PROCEEDINGS OF SPIE

Fifth International Conference on Remote Sensing and Geoinformation of the Environment (RSCy2017)

Kyriacos Themistocleous Silas Michaelides Giorgos Papadavid Vincent Ambrosia Gunter Schreier Diofantos G. Hadjimitsis Editors

20–23 March 2017 Paphos, Cyprus

Organized by
Cyprus Remote Sensing Society (Cyprus)

Co-organized by

ESA—European Space Agency • NASA (United States) • GEO (Group on Earth Observations) (Switzerland) • DLR (German Aerospace Center) (Germany) • Department of Electronic Communications of the Ministry of Communications and Works (Cyprus) • ETEK (Cyprus Scientific and Technical Chamber) (Cyprus) • Agricultural Research Institute (Cyprus) • Department of Meteorology (Cyprus) • HellasGIS (Greece) • Neapolis University (Cyprus)

Published by SPIE

Volume 10444

Proceedings of SPIE 0277-786X, V. 10444

SPIE is an international society advancing an interdisciplinary approach to the science and application of light.

Fifth International Conf. on Remote Sensing and Geoinformation of the Environment (RSCy2017), Kyriacos Themistocleous, Silas Michaelides, Giorgos Papadavid, Vincent Ambrosia, Gunter Schreier, Diofantos G. Hadjimitsis, Eds., Proc. of SPIE Vol. 10444, 1044401 · ⊚ 2017 SPIE · CCC code: 0277-786X/17/\$18 · doi: 10.1117/12.2285380

The papers in this volume were part of the technical conference cited on the cover and title page. Papers were selected and subject to review by the editors and conference program committee. Some conference presentations may not be available for publication. Additional papers and presentation recordings may be available online in the SPIE Digital Library at SPIEDigitalLibrary.org.

The papers reflect the work and thoughts of the authors and are published herein as submitted. The publisher is not responsible for the validity of the information or for any outcomes resulting from reliance thereon.

Please use the following format to cite material from these proceedings:

Author(s), "Title of Paper," in *Fifth International Conference on Remote Sensing and Geoinformation of the Environment (RSCy2017)*, edited by Kyriacos Themistocleous, Silas Michaelides, Giorgos Papadavid, Vincent Ambrosia, Gunter Schreier, Diofantos G. Hadjimitsis, Proceedings of SPIE Vol. 10444 (SPIE, Bellingham, WA, 2017) Seven-digit Article CID Number.

ISSN: 0277-786X

ISSN: 1996-756X (electronic)

ISBN: 9781510613522

ISBN: 9781510613539 (electronic)

Published by

SPIE

P.O. Box 10, Bellingham, Washington 98227-0010 USA Telephone +1 360 676 3290 (Pacific Time) · Fax +1 360 647 1445 SPIE.org

Copyright © 2017, Society of Photo-Optical Instrumentation Engineers.

Copying of material in this book for internal or personal use, or for the internal or personal use of specific clients, beyond the fair use provisions granted by the U.S. Copyright Law is authorized by SPIE subject to payment of copying fees. The Transactional Reporting Service base fee for this volume is \$18.00 per article (or portion thereof), which should be paid directly to the Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, MA 01923. Payment may also be made electronically through CCC Online at copyright.com. Other copying for republication, resale, advertising or promotion, or any form of systematic or multiple reproduction of any material in this book is prohibited except with permission in writing from the publisher. The CCC fee code is 0277-786X/17/\$18.00.

Printed in the United States of America.

Publication of record for individual papers is online in the SPIE Digital Library.



Paper Numbering: Proceedings of SPIE follow an e-First publication model. A unique citation identifier (CID) number is assigned to each article at the time of publication. Utilization of CIDs allows articles to be fully citable as soon as they are published online, and connects the same identifier to all online and print versions of the publication. SPIE uses a seven-digit CID article numbering system structured as follows:

- The first five digits correspond to the SPIE volume number.
- The last two digits indicate publication order within the volume using a Base 36 numbering system employing both numerals and letters. These two-number sets start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B ... 0Z, followed by 10-1Z, 20-2Z, etc. The CID Number appears on each page of the manuscript.

