GeoForAll

Monthly Newsletter

Be part of "Geo for All"

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4. Conferences

EUROPE

June 2021

1. 7-9 June: Knowledge Commons "Deciphering the grammar of Institutions".

On-line conference organized by the International Association for the Study of the Commons

July 2021

2. 6-8 July: 12th International Symposium on Digital Earth "Digital Earth for Sustainable Societies"

Venue: Faculty of Natural Sciences (Naturwissenschaftliche Fakultät) of the University of Salzburg, Salzburg, Austria

SOUTH AMERICA

September – October 2021

3. 27 Sept – 02 Oct.: FOSS4G

Venue: The Buenos Aires Convention Center (CEC) and the UBA Law School of the University of Buenos Aires, Buenos Aires, Argentina

ASIA

4. October 2021

14-17 October: 3rd International Congress on Geographical Education (ICGE-2021)

Venue: Online

Organizer: Sivas Cumhuriyet University, Sivas, Turkey

5. Webinars

- If you want to start learning how to use QGIS, there are some excellent free resources at https://www.gislounge.com/free-ways-to-learn-qgis/ and https://www.gislounge.com/self-guided-qgis-courses/?utm_medium=email&utm_campaign=GISNL-Aug-27-2020&utm_source=YMLP

Editorial Board

Please refer to the appropriate person according to the following table:

GeoForAll Themes

- **OpenCity Smart**

  Theme under revision

- **Teacher Training & School Education**

➢ Chairs: Elżbieta Wołoszyńska-Wiśniewska (Poland), Nikos Lambrinos (Greece)

➢ Mail list: geoforall-teachertraining@lists.osgeo.org

➢ Website: http://wiki.osgeo.org/wiki/GeoForAll_TeacherTraining_SchoolEducation

- **CitizenScience**

➢ Chairs: Peter Mooney (Ireland) and Maria Brovelli (Italy)

➢ Mail list: https://lists.osgeo.org/cgi-bin/mailman/listinfo/geoforall-geocrowd

➢ Website: http://wiki.osgeo.org/wiki/Geocrowdsourcing_CitizenScience_FOSS4G

- **AgriGIS**

➢ Chairs: Didier Leibovici (U.K.) and Nobusuke Iwasaki (Japan)

➢ Mail list: https://lists.osgeo.org/cgi-bin/mailman/listinfo/geoforall-agrigis

➢ Website: http://wiki.osgeo.org/wiki/Agrigis

GeoForAll Regional Chairs and Contact Information

North America Region

Chairs: Helena Mitasova (USA), Charles Schweik (USA), Phillip Davis (USA) Subscribe at mail list http://lists.osgeo.org/cgi-bin/mailman/listinfo/geoforall-northamerica

Email: na.gfa.chair@osgeo.org

Iberoamerican Region

Chairs: Sergio Acosta y Lara (Uruguay) and Silvana Camboim (Brazil) and Antoni Pérez Navarro (Spain). Subscribe at mail list: https://lists.osgeo.org/mailman/listinfo/geoforall-iberoamerica

Email: geoforall-iberoamerica@lists.osgeo.org.

Africa Region

Chairs: Msilikale Msilanga (Tanzania), Serena Coetzee (South Africa) and Bridget Fleming (South Africa) Subscribe at mail list http://lists.osgeo.org/cgi-bin/mailman/listinfo/geoforall-africa

Email: africa.gfa.chair@osgeo.org

Asia Region (including Australia)

Chairs: Tuong Thuy Vu (Malaysia/Vietnam) and Venkatesh Raghavan (Japan/India) Subscribe at maillist http://lists.osgeo.org/cgi-bin/mailman/listinfo/geoforall-asiaaustralia

Email: asia.gfa.chair@osgeo.org

Europe Region

Chairs: Maria Brovelli (Italy) and Peter Mooney (Ireland) Subscribe at mail list http://lists.osgeo.org/cgi-bin/mailman/listinfo/geoforall-europe

