GeoForAll
Monthly Newsletter

Be part of "Geo for All"

Table of Contents

Editorial

Nikos Lambrinos
Chief Editor
Dept. of Primary Education
Aristotle Univ. of Thessaloniki
Greece

Dear all,

There are two things which appear or re-appear in this issue.

The first one is the sub-section "Lab of the Month". In fact, this section was never canceled, it was postponed. The reason was not because of the lack of Labs which can be promoted as "Lab of the Month", but due to the lack of time. Needless to say, we are all too busy with our work and it is not easy to ask from a person to cover the needs of a permanent section in the newsletter. So, there is another solution: there are many Labs, members of our community, which are worth of promoting and/or reference. If someone from the Lab would like to write about the Lab in order to let the other members of the community know about the scope, the status and the work that is being done in his/her Lab then he/she is more than welcome to do so by presenting his/her Lab.

Don't forget to add some photos and a conduct name/email. All you have to do is send me the presentation. For the beginning you can read about The Open University of Catalonia (UOC). Also, for your information and convenience, there is a Lab of the Month content table where you can see all the Labs that were introduced in previous issues, so you can see which Labs had the honor to be introduced to our community.

Also, we are going to follow the same procedure for the "GeoAmbassador" sub-section, hoping that in the following months we will be able to "meet" interesting people from the geospatial community. Please send me your article about colleague(s) or team(s) who have a crucial role in geospatial science and they deserve to be honored with a reference to their work. You can also find a GeoAmbassador content table just to be informed about who has been introduced to our community so far.

The presence of these sub-sections depends on us.

The second one has to do with the section "Conferences". As we all have noticed, during last year, all the conferences were postponed and in some cases were canceled, because of the coronavirus pandemic. In our newsletter, the Conferences are ordered according to where and when they take place. Because all the Conferences are Online and there is no physical venue, we decided to present the Conferences according to the date of the organization and add "Online Conference" instead of "Venue".

Have a pleasant reading

Nikos Lambrinos

Chief Editor

Editorial Board

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

GeoForAll

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

2. A) Lab of the Month

Universitat Oberta de Catalunya (UOC)

by Antoni Perez-Navarro, PhD
Estudis d'Informàtica,
Multimèdia i Telecomunicació,
Barcelona, Spain

UOC was the first 100% online university that now celebrates its 25 years. It offers courses of most of the disciplines and develops research with many different scopes.

The role that Geographic information systems (GIS) in particular and location based applications in general has three main ambits:

- Education: GIS are part of UOC since 2004, when started to be an option for the final degree project of students of computer science. The offer in GIS at UOC has been changing during these years, and for three years we offered postgraduate studies in GIS. Nowadays we have the following possibilities:
  - Students from the degrees of computer science, master of computer science, master of telecommunication can choose developing their final degree project in GIS.
  - Students from Social sanitary work use GIS in their practicum.
  - Course of introduction to GIS in the telecommunication degree: is a non-mandatory course that students of telecommunication can choose.
  - Course of geodata analysis in the master of Data Science.
  - Course of Transportation and Sustainable Mobility in the master of cities and urbanism: in this course students reconstruct a transportation network and obtain several GIS indicators.

- Students of the master of cities and urbanism tend to use GIS in their final degree project.
- PhD: between education and research we find the phD programs.
  - GIS is one of the lines of research offererd in the Networking and Information technologies phD program (https://www.uoc.edu/portal/en/escola-doctorat/linies-recerca/linies-nit/applications-geographic/index.html)