Contents

ix	Authors
xiii	Conference Committee
xvii	Introduction
xix	Conference Sponsorship and Support
	A C DICHITUDE
	AGRICULTURE
10444 02	Design of autonomous sensor nodes for remote soil monitoring in tropical banana plantation [10444-47]
10444 03	Land cover mapping using lidar data and aerial image and soil fertility degradation assessment for rice production area in Quezon, Nueva Ecija, Philippines [10444-16]
10444 04	Comparative analysis of tree classification models for detecting fusarium oxysporum f. sp cubense (TR4) based on multi soil sensor parameters [10444-44]
10444 05	Development of an asynchronous communication channel between wireless sensor nodes, smartphone devices, and web applications using RESTful Web Services for intelligent farming [10444-37]
10444 06	Extraction of inland Nypa fruticans (Nipa Palm) using Support Vector Machine [10444-18]
10444 07	Streamlining machine learning in mobile devices for remote sensing [10444-38]
	REMOTE SENSING
10444 08	Evaluating ALOS AW3D30 data [10444-48]
10444 09	Commercial vs professional UAVs for mapping [10444-56]
10444 0A	Studying the dynamics of mountain ecosystems in the context of climate change employing remotely sensed data [10444-57]
10444 OB	Photogrammetry and remote sensing education subjects [10444-36]
10444 0C	Terrestrial laser scanning for biomass assessment and tree reconstruction: improved processing efficiency [10444-46]
10444 0D	Ubiquitous UAVs: a cloud based framework for storing, accessing and processing huge amount of video footage in an efficient way [10444-2]

	GIS
10444 OE	A discussion for integrating INSPIRE with volunteered geographic information (VGI) and the vision for a global spatial-based platform [10444-3]
10444 OF	Implementing GIS in real estate price prediction and mass valuation: the case study of Nicosia District [10444-72]
10444 0G	Including granulometric sediment coastal data composition into the Black Sea GIS [10444-41]
10444 0H	On-line applications of numerical models in the Black Sea GIS [10444-42]
10444 01	PERSEUS QC: preparing statistic data sets [10444-39]
	NATURAL HAZARDS
10444 OJ	Ground subsidence phenomena in Frakadona, West Thessaly, Greece [10444-40]
10444 OK	TIR time series satellite and field data for seismic anomalies monitoring [10444-33]
10444 OL	Using remote sensing to predict earthquake impacts [10444-67]
10444 OM	Exposure and vulnerability assessment of buildings extracted from lidar derived datasets in Bucao River floodplains, Zambales, Philippines [10444-8]
10444 ON	Hydrologic modeling of Guinale River Basin using HEC-HMS and synthetic aperture radar [10444-21]
10444 00	Detection and assessment of flood susceptible irrigation networks in Licab, Nueva Ecija, Philippines using LiDAR DTM [10444-19]
	FOREST AND FOREST FIRES - DISASTER RESPONSE
10444 OP	Mid-term fire danger index based on satellite imagery and ancillary geographic data [10444-32]
10444 0Q	Remote sensing techniques in monitoring areas affected by forest fire [10444-24]
10444 OR	Non-supervised method for early forest fire detection and rapid mapping [10444-73]
10444 OS	IMPRESS: medical location-aware decision making during emergencies [10444-51]
10444 OT	VHR satellite imagery for humanitarian crisis management: a case study [10444-54]

	FOREST AND FOREST FIRES
10444 OU	Evaluating horizontal positional accuracy of low-cost UAV orthomosaics over forest terrain using ground control points extracted from different sources [10444-30]
10444 0V	Analysis of the urban green areas of Nicosia: the case study of Linear Park of Pedieos River [10444-66]
	CLOSED SESSION
10444 OW	The use of UAS in disaster response operations [10444-70]
	CULTURAL HERITAGE
10444 OX	Qualitative assessment of the medieval fortifications condition with the use of remote sensing data (Republic of Tatarstan) [10444-50]
10444 OY	Methodology for heritage conservation in Belgium based on multi-temporal interferometry [10444-22]
10444 OZ	Endangerment of cultural heritage sites by strong rain [10444-6]
	GEOLOGY
10444 10	Tracing dynamics of relative volumetric soil moisture content using SAR data [10444-12]
10444 11	Predicting heavy metal concentrations in soils and plants using field spectrophotometry [10444-53]
10444 12	Soil spectral measurements in the field: problems and solutions in light of the GEO-CARDEL project [10444-63]
	ATMOSPHERIC
10444 13	Evaluation and intercomparison of GPM-IMERG and TRMM 3B42 daily precipitation products over Greece [10444-69]
	URBAN ENVIRONMENT
10444 14	Unmanned aerial vehicle (UAV) application to the structural health assessment of large civil engineering structures [10444-29]
10444 15	Reflectance and thermal properties of the urban fabric studied with aerial spectral imaging [10444-45]