Email: eu.gfa.chair@osgeo.org

GeoAmbassador Content table

July 2016, Vol.2, no.7	Prof. Georg Gartner, Vienna University of Technology
Aug 2016, Vol.2, no.8	Prof. Silvana Philippi Camboim, Federal University of Paraná, Brazil
Sep 2016, Vol.2, no.9	Nimalika Fernando, Sri Lanka
Oct 2016, Vol.2, no.10	Sergio Acosta Y Lara, Montevideo Uruguay
Nov 2016, Vol. 2, no. 11	Victoria Rautenbach, Centre of Geoinformation Science Univ. of Pretoria, South Africa
Dec 2016, Vol.2, no.12	Dr. Daria Svidzinska, Taras Shevchenko National University of Kyiv, Ukraine
Jan 2017, Vol.3 no.1	Dr. Mark Ware, University of South Wakes, UK
Feb 2017, Vol.3, no. 2	Dr. Rafael Moreno Sanchez, Department of Geography and Environmental Sciences, University of Colorado Denver, USA
March 2017, Vol.3 no.3	Dr. Tuong Thuy Vu, School of Environmental and Geographical Sciences, University of Nottingham, Malaysia campus
April 2017, Vol.3 no.4	Michael P. Finn, U.S. Geological Survey
May 2017, Vol.3 no.5	Dr. Peter Mooney, Maynooth University, NASA
June 2017, Vol.3 no.6	Patrick Hogan, NASA
July 2017, Vol.3 no.7	Prof. Dr. Josef Strobl, Salzburg
September 2017, Vol.3 no.9	Bridget Fleming, South Africa
October 2017, Vol.3 no.10	Sven Schade, Joint Research Centre, Italy
November 2017, Vol.3 no.11	Luciene Stamato Delazari, Universidade Federal do Paraná in Brazil
December 2017, Vol.3 no.12	Charlie Schweik, Univ. of Massachussets, USA
January 2018, Vol.4 no.1	Julia Wagemann, European Centre for Medium-Range Weather Forecasts
February 2018, Vol.4 no.2	Barend Köbben, Department of Geo-Information ProcessingUniversity of Twente
March 2028, Vol.4 no.3	Kurt Menke, Birds Eye View
April 2018, Vol.4 no.4	Dr. Clous Rinner, Department of Geography and Environmental Studies at Ryerson University, Toronto, Canada
June 2018, Vol.4, no.6	Martin Landa, Department of Geomatics, Faculty of Civil Engineering, Czech Technical University (CTU) in Prague

Lab of the Month, Content table

Aug 2015, Vol.1 no.1	Open Source Geospatial Lab, Kathmandu University, Nepal (Asia)
Sep 2015, Vol.1 no.2	FOSS4G Lab, University of Colarado Denver (USA)
Oct 2015, Vol.1, no.3	Open Source Geospatial Lab, University of Southampton, UK (Europe)
Nov 2015, Vol.1 no.4	The Northeast Institute of Geography and Agroecology of Chinese Academy of Science, China (Asia)
Jan 2016 , Vol.2 no.1	Centre for Geoinformation Science, University of Pretoria, South Africa, (Africa)
Feb 2016, Vol.2 no.2	Open Source Geospatial Lab, University of Newcastle, UK, (Europe)
Mar 2016, Vol.2 no.3	SMART Open Source Geospatial Lab, University of Wollongong, (Australia)
Apr 2016, Vol.2 no.4	Regional Centre for Mapping of Resources for Development, Nairobi, Kenya (Africa)
May 2016, Vol.2 no.5	GeoDa Centre – Arizona State University, (USA)
June 2016, Vol.2 no.6	Direccion Nacional de Topografia – MTOP Montevideo, Uruguay, (South America)
July 2016, Vol.2 no.7	SIGTE – University of Girona, Spain (Europe)
August 2016, Vol.2 no.8	Open Source Geospatial Lab, Department of Geodesy and Surveying, Budapest Univ. of Technology and Economics, Hungary (Europe).
September 2016, Vol.2 no.9	Open Source Geospatial Lab, Faculty of Geodesy, University of Zagreb, Croatia, (Europe)
October 2016, Vol.2 no.10	Hellenic digital earth Centre of Excellence, Aristotle University of Thessaloniki, Greece, (Europe)
November 2016, Vol.2 no.11	Department of Geoinformatics, Palacký University in Olomouc, Czech Republic
December 2016, Vol.2 no.12	Asian Institute of Technology, Bangkog, Thailand
January 2017, Vol.3 no.1	Spatial Lab, Texas A&M, Corpus Christi, USA
February 2017, Vol.3 no.2	Open Source Geospatial Lab, Faculty of Civil Engineering, Belgrade, Serbia
March 2017, Vol.3 no.3	Geomatics and Earth Observation Laboratory (GEOlab) , Politecnico di Milano, Italy
April 2017, Vol.3 no.4	Faculty of Civil Engineering, Department of Geomatics, Czech Technical University in Prague, Czech Republic
May 2017, Vol.3 no.5	the Laboratory of socio-geographical research of the University of Siena, ITALY
June 2017, Vol.3 no.6	A World Bridge program
July 2017, Vol.3 no.7	Department of Civil, Environmental and Mechanical Engineering of the University of Trento, Italy
August 2017, Vol.3 no.8	Institute of Geography, Faculty of Science, Pavol Jozef Šafárik University in Košice, Slovakia
November 2020, Vol.6 no.11	Universitat Oberta de Catalunya (UOC), Spain
January 2021, Vol.7 no.01	gvSIG Uruguay Community, Uruguay

