamin Bechtel Ruhr-University Bochum, Germany</p>
	<p>Short oral presentations</p> <p>Mapping Africa into local climate zones Sarah Sticksel, Matthias Demuzere, Benjamin Bechtel Ruhr-University Bochum, Germany</p>
	<p>Mapping Of Urban Land Surface Temperatures By The Future THRISHNA Mission : Focus On Inversion And Sharpening Methods Aurélie Michel, Carlos Granero-Belinchon, Xavier Briottet ONERA-DOTA, France</p>
	<p>Monitoring Water Vapour Distribution Over Cities Using Galileo Signals From Connected Vehicles: A Feasibility Study Steffen Schön¹, Lucy Icking¹, Gael Kermarrec² ¹Institut für Erdmessung, Leibniz Universität Hannover, Germany; ²Geodetic Institute, Leibniz Universität Hannover, Germany</p>
	<p>Comparative Urban Land Surface Phenology Using Vegetation Indices from VENμS and Land Surface Temperature from ECOSTRESS & MODIS Geoffrey Michael Henebry¹, Yuan Zhang^{1,2}, Monika Anna Tomaszewska¹, Rong Yu³, Alison Donnelly³, Pietro Sciusco¹, Jiquan Chen¹ ¹MICHIGAN STATE UNIVERSITY, United States of America; ²WUHAN UNIVERSITY, People's Republic of China; ³UNIVERSITY OF WISCONSIN-MILWAUKEE, United States of America</p>
	<p>Thermal Properties of Urban Ecosystem from Multisource Airborne Data Frantisek Zemek, Miroslav Píkl, Jan Novotny, Dava Vackaru Global Change Research Institute, Czech Academy of Sciences, Czech Republic</p>
	<p>First Results Of The Project THERMOPOLIS (THERmal MONitoring for urban climate adaptation POLicieS) Gregory Duveiller, Nikos Alexandris, Matteo Piccardo, Alessandro Cescatti European Commission Joint Research Centre, Italy</p>
	<p>Observed Globally Intensifying Additional Warming in Cities Zihan Liu, Wenfeng Zhan, Jiameng Lai Nanjing University, China, People's Republic of</p>
	<p>Evaluating Built-up Indices for DisTrad Thermal Sharpening over the Arid and Semi-Arid Regions; Case Study: Gaza Strip Wiesam A. Essa^{1,2}, Jonathan Huck², Rachid Lhissou³ ¹Department of Geography, University of Manchester, United Kingdom; ²Department of Geography, Al-Aqsa University, Palestine; ³Centre Eau Terre Environnement (ÉTE-INRS), Université du Québec, Canada</p>
	<p>Effects of Urban Land-use Patterns on Air Quality in China's Developed Coastal Region: Exploration and Solutions Yifan Lin¹, Xinyi Yuan², Jing Wang² ¹Beijing University, China, People's Republic of; ²Wuhan University, China, People's Republic of</p>
3:00pm - 3:20pm	Coffee Break
3:20pm - 4:50pm	PLENARY 14: Urban Changes Impacts on Climate, Air-quality and Environment (Discussion)
4:50pm - 5:15pm	PLENARY 15: Young scientists awards and Closing ceremony