- Research: several groups of research at UOC use GIS in their everyday work:
  - ICSO (https://dpcsicso.wordpress.com):The Internet Computing & Systems Optimization (ICSO) group focuses on the use of Intelligent Algorithms & Data Science (including optimization, simulation, analytics, and machine learning methods) to support complex decision making in different application fields that range from smart cities, to sustainable transportation and logistics, production, real-time positioning, bioinformatics and computational finance. GIS is the base map from which to obtain real world distances, for preventing healthy behaviours through geolocation apps, and for indoor positioning.
  - A publication of routing: Gruler, A.; Perez, T.; Calvet, L.; Juan, A. (2020): "A Simheuristic Algorithm for Time-Dependent Waste Collection Management with Stochastic Travel Times". Statistics and Operations Research Transactions (indexed in ISI SCI, 2019 IF = 0.778, Q3; 2019 SJR = 0.475, Q3). ISSN: 1696-2281.
  - A publication of preventing healthy behaviours: Besoain, F., Perez-Navarro, A., Jacques Aviñó, C., Caylà, J. A., Barriga, N. A., & Garcia de Olalla, P. (2020). Prevention of HIV and Other Sexually Transmitted Infections by Geofencing and Contextualized Messages With a Gamified App, UBESAFE: Design and Creation Study. *JMIR MHealth and UHealth*, *8*(3), e14568. https://doi.org/10.2196/14568
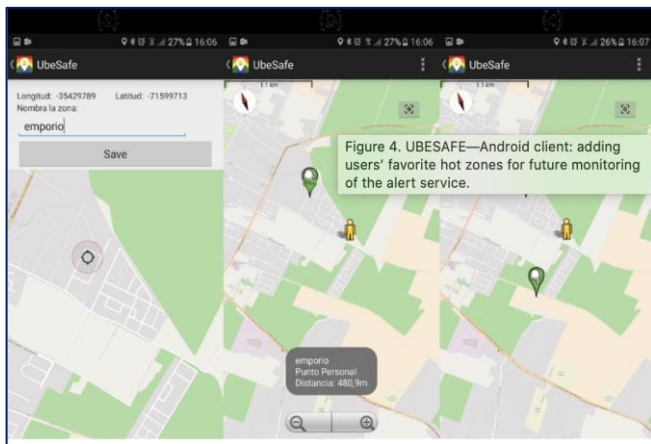
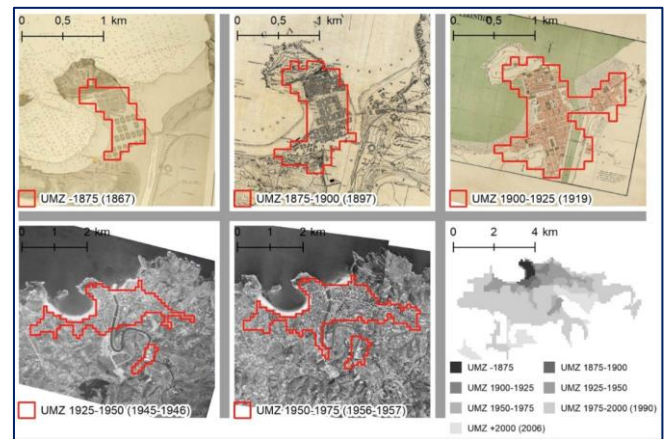*Figura 1: UBESAFE—Android client: adding users' favorite hot zones for future monitoring of the alert service.*

- NOUTUR (http://transfer.rdi.uoc.edu/es/grupo/nuevas-perspectives-en-turismo-y-ocio): The new perspectives in tourism and leisure (NOUTUR) group has used GIS in the project I+D ECCOLTUR. The GIS is intended to serve to map the evolution and spatial distribution of socio-economic indicators of collaborative economy in Spain.

- A publication: Soledad Morales-Pérez , Lluís Garay & Julie Wilson (2020): Airbnb'scontribution to socio-spatial inequalities and geographies of resistance in Barcelona, Tourism Geographies, DOI: 10.1080/14616688.2020.1795712

- SUMA (http://transfer.rdi.uoc.edu/es/grupo/sustainability-and-management-research-group): in the Sustainability and Management (SUMA) group research about management and sustainability of the companies. Their members have work in several projects where GIS play a key role, like HGISe (http://europa.udl.cat/) or Industrial Heritage (www.patrimoniindustrial.cat).