10444 16 Geospatial data for assessment of extreme climate impacts on urban environment [10444-34] COASTAL WATERS, OCEANS, AND LARGE WATER BODIES 10444 17 Coastal habitat mapping in the Aegean Sea using high resolution orthophoto maps [10444-52] UAS close range remote sensing for mapping coastal environments [10444-35] 10444 18 10444 19 Operational use of open satellite data for marine water quality monitoring [10444-49] 10444 1A Creation of a digital elevation model of the bottom according to echosounding [10444-14] 10444 1B Estimation of the particle size distribution slope with 3 methods: implications for the optical backscattering ratio and the bulk refractive index [10444-10] 10444 1C Remote sensing in detection of geophysical changes in Talisay River, Bataan, Philippines [10444-9] 10444 1D Assessment of the vulnerability to erosion for the Arctic coast [10444-68] **POSTER SESSION** 10444 1E Development of web-based GIS services for sustainable soil resource management at farm level [10444-43] 10444 1F Predicting soil properties for sustainable agriculture using vis-NIR spectroscopy: a case study in northern Greece [10444-28] 10444 1G Measuring the environmental awareness of young farmers [10444-71] 10444 1H Analysis of Joss-Waldvogel disdrometer measurements in rainfall events [10444-60] 10444 11 The use of UAVs to monitor archeological sites: the case study of Choirokoitia within the PROTHEGO project [10444-78] 10444 1J Integration of multispectral and SAR data for monitoring forest ecosystems recovery after **fire** [10444-5] 10444 1K Land subsidence phenomena in urbanized areas of Attica observed by applying advanced DinSAR techniques [10444-11] 10444 1L Land subsidence susceptibility and hazard mapping: the case of Amyntaio Basin, Greece [10444-15] 10444 1M Investigation on the thermographic detection of corrosion in RC structures [10444-75]

10444 1N	Quality enhancement of satellite images and its application for identification of surroundings of waste disposal sites [10444-4]
10444 10	Optical hyperspectral measurements of rocks and soils in Central Srednogorie, Bulgaria [10444-13]
10444 1P	Satellite data based approach for the estimation of anthropogenic heat flux over urban areas [10444-74]
10444 1Q	Ten years research activities in Earth observation at the Cyprus University of Technology [10444-77]
10444 1R	Comparison of MODIS-derived land surface temperature with air temperature measurements [10444-55]
10444 1S	Assessment of modern smartphone sensors performance on vehicle localization in urban environments [10444-79]

Authors

Numbers in the index correspond to the last two digits of the seven-digit citation identifier (CID) article numbering system used in Proceedings of SPIE. The first five digits reflect the volume number. Base 36 numbering is employed for the last two digits and indicates the order of articles within the volume. Numbers start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B...0Z, followed by 10-1Z, 20-2Z, etc.

Abbott, Victor, OC Abu, Patricia Angela R., 07 Agapiou, Athos, 1Q Akçit, Nuhcan, 1R Alberto, R. T., 03, 06, 0O Alboabidallah, Ahmed, OC Artés, Tomàs, 0R

Asmaryan, Sh., 0A, 11 Avetisyan, Daniela, 10, 1J, 10

Baltas, Evangelos, 1H Banushev, Banush, 1O Bejarano-Urrego, L., 0Y Belokopytov, Vladimir, 0l Biagtan, A. R., 06

Bien, Ferdinand E., 0N Bien, Ferdinand E., 0N Bitelli, Gabriele, 0T Bliziotis, Dimitrios, 1P Boca, Roberto, 0R Borisova, Denitsa, 1N, 1O Brambilla, Giobanni, 14 Bulaong, Edmark P., 1C

Burud, Ingunn, 15 Camaso, E. E., 03, 06, 00 Campagna, Michele, 0E Castiglioni, Carlo A., 14 Celestino, A. B., 00 Chaikalis, S., 1B Chiarelli, Gian P., 14 Co, Jerelyn, 02, 04, 05