GeoForAll

- User Preparation Webinar: 3MI

    Start Date: June 14, 2021

    End Date: June 15, 2021

    Region: Europe

    Organizer: EUMETSAT

    Language: English

    Contact email: Sreerekha Thonipparambil (Sreerekha.Thonipparambil@Eumetsat.int)

6. Courses

- Geospatial Applications for Disaster Risk Management.

    Start Date: May 15, 2021

    End Date: August 15, 2021

    Organizer: NOOSA (United Nations Office for Outer Space Affairs) & CSSTEAP (Center for Space Science & Technology Education in Asia and the Pacific)

    Language: English

    Contact link: https://isat.iirs.gov.in/mooc.php

    Details at: https://isat.iirs.gov.in/courseDocs27/MOOC_Brochure.pdf

- Applications of Machine Learning on EO Data.

    Start Date: July 5, 2021

    End Date: July 9, 2021

    Organizer: EUMETSAT (online)

    Language: English

    Contact email: training@eumetsat.int

    Details at: https://confluence.eumetsat.int/pages/viewpage.action?pageId=121839628

- Management of Observational Information

    Start Date: July 12, 2021

    End Date: July 23, 2021

    Organizer: Gustavo Lopez (online)

    Host: RTC-SMN Argentina

    Language: Spanish

    Targeted Audience: personnel performing meteorological observations, meteorological observer, aeronautical meteorological observer.

    Contact email: Marines Campos marinescampos27@gmail.com

    Details at:

    https://docs.google.com/forms/d/e/1FAIpQLSeWRJjoKWzxe8gE-3Tq0XWVH12aMrZJowaUNVy9qPrmdLxSNg/viewform

7. Training programs

- GeoForAll educational materials have been transferred to our new web site. GeoForAll educational inventory system, a place to search and share educational materials

- Open Data Science Workshop is a 5-day event with the first 2 days of training sessions in processing data cubes and using machine learning to extract content, and the following 3 days with oral talks and keynotes. The event will be hybrid, online via Zoom webinars and streamed live on the OpenGeoHub YouTube channel [https://www.youtube.com/channel/UC6HFFFYiV4zEYJlQMIXemWA]. The special theme of the workshop is: Spatiotemporal Modeling of European Landscapes and Climate 2000-2020: using EO and machine learning.

- The National Geodetic Survey (NGS) recently held a free online meeting for the 2021 Geospatial Summit. Presentations can be viewed at https://geodesy.noaa.gov/geospatial-summit/year-2021/presentations.shtml (language: English).