- A publication: https://www.mdpi.com/2071-1050/11/24/6948

Figura 2: Evolution of the H-UMZ for San Sebastián based on cartography and historical reference photograms.

- Sanitary social work (http://trabajosocialsanitario.blogs.uoc.edu): in the context of the social and sanitary workers, a GIS is being used to map their distribution in the spanish territory.

  - A publication:

  https://www.lavanguardia.com/vida/20191001/47761944577/la-uoc-elaborara-el-primer-atlas-de-trabajo-social-sanitario-en-espana.html

- CoSIN3 (http://transfer.rdi.uoc.edu/es/grupo/complex-systems-in3): tGIS is an invaluable tool for the Complex Systems group at the IN3 (CoSIN3) in their research on the structure and dynamics of cities. On a day to day basis, the group makes use of many of the tools available from GIS well-developed open-source ecosystem, from QGIS for mapping and visualization, to the Shapely and GeoPandas libraries for building tailored geoprocessing scripts in the Python programming language. Their work in the areas of urban traffic safety, social segregation, and sidewalk networks have relied on a wide range of geographic data sources, including geo-tagged traffic collisions, mobile phone records, and land use polygons, among many others.

- A publication: arXiv:2009.12548 [physics.soc-ph] https://arxiv.org/pdf/2009.12548.pdf
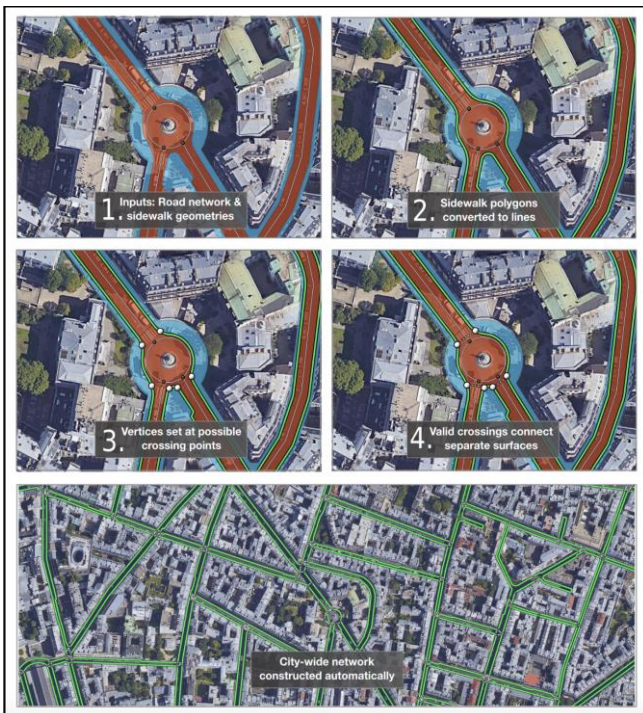
Figura 3: Network construction process. Building from heterogeneous municipal open data sets, an algorithm was developed to construct sidewalk networks automatically for each of the cities of study using a few simple rules, as described in the figure.

- TURBA (https://turbalab.research.uoc.edu):
   TURBA explores the urban geographies of digital capitalism and grassroots alternatives. We focus on three areas: the political economy of new technologically mediated urban models; the political ecology of urban governance and social-ecological resilience; and, the transformative capacities of grassroots collaborative processes of (urban) knowledge creation in digital as well as in non-digital environments. In doing so, we use open source GIS (QGIS & R) to analyse uneven socio-spatial configurations and visualise hidden actors, processes and relations as well the uneven inter- and intra- geographies of cities.

3. Events

- Air Quality Management with Satellite Data

   On September 25th at 4:00 P.M. (Amsterdam/UTC+2) / 10:00 A.M. (Santiago/UTC-4), TNO (*the Netherlands Organisation for applied scientific research*) organized a webinar focusing on Latin America on the use of satellite data for air quality management. TNO is one of the largest independent research and technology organizations in Europe, and has extensive experience in the development of satellite instruments, such as the TROPOMI instrument and with the use of satellite data for the European Union's Copernicus Atmospheric Monitoring Service (CAMS), among others.