Coronel, Andrei D., 04, 07

Damian, G. B., 03, 06, 00 Danezis, Chris, 1S Declerca, P.-Y., 0Y

Dela Cruz, Bon Lemuel T., 05, 07 De Leon, Marlene M., 05

Demetriou, Demetris, 0E Derauw, D., 0Y Dervos, Nikolaos, 1H Diagourtas, D., 0S Dimitrakos, Agathoklis, 1F

Dimopoulos, Thomas, OF

Dor, E. Ben, 12 Doukari, Michaela, 17, 18

Doula, Maria, 1E Dragozi, E., 0P Drakopoulos, P. G., 1B Efstathiou, Nectarios, 0D Eftychidis, G., 0S, 0W Eleias, Magdalena, 0T Espiritu, Jo Adrianne, 0M

Estuar, Maria Regina Justina E., 04, 05, 07

Fedorova, Elena, 1A Feloni, Elissavet, 1H Fischer, Peter, 0Z Franci, Francesca, 0T Fylaktos, Asimakis, 0L Gainullin, Iskander I., 0X Gaitani, Niki, 15 Galanis, Georgios, 1F Garcia, Kyle Kristopher P., 07

Georgi, Julia, 0V, 14 Georgiadis, Charalampos, 0U Georgiou, Andreas, 1R

Georgiou, Panagiota G., 1M

Gertman, Isaac, Ol Giagkas, Fotis, OU Giavis, George, 1H Gitas, I., OP Gkotsis, I., OS, OW Gounaridis, Dimitrios, 1P Granot, Amihai, 12 Grigoriadis, D., OP

Guico, Maria Leonora, 02 Hadjimitsis, Diofantos G., 1G, 1Q

Hahmann, S., OS Hayen, R., OY Hedel, R., OS

Hernando, P. J. C., 00 Ilia, Ioanna, 0J Ingerov, Andrey, 0l Ioannou, Fotia G., 1M

Isip, M. F., 03 Ivanova, Iva, 1J, 1N Kaimaris, Dimitris, 0U Kaitantzian, A., 1K Kalopesa, Eleni, 1F Karageorgis, A. P., 1B

Karagianni, Aikaterini Ch., 0B, 0Q

Katagis, T., OP

Katsanevakis, Stelios, 17 Kazamias, A. P., 13 Kazaryan, Maretta, 1N Khaliulin, Alexey, 0G, 0H, 0I Khomyakov, Petr V., 0X

Kolios, P., 0W Kolovos, Chronis, 1E Konecny, Milan, 0E Kostaridis, A., 0S

Kotsifakis, Konstantinos, 1H Koukouvelas, Ioannis, 09 Kountios, G. 1G Koutras, Nikolaos, 0D Krauß, Thomas, OZ Krylenko, Marina, 0G Krylenko, Viacheslav, 0G Kyriakides, Nicholas, 1M Lagouvardos, K., 13 Lao, Ranilo B., OM, 1C Lavender, Samantha, OC Lazaridou, Maria A., 0B, 0Q Lazarou, Theodoros, 1S Leventakis, G., 0S Liberta, Giorgio, OR Lim, Hadrian Paulo M., 05, 07

Lopez, J., 0Y

Loupasakis, Constantinos, OJ, 1K, 1L Macalinao, Marc Joseph M., 02

Majewski, Dawid, 1D Makri, Despina, 17 Mallinis, Giorgos, 0U Mamouri, Rodanthi, 1Q Mandanici, Emanuele, 0T Mapanao, Kathrina M., 0M

Martin, John, 0C

Mettas, Christodoulos, 1Q Michaelides, Silas, 1Q Monje, Jose Claro, 02 Mountzouris, M., OS Moussiopoulos, Nicolas, 1P Muradvan, V., 0A, 11 Nedkov, Roumen, 10, 1J, 1N, 1O

Neoclous, Kyriacos, 1Q Nikolaidis, Andreas, OG, OH, OI Nikolaidis, Marios, OG, OH, Ol

Nikolakopoulos, Konstantinos G., 08, 09

Nisantzi, Argyro, 1Q Nitis, Theodoros, 1P Ntonou, Eleftheria, 1F Olunczek, A., 0S Oppus, Carlos, 02