11. Free books, educational materials, etc.

- Paulo Raposo (Assistant Professor of Geovisualization, GIP Department, Faculty ITC, University of Twente) has shared a new tutorial about Basic LiDAR Data Handling using PDAL, available here: https://paulojraposo.github.io/pages/PDAL_tutorial.html

- **SPRING** is a state-of-the-art GIS and remote sensing image processing system with an object-oriented data model which provides for the integration of raster and vector data representations in a single environment. For more information and how to download the software please go to http://www.dpi.inpe.br/spring/english/index.html

12. Articles

Acronyms

by **Nikos Lambrinos**, Chief Editor, and **Michael Finn**.

For those who would like to support this effort, please send any acronyms to the Chief Editor (labrinos@eled.auth.gr).

3DEP: 3-D Elevation Program

AAG: Association of American Geographers

AGI: Ambient Geographic Information

AGS: American Geographical Society

AGU: American Geophysical Union

AI: Artificial Intelligence

AM/FM: Automated Mapping/Facilities Management

API: Application Programming Interface

ASPRS: American Society for Photogrammetry and Remote Sensing

AURIN: Australian Urban Research Infrastructure Network

BBSRC: Biotechnology and Biological Sciences Research Council

BDS: BeiDou Navigation Satellite Demonstration System

BIM: Building Information Modelling

CAADP: Comprehensive African Agricultural Development Programme

CAD: Computer Aided Design

CaGIS: Cartograhy and Geographic Information Society

CCGI: Collaboratively Contributed Geographic Information

CEGIS: Center of Excellence for Geospatial Information Science

CEOS: Committee on Earth Observation Satellites

CI: CyberInfrastructure

CLGE: The Council of European Geodetic Surveyors

CODATA: Committee on Data for Science and Technology

COGO: Coordinate geometry

CRC: Census Research Centre

CRS: Coordinate Reference System

CSA: Canadian Space Agency

CSSTEAP: Center for Space Science & Technology Education in Asia and the Pacific

CUDA: Compute Unified Device Architecture

DAAC: Distributed Active Archive Center (of NASA)

DEM: Digital Elevation Model

DSM: Digital Surface Models

DWG: Design file format

DXF: Drawing Interchange File

ECMWF: European Center for Medium range Weather Forecasting

EOS: Earth Observation Science

EOSDIS: Earth Observing System and Data Information System

EPA: Environmental Protection Agency

EPSG: European Petrol Survey Group (used in projection IDs)

ESA: European Space Agency

ESERO: European Space Education Resource Office

EUROGI: European Umbrella Organisation for Geographic Information

EuroSDR: European Spatial Data Research

FOSS: Free and Open Source Software

FOSS4G: Free and Open Source Software For Geospatial

GCP: Ground Control Point

GDAL: Geospatial Data Abstraction Library

GEO: Group on Earth Observations

GEO: Geosynchronous Earth Orbits

GloFAS: Global Flood Awareness System

GNSS: Global Navigational Satellite System

GODAN: Global Open Data for Agriculture and Nutrition

GPS: Global Positioning System

GPX: GPS Exchange Format

GRACE: Gravity Recovery and Climate Experiment (satellite program)

GRASPgfs: Geospatial Resource for Agricultural Species and Pests and Pathogens with workflow integrated modeling to support Global Food Security

GSoC: Google Summer of Code

HLPF: High Level Political Forum (of UN)