   The webinar focused on reducing air pollution and greenhouse gas emissions. Climate change threatens food production, causes sea level rise and changes global weather patterns. Air pollution causes millions of premature deaths every year and increases disease among the population. This has also been unfortunately demonstrated in relation to the current pandemic. The webinar discussed how pollution levels and emissions can be effectively reduced using satellite data and presented the TNO's LOTOS-EUROS prediction model, which can help to identify sources of emissions and understand the sectors responsible for them. This process allows the user to start taking action.

   The main topics discussed were:

   - Air quality management: monitoring and reduction of air pollution and greenhouse gas emissions using satellite data

   - The TROPOMI satellite instrument on board the Sentinel 5p mission: how does it work?
   - The LOTOS-EUROS air pollution model (open source)

   - How can it be applied in your region?

   Almost 90 experts from 15 countries participated in the webinar.

   For the recordings and presentations see section "5. Webinars"

   For more information on the webinar, TROPOMI and the topic of air quality, please contact: M.Sc. Max van Strien at TNO: *max.vanstrien@tno.nl*.

- "Contributions of the GeoForAll labs to UN Sustainable Development Goals".

  The Conference was organized on October, 6th.

  The Agenda of the Conference:

  Introduction and welcome to GeoForAll - Victoria Rautenbach (Chair, GeoForAll)

  Mapping the Accessibility in OpenStreetMap: a comparison of different techniques - Stucchi Lorenzo ,Ludovico Biagi, Maria Antonia Brovelli (Politecnico di Milano, Italy)

  Assessing the needs of Women empowerment needs using open data and geospatial skills: Implications for SDGs in Nigeria - Victor N. Sunday, Damilola Olufemi & Uchechi S. Anaduaka (Unique Mappers Network, Nigeria)

  The pedagogical value of GeoForAll Newsletter as a means of teacher training - Nikos Lambrinos (Aristotle University of Thessaloniki)

  GeoForAll contributions for United Nations SDGs - Suchith Anand (GODAN)

4. Conferences (Online)

1. 4-6 November: 16th International gvSIG Conference

Venue: Virtual Conference

Communication proposals submission at: conference-contact@gvsig.com

The information indicated at Communications section of the event website

All the information related to the conference, including workshops information, will be published at gvSIG Blog

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

- Webinar on "Data Rights and Digital Feudalism", organised by the Benchmark Initiative, at https://vimeo.com/456581072

- "Challenges and Opportunities of Instructing a University Level FOSS4G Course", organized by the Department of Geography and Environmental Sciences University of Colorado Denver. Presentation slides are here: https://drive.google.com/file/d/1gSjN4HpyCKA GOx02Pj3LluF0LCtg0byE/view?usp=sharing and Webinar recording here: https://youtu.be/d99W_9p-vL4

- *"Air Quality Management with Satellite Data", organized by TNO (*the Netherlands Organisation for applied scientific research) on September 25th. *A video recording of the event can be seen (after registration) on the link:* https://channel.royalcast.com/tnowebcasts/#!/t nowebcasts/20200925_1 *where you can also download the webinar presentations in English and Spanish.*

- World Commons Week 2020 (https://wcw2020.iasc-commons.org/) GeoForAll webinar mini-conference 2020: Contributions of the GeoForAll labs to UN Sustainable Development Goals, organized by the Department of Geography and Environmental Sciences, University of Colorado Denver.