Paelmo, Sharlene Mae, 05

Palado, G. C., 00 Panuyas, N. Z., 06 Papadavid, G., 1G Papadopoulos, Antonis, 1E

Papakonstantinou, Apostolos, 17, 18

Papoutsa, Christiana, 1Q Paprota, Maciei, 1D Parcharidis, I., 1K Patias, Petros, OU

Paz-Alberto, Annie Melinda, 0M, 1C

Petkov, Doyno, 10 Plopenio, Joanaviva C., 0N

Psaroudakis, Chrysostomos, 0D

Psarra, S., 1B Quibuyen, J. S., 06 Rabuffetti, Angelo S., 14 Racetin, Ivana, 0E

Ragkos, A., 1G Ramos, Gloria N., 0M Raneses, Eleazar V., 1C Richter, Andrey, 1N Saddi, Ivan Lester, 05 Saghatelyan, A., 0A, 11 Sahakyan, L., 11

Salvador, Nicasio C., 1C San-Miguel, Jesús, OR Sapountzis, M., 13 Savastru, Dan M., OK, 16 Savastru, Roxana S., OK, 16 Señires, Chiara Veronica, 04 Serrano, S. C., 06

Shakhramanyan, Mihail, 1N Shimoni, M., 0Y

Sitdikov, Airat G., 0X Skitsas, Michael, 0D Spyridakis, N., 1B Stamatis, Panagiotis, 17 Stankova, Nataliya, 1J, 1N Stavrakoudis, D., OP Stefanidou, A., OP Stepanidou, L., OP

Stylianou, Stavros, OH, OI Sulisz, Woiciech, 1D Suszka, Lechoslaw, 1D Symeonidis, Panagiotis, 19

Tagaca, R. C., 00 Tantele, Elia A., 1M Tepanosyan, G., 0A, 11 Terzopoulou, Evangelia, 1F Themistocleous, Kyriacos, 11, 1Q Thiis, Thomas, 15

Tiausas, Francis Jerome G., 02, 04

Tompoulidou, M., OP

Topouzelis, Konstantinos, 17, 18 Torrijos, Jose Emmanuel, 07 Troyanos, Yerasimos, 1E Tsakiridis, Nikolaos L., 1F Tsangaratos, Paraskevas, OJ Tsegas, George, 1P

Tsioukas, Vassileios, OU Tsirika, Anastasia, 1F Tzampoglou, P., 1L Tziolas, Nikolaos, 1F Tzouvaras, Marios, 1Q Usmanov, Bulat M., 0X Vakkas, Theodoros, 19 Van Balen, K., OY Veic, Duie, 1D Velizarova, Emiliya, 10 Verstrynge, E., 0Y

Victorino, John Noel C., 04, 05, 07

Votsis, Renos A., 1M Walstra, J., 0Y Warner, T. A., 11 Wolff, Claudia, 1D Yfantidou, Anastasia, OL Yiorkas, Charalambos, 0F Zaharinova, Mariana, 1N Zalidis, George C., 1F Zanos, Pavlos, 0V Zhuk, Elena, 0G, 0H, 0I Zodiatis, George, 0G, 0H, 0I Zoran, Maria A., 0K, 16

Conference Committee

Conference Chairs

Kyriacos Themistocleous, Cyprus University of Technology (Cyprus)
Silas Michaelides, Meteorological Service of Cyprus (Cyprus)
Giorgos Papadavid, Agricultural Research Institute (Cyprus)
Vincent Ambrosia, NASA (United States)
Gunter Schreier, Deutsches Zentrum für Luft- und Raumfahrt e.V.
(Germany)

Diofantos G. Hadjimitsis, Cyprus University of Technology (Cyprus)

Scientific Committee

Anthony Stefanides, George Mason University (United States)

Qian Yu, University of Massachusetts (United States)

Chen Gang, University of North Carolina at Charlotte (United States)

Qihao Weng, Indiana State University (United States)

Jon Mills, Newcastle University (United Kingdom)

Kevin Tansey, University of Leicester (United Kingdom)

Marinko Oluic, Geosat (Croatia)

Lena Halounova, Czech Technical University in Prague (Czech Republic)

Nilanchal Patel, Bit-Step (India)

George Zalidis, Aristotle University (Greece) and I-Bec (Greece)

Demetre Argialas, National Technical University of Athens (Greece)