HOT: Humanitarian OpenStreetMap Team

HPC: high-performance computing

ICA: International Cartographic Association

ICSU-WDS: International Council for Science – World Data System

IDE: Spatial Data Infrastructure

INSPIRE: Infrastructure for Spatial Information in Europe

IPGH: Pan American Institute of Geography and History

ISO: International Organization for Standardization

ISPRS: International Society for Photogrammetry and Remote Sensing

ISRO: Indian Space Research Organization

JAXA: Japan Aerospace Exploration Agency

KML: Keyhole Markup Language

LBS: Location-Based Service

LEO: Low Earth Orbits

LiDAR: Light Detection and Ranging

LOC: Local Organizing Committee

LOD: Level Of Detail

MEO: Medium Earth Orbits

MIL: Media and Information Literacy

MoU: Memorandum of Understanding

MSS: Multispectral Scanner

NAD: North American Datum

NCSA: National Center for Supercomputing Applications

NED: National Elevation Dataset

NEPAD: NEw Partnership for African Development

NGA: National Geospatial Intelligence Agency

NHD: National Hydrologic Dataset

NLCD: National Land Cover Dataset

NOOSA: United Nations Office for Outer Space Affairs

NRSA: Indian National Remote Sensing Agency

NSDI: National Spatial Data Infrastructure

NSF: National Science Foundation

OECD: Organisation for Economic Co-Operation and Development

OER: Open Educational Resources

OGC: Open Geospatial Consortium

OHI: International Hydrographic Office

OSGeo: Open Source Geospatial Foundation

OSM: OpenStreetMap

OTB: Orfeo Tool Box

PPGIS: Public Participation in Geographic Information Systems

PPSR: Public Participation in Scientific Research

RBV: Return Beam Vidicon

RCMRD: Regional Centre for Mapping of Resources for Development

RDA: Research Data Alliance

ROSCOSMOS: Russian Federal Space Agency

ROSHYDROMET: Russian Federal Service for Hydrometeorologyand Enviromental Monitoring

RUFORUM: Regional Universities Forum for capacity building in agriculture

SaaS: Software as a Service

SAR: Synthetic Aperture Radar

SDG: Sustainable Development Goal

SDI: Spatial Data Infrastructure

SIG: Geographic Information System

SIGTE: The GIS and Remote Sensing Service of the University of Girona, Spain

SPIDER: open SPatial data Infrastructure eDucation nEtwoRk

SQL: Structured Query Language

STISA 2024: Science Technology Innovation Strategy for Africa

STSM: Short Term Scientific Missions

SWIR: Short Wave Infrared

TIN: Triangulated Irregular Network

UAV: Unmanned Aerial Vehicle

UML: Unified Modeling Language

UN-GGIM: United Nations Global Geospatial Information Management

USGS: U.S. Geological Survey

USGIF: United States Geospatial Intelligence Foundation

VGI: Volunteered Geographic Information

VNIR: Visible Near Infrared

XSEDE: Extreme Science and Engineering Discovery Environment

WCS: Web Coverage Service

WFS: Web Feature Service

WGCapD: Working Group on Capacity Building and Data Democracy

WGS: World Geodetic System

WISERD: Wales Institute of Social & Economic Research, Data & Methods

WMO: World Meteorological Organization

WMS: Web Map Service

WMTS: Web Map Tiles Services

WOIS: Water Observation Information System

WPS: Web Processing Service

- From Rania E. Ibrahim , Amr Elramly and Hoda M Hassan, (2020). Open Systems Science: Digital Transformation and Developing Business Model toward Smart Farms' Platform. INTERNATIONAL JOURNAL OF CIRCUITS, SYSTEMS AND SIGNAL PROCESSING DOI: 10.46300/9106.2020.14.134

Abstract— This paper describes efforts by National Authority for Remote Sensing and Space Sciences (NARSS) to help the Egyptian government to manage and monitor the national projects. We successfully developed a geospatial data sharing portal (NARSSGeoPortal) as part of the government need to build national Decision Support System (DSS). We were able to solve the software development issues as well as the satellite imagery sourcing issues, but the main challenge remains around how to collect complete and correct data from the public about their private businesses nationwide. The most challenging is how to engage the public and encourage the business owners who are the main sources of data to provide the government Geoportal with data about their businesses. It is also challenging to engage the scientists and experts from government research centers into the data sharing Geoportal. Furthermore, it is a challenge to integrate the government research centers with the public businesses' daily operation. The data sharing Geoportal is built for all national projects and government authorities, however, in this paper we focus on the Agriculture authorities and farming businesses where the challenge is how to collect correct and complete data per acre about the seeds, fertilizers, water, pest control and all other farm related data that

the satellite imagery does not provide. The goal is to integrate the farms into unified national monitoring, and control system while developing advanced smart farms with the use of Internet of Things (IoT). The proposed collaboration agriculture platform fills the gap between two groups. The first group includes the government authorities, financial institutions, and research centers. The second group includes farmers, supply chain, and agriculture engineers. The platform show how employment can be generated by transforming the national ecosystem. The paper also fills a major gap in industry as well as in academia by providing the first Bluetooth Low Energy computer aided design tool that will facilitate testing, designing, deploying, managing and debugging of real Bluetooth Low Energy networks.