  Presentations slides are here: https://drive.google.com/drive/folders/1M-jeyKIHFg0-q5ry6iHi3cqNyulQ76oG

  Webinar recording here: https://youtu.be/gqrUQ9apFkc

6. Courses

- "Implementing Resilient GIScience Education"

Americas' Panel 2

Tuesday November 17, 2020, **from** 1:00 pm - 2:30 pm EST (Eastern Standard Time)**.**
Click here to **register** for this panel presentation: https://umass-amherst.zoom.us/meeting/register/tJwucuChrTwtEtG971WQ3Ly15d-BXqOltfND

Panelists: Sergio ACosta y Lara, Tora Johnson, Anthony Robinson, Renée Sieber

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

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

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

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

GEO: Group on Earth Observations

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

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

ISPRS: International Society for Photogrammetry and Remote Sensing

JAXA: Japan Aerospace Exploration Agency

KML: Keyhole Markup Language

LBS: Location-Based Service

LiDAR: Light Detection and Ranging

LOC: Local Organizing Committee

LOD: Level Of Detail

MIL: Media and Information Literacy

MoU: Memorandum of Understanding

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

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

RCMRD: Regional Centre for Mapping of Resources for Development

RDA: Research Data Alliance

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

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

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

- Article on Ethical dimensions of Digital Feudalism in Agriculture at https://www.godan.info/news/ethical-dimensions-digital-feudalism-agriculture

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. Special Issue entitled "Applications of Remote Sensing and Geospatial Technologies to Earth Observations" in the online journal, Applied Sciences (ISSN 2076-3417,

https://www.mdpi.com/journal/applsci).
For further reading, please follow the link to the Special Issue:
https://www.mdpi.com/journal/applsci/special_issues/Geospatial_RS

If this topic is of interest, you are warmly invited to submit a manuscript now or up until the deadline (1 December 2020). Submitted papers should not be under consideration for publication elsewhere. Authors are encouraged to send a short abstract or tentative title in advance.

3. The open access journal *Data* is pleased to announce a new Special Issue titled "A European Approach to the Establishment of Data Spaces". Marco Minghini (marco.minghini86@gmail.com) is serving as Guest Editor for this Special Issue together with his colleagues at the European Commission - Joint Research Centre (JRC) Alexander Kotsev, Massimo Craglia, and Stefano Nativi.

Papers should address any of the cross-cutting issues emerging from the recently launched European Data Strategy, e.g. the definition of sustainable governance models for data, appropriate socio-economic

incentives, choice of standards and technologies ensuring interoperability, the establishment of reference architectures and licensing frameworks, and multi-source data quality assessment frameworks. Within this context, multidisciplinary and multi-domain submissions are welcome that would contribute to shaping the research agenda, and providing best practices for data-driven innovation that are in line with European values.

The submission deadline is January 31, 2021. The full Call for Papers is available at https://www.mdpi.com/journal/data/special_issues/EU_DataSpaces.

4. The draft of Third Edition of Future Trends in geospatial information management: the five to ten year vision is now available for global consultation and review by the United Nations Committee of Experts on Global Geospatial Information Management. Details at https://ggim.un.org/documents/DRAFT_Future_Trends_report_3rd_edition.pdf

5. On October 27th, a joint appeal for open science has been launched by UNESCO, WHO, CERN and the Office of the United Nations High Commissioner for Human Rights (https://events.unesco.org/event?id=1522100236).

The idea behind Open Science is to allow scientific information, data and outputs to be more widely accessible (Open Access) and more reliably harnessed (Open Data) with the active engagement of all the stakeholders (Open to Society).

By encouraging science to be more connected to societal needs and by promoting equal opportunities for all (scientists, policy-makers and citizens), Open Science can be a true game changer in bridging the science, technology and innovation gaps between and within countries and fulfilling the human right to science.

UNESCO, as the United Nations Agency with a mandate for Science, is the legitimate global organization enabled to build a coherent vision of Open Science and a shared set of overarching principles and shared values. That is why, at the 40th session of UNESCO's General Conference, 193 Members States tasked the Organization with the development of an international standard-setting instrument on Open Science in the form of a UNESCO Recommendation on Open Science.

Details at https://en.unesco.org/science-sustainable-future/open-science