Vassilia Karathanassi, National Technical University of Athens (Greece)

Efi Dimopoulou, National Technical University of Athens (Greece) **Andreas Georgopoulos**, National Technical University of Athens (Greece)

Athanasios Loukas, University of Thessaly (Greece)

Petros Patias, Aristotle University (Greece)

Ioannis Gitas, Aristotle University (Greece)

Diofantos G. Hadjimitsis, Cyprus University of Technology (Cyprus)

Phaedon Kyriakidis Cyprus University of Technology (Cyprus)

Vincent Ambrosia, NASA (United States)

Albert Ansmann, Leibniz Institute for Tropospheric Research (Germany)

Athanassios Ganas, National Observatory of Athens (Greece)

Jesus San Miguel-Ayanz, Institute for Environment and Sustainability, Ec Joint Research Centre (Belgium)

Gunter Schreier, Deutsches Zentrum für Luft- und Raumfahrt e.V. (Germany)

Rosa Lasaponara, CNR (Italy)

Nicola Masini, CNR (Italy)

Armin Schmidt, GeodataWIZ Ltd (United Kingdom)

Alexandra Chudnovsky, Tel-Aviv University (Israel)

Maria Zoran, INOE (Romania)

Ignacio Merendez-Pastor, Universidad Miguel Hernández of Elche (Spain)

Artur Gil, University of The Azores (Portugal)

A.P. Krishna, Birla Institute of Technology, Mesra (India)

Apostolos Sarris, FORTH (Greece)

Nektarios Chrysoulakis, FORTH (Greece)

Konstantinos Nikolakopoulos, University of Patras (Greece)

Marios Anagnostou, National Technical University of Athens, National Observatory of Athens (Greece)

Adrianos Retalis, National Observatory of Athens (Greece)

Giorgos Papadavid, Agricultural Research Institute (Cyprus)

Silas Michaelides, Cyprus University of Technology (Cyprus)

Skevi Perdikou, Geofem (Cyprus)

Athos Agapiou, Cyprus University of Technology (Cyprus)

Chris Danezis Cyprus University of Technology (Cyprus)

Christiana Papoutsa, Cyprus University of Technology (Cyprus)

Marios Tzouvaras, Cyprus University of Technology (Cyprus)

Rodanthi Mamouri, Cyprus University of Technology (Cyprus)

Argyro Nisanzti, Cyprus University of Technology (Cyprus)

Vassiliki Lysandrou, Cyprus University of Technology (Cyprus)

Christoudoulos Mettas, Cyprus University of Technology (Cyprus)

George Melillos, Cyprus University of Technology (Cyprus)

Kyriacos Themistocleous, Cyprus University of Technology (Cyprus)

Keynote Speakers

Jérôme Béquignon, ESA—European Space Agency

Vincent Ambrosia, NASA (United States)

Nicolae Mitu, Copernicus

Athanassios Ganas, National Observatory of Athens (Greece)

Konstantinos Nikolakopoulos, University of Patras (Greece)

Felix Puls, Leica Geosystems AG (Switzerland)

Session Chairs

1 Remote Sensing for Cultural Heritage Beyond Europe - Enjoyment of Cultural Heritage by Means of New and Old Media

Rosa Lasaponara, CNR (Italy)

Nicola Masini, CNR (Italy)

2 Agriculture

Andreas Damalas, Cyprus University of Technology (Cyprus)

3 Agriculture

Giorgos Papadavid, Agricultural Research Institute (Cyprus)

4 Remote Sensing

Konstantinos Nikolakopoulos, University of Patras (Greece)

5 Remote Sensing

Charalabos Ioannides, National Technical University of Athens (Greece)

6 GIS

Demetris Demetriou, Public Works Department (Cyprus)

7 Natural Hazards

Vincent Ambrosia, NASA (United States)

Forest and Forest Fires - Disaster Response
 Andreas Damalas, Cyprus University of Technology (Cyprus)

9 Forest and Forest Fires

Ioannis Gitas, Aristotle University (Greece)

10 Defence and Security Applications

Betty Charalampopoulou, GeoSystems Hellas (Greece)

11 Exploitation of Copernicus data at ERDAS IMAGINE

Evangelos Maltezos, GeoSystems Hellas (Greece)

12 Cultural Heritage

Charalabos Ioannides, National Technical University of Athens (Greece)