To get the full article go to:

https://www.naun.org/main/NAUN/circuitssystemssignal/2020/c722005-eaq.pdf

17. Ideas / Information

1. If you are interested in educational material, then go to https://www.osgeo.org/initiatives/geo-for-all/in-your-classroom/ where you can find software resources for your classroom. Also, go to "Resources" https://www.osgeo.org/resources/ to get a guidance on how to use open source projects and tools.

2. From Zhe (Sarina) Zhang: *Computational Urban Science journal welcomes original papers related to big data and urban studies! Computational Urban Science* publishes rigorously peer-reviewed and high-quality original articles and reviews that focus on the intersection of computational sciences and urban sciences in building intelligent and resilient cities. The journal aims to

introduce the latest results in urban computing and its applications, examine both the spatial and social dimensions of urban networks and built environment, promote the cooperation between computational disciplines and the urban domain sciences, and build a bridge for scientific communication. This journal will focus on the development of research frameworks, theories, methods, and good case studies of tackling key urban research challenges in the mobile and big data era. Sample topics include but not limited to:

1. Agent-based models of social interactions
2. Data sharing and dissemination in urban computing research
3. Large-scale Social activities in physical and virtual spaces
4. Multi-scale urban modeling
5. Privacy issues in mobile and big data and possible solutions
6. Space-time data models for urban computing
7. Spatiotemporal social network analysis
8. Trajectory data mining, analysis, and visualization
9. Visualization and computation of big health data

• Provides a unique focus on the intersection of computational science and urban science

• Delivers a fast review for authors, with a first decision on average within 4 weeks

• Disseminates content globally through journal website and social media platforms

• APC fully covered/sponsored by Jiangxi Normal University

Website: https://www.springer.com/journal/43762

3. From Cristina Vrînceanu (Cristina.vrinceanu@nottingham.ac.uk): You are invited to submit a proposal for the 2021 UN OSGeo Educational Challenge.

The Challenge supports the objectives of the OSGeo UN Committee i.e. promoting the development and use of open source software that meets the UN needs and supports the aims of the UN.

Two challenges are envisioned in this framework:

1. Training on Satellite Data Analysis and Machine Learning with QGIS (refer as Satellite_QGIS)
2. Workshop material for pgRouting
   The full description, criteria and benefits of the 2021 UN OSGeo Educational Challenge is available here.

For participating, please fill the required application for proposals form included in the Proposals section of the description.

The deadline for submitting applications is 14th of June 2021.

Any additional queries regarding this topic can be addressed to un.osgeo@gmail.com.

4. Research and application of Geographic Information Technologies: Geographic Information Technologies (GIT) comprise all disciplines that allow the generation, processing or representation of geographic information, understanding geographic information as any variable georeferenced in space. Therefore, within the field of TIG very varied disciplines are included, some of great historical tradition such as Cartography, as well as others of more recent emergence, such as Satellite Positioning Systems, Geographic Information Systems (GIS), and Remote Sensing (in a broad sense, also encompassing the capture and processing of aerial photographs). The objective of this axis is to generate a critical debate with the largest possible number of experts who are related to Geographic Information Technologies in academic, research, and professional application fields. This seeks to generate a space for the exhibition of works and exchange, in which topics addressed from geography are integrated, as well as the development of applications based on geotechnology and other related disciplinary fields, which facilitate or are based on the use of geographic information. Participation in the axis will constitute an excellent opportunity to advance in the systematization and construction of the state of the art of TIG applications and account for the scientific-technological advances that are currently taking place in Latin America, as well as the various

lines of study that have been enhanced with these technologies.

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Datos Coordinador 5 Nombre y Apellido: LUIS PICCINALI

Email: luispicci@gmail.com

5. By Suchith Anand.

Uniting the world to tackle climate change.

Uniting the world behind science.

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