13 Geology

Eyal Ben Dor Tel Aviv University (Israel)

14 Atmospheric

Alex Papayannis, National Technical University of Athens (Greece)

15 Urban Environment

Maria Zoran, INOE (Romania)

16 Coastal Waters, Oceans and Large Water Bodies

Konstantinos Topouzelis, University of the Aegean (Greece)

Introduction

The organizing committee, scientific committee, and editors would like to thank the authors and participants who attended the Fifth International Conference on Remote Sensing and Geoinformation of Environment in Paphos, Cyprus, which took place 20-23 March 2017. The conference focused on emerging issues in remote sensing and geoinformation of environment. The keynote speakers and thoughtprovoking technical program encouraged the exchange of ideas and provided the foundation for future collaboration and innovation. The RSCy2017 was organized by the Cyprus Remote Sensing Society, in cooperation with, ESA (European Space Agency), NASA, ETEK (Cyprus Scientific and Technical Chamber), the Department of Meteorology, the Department of Electronic Communications of the Ministry of Communications and Works, GEO (Group on Earth Observations), DLR (German Aerospace Center), the Agricultural Research Institute, Copernicus, HellasGIS, and Neapolis University. RSCy2017 was supported by the Cyprus Research Promotion Foundation, Copernicus, the Copernicus Relays network and the Copernicus Academic network, as well as the CLIMA, PROTHEGO and ATHENA project.

The papers in this volume, reviewed for presentation and accepted for publication by the scientific committee, represent continued advancements in the field of remote sensing and geoinformation. The program, which included both oral and poster presentations, was organized around twelve major themes: Agriculture, Atmospheric, Coastal Waters-Ocean-Large Water Regions, Remote Sensing for Cultural Heritage, Forests, Geology, GIS, Natural Hazards and Disaster Response, Remote Sensing, Surveillance and Urban Environment. The abstracts and subsequent papers make important contributions to the open scientific literature on remote sensing and geoinformation. We thank the authors for sharing their knowledge and enthusiasm. Experts from over 35 countries are represented in the papers that were presented. As well, the conference was enhanced by the inclusion of the workshops, "Defense and Security Applications," "Exploitation of Copernicus data at ERDAS IMAGINE," "Remote Sensing for Cultural Heritage Beyond Europe," under the auspices of the ATHENA project; and "Enjoyment of Cultural Heritage By Means of New and Old Media," which was developed within the frame of the Action Programme of the Joint Programming Initiative on Cultural Heritage and Global Change.

We are honored that so many experts from all over the world specializing in so many diverse areas of remote sensing and geoinformation are attending this conference. RSCy2017 was an excellent opportunity for colleagues to share their knowledge, network and collaborate on future research. We encourage you to take this opportunity to learn about the latest, most state-of-the-art findings and applications in the field of remote sensing and geoinformation.

Thank you to the scientific committee, keynote speakers, and session chairs, who provided invaluable assistance during the conference. Thank you as well to the staff at SPIE for following the proceedings through the publication process. We also thank our sponsors for their support.

Kyriacos Themistocleous Silas Michaelides Giorgos Papadavid Vincent Ambrosia Gunter Schreier Diofantos G. Hadjimitsis

Conference Sponsorship and Support

Conference Organizers
Cyprus Remote Sensing Society (Cyprus)

Co-organized by

ESA—European Space Agency

NASA (National Aeronautics and Space Administration, United States)

GEO (Group on Earth Observations, Switzerland)

DLR (German Aerospace Center) (Germany)

Department of Electronic Communications of the Ministry of Communications and Works (Cyprus)

ETEK (Cyprus Scientific and Technical Chamber, Cyprus)

Agricultural Research Institute (Cyprus)

Department of Meteorology (Cyprus)

HellasGIS (Greece)

Neapolis University (Cyprus)

Sponsored by

ESA— European Space Agency

NASA (United States)

GeoSystems Hellas (Greece)

GETMap (Greece)

Supported by

Cyprus Research Promotion Foundation

Joint Programming Initiative

COST - Optimise

Copernicus

Copernicus Relays

Copernicus Academy

"Athena" H2020-TWINN2015 EU-691936

"Clima" JPI Heritage Plus/0314/07

"Prothego" JPI Heritage Plus/0314/36

Smart Events