Volume 5, No. 10 October 2019





GeoforAll

Monthly Newsletter



Table of Contents

Editorial

Editorial Board

2. A) Lab of the month.....

B) GeoAmbassador

3. Events

4. Conferences 1

5. Webinars 4

6. Courses

7. Training programs 5

8 Key research publication

9. Funding opportunities

10. New free and open software,

open data 6

11. Free Books 6

12. Articles 6

13. Scholarships for students and staff

14. Exchange programs for

15. Awards

16 Web sites

18. Social contribution

17. Ideas 9

students and staff

1. Activities 1



Be part of "Geo for All"

1. Activities of the Network

 Ottawa, Ontario, OSGeo Meetup Group meets on the third Thursday of each month. If you are located in the area, go to the link to sign up to the group and get updates about future events.

(http://www.meetup.com/Ottawa OSGeo/

4. Conferences

Europe

October 2019

1. 8-9 October: 1st International Workshop on Legal and Ethical Issues in Crowdsourced Geographic Information

Venue: University of Zurich, Zurich,

Switzerland

2. 22-24 October: <u>Inspire Helsinki</u>

<u>2019</u>.

Venue: Epicenter venue, Helsinki,

Finland

3. 23-25 October: <u>JIIDE 2019</u> (in

Spanish)

Venue: San Francisco Cultural Complex, San Francisco Round s / n,

CÁCERES, Spain

4. 24-26 October: <u>14th International</u>

gvSIG Conference

Venue: School of Engineering in Geodesy, Cartography and Surveying, Universitat Politècnica de València, Spain.



November 2019

5. 1-4 November: 12th International
Conference of the Hellenic
Geographical Society (ICHGS - 2019).
"INNOVATIVE GEOGRAPHIES:
Mapping and Modeling our World"
Venue: National Technical University
of Athens, Athens, Greece



6. 14-16 November: XI Conference of users of R (in Spanish)

Venue: REPSOL Auditorium and UNED Faculty of Education, Madrid, Spain

May 2020

7. 12-15 May: <u>INSPIRE Conference</u> 2020

Venue: Dubrovnik, Croatia













Editorial Board

Luitoriai Doura		
Please refer to the appropriate person according to the following table:		
Chief Editor	Nikos Lambrinos, Professor, Dept. of Primary Education, Aristotle University of Thessaloniki, Greece. President of the Hellenic digital earth Centre of Excellence labrinos@eled.auth.gr	Oceania
Co-editor	Rizwan Bulbul, Assistant Professor of GIScience Head of Geospatial Research and Education Lab Department of Space Science, Institute of Space Technology, Islamabad, Pakistan bulbul@grel.ist.edu.pk	India, Sri Lanka, Pakistan, Afghanistan, Nepal, Burma, Iran, Iraq, Jordan, Syria, Israel, Lebanon, Turkey, Saudi Arabia, Oman, Yemen, United Arab Emirates, Kuwait and Islands of S. Pacific.
Co-editors	Pavel Kikin, Senior Lecturer "Department of applied informatics and IT", Siberian State Univer. of Geosystems and Technologies Alexey Kolesnikov, Senior Lecturer "Department of cartography and GIS", Siberian State Univer. of Geosystems and Technologies it-technologies@yandex.ru	Russia, Mongolia, China, Japan, S. Korea, Vietnam, Thailand, Malaysia, Laos, Myanmar, Cambodia, Singapore, Brunei, Indonesia, Philippines, Turkmenistan, Uzbekistan, Tajikistan and Kyrgyzstan.
Co-editor	Rania Elsayed, Computers & Information Researcher, Division of Scientific Training & Continuous Studies, National Authority for Remote Sensing & Space Sciences, Cairo, Egypt. ranyaalsayed@gmail.com	Africa
Co-editor	Seraphim Alvanides, Reader (Geographical Information Science) Northumbria University, Newcastle NE1 8ST, United Kingdom. <u>s.alvanides@gmail.com</u>	Scandinavian countries, Denmark, Germany, Austria, Switzerland, UK, Ireland, Iceland
Co-editor	Antoni Perez Navaro, Associate Professor at Universitat Oberta de Catalunya (UOC) Computer Sciences and Multimedia Department aperezn@uoc.edu	Italy, Malta, Spain, Portugal, France, Belgium, The Netherlands, Luxemburg.
Co-editor	Emma Strong, Planner with the City of Gulfport, Mississippi eestrong118@gmail.com	North and Central America
Co-editor	Sergio Acosta Y Lara, Departamento de Geomática Dirección, Nacional de Topografía, Ministerio de Transporte y Obras Públicas, URUGUAY sergio.acostaylara@mtop.gub.uy	South America
Co-editor	Codrina Ilie, PhD student at the Technical University of Civil Engineering, Bucharest, Romania	The Balkans, Ukraine, Moldavia, Estonia, Lithuania, Belarus, Latvia, Hungary, Czech Republic, Slovakia
Production Designer	Nikos Voudrislis, MSc, PhD in geography education. nvoudris@gmail.com	Design and final formation of the newsletter

Paulo César Coronado Sánchez, Professor of computer sciences at Universidad Distrital Francisco José de Caldas, Head of GISEPROI and OSGeoLabUD research Group. Bogotá, Colombia paulocoronado@gmail.com

Translator and designer of the Spanish Edition











GeoForAll Themes

OpenCity Smart

➤ Chairs: Chris Pettit (Australia), Patrick Hogan (USA)

➤ Mail list: http://lists.osgeo.org/cgi-bin/ mailman/listinfo/geoforall-urbanscience

➤ Website:

http://wiki.osgeo.org/wiki/Opencitysmart

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/cgibin/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











continued from page 1

North and Central America and the Caribbean

October 2019

8. 25 October: QGIS Meeting in Chattanooga,

Tennessee

Venue: Chattanooga State Technical College,

Chattanooga, Tennessee, USA

December 2019

9. 9-13 December: <u>AGU Meeting</u> Venue: San Francisco, California, USA

Africa

November 2019

10. 18-19 November: <u>VizAfrica 2019</u> Data

Visualization Symposium

Venue: University of Botswana Gaborone, Botswana

Deadline for proposals is Monday 19 August:

https://vizafrica.codata.org/2019-Botswana/submit/

Asia

October 2019

11. 23-25 October: Turkish National GIS Congress

2019

Venue: Ankara, Turkey

November 2019

12. 18-21 November: <u>Eighth International Conference</u>

on Agricultural Statistics (ICAS VIII)

Venue: ICAR-Indian Agricultural Statistics Research

Institute, New Delhi, India

Oceania

November 2019

13. 4-9 November: GEO Week and GEI Ministerial

Summit

Venue: Canberra, Australia

14. 12-15 November: <u>FOSS4G SotM Oceania 2019</u> Venue: Rutherford House, Victoria University,

Wellington, New Zealand

5. Webinars

Using the UN Biodiversity Lab to Support Biodiversity Monitoring & Reporting

Spatial data are available for your country through the UN Biodiversity Lab [1] on trends such as the rate of forest loss between 2000-2017 and protected area coverage of key biodiversity areas. You can also access maps that can help you understand where to take actions, such as those that safeguard ecosystem services and carbon stores in the environment. Would you like to learn how to use the UN Biodiversity Lab Status Maps [2] to support biodiversity monitoring and reporting?

Watch the webinar recording at https://youtu.be/Bo2WilWtQ9s

[1] https://unbiodiversitylab.org

[2] http://nbsapforum.net/knowledgebase/resource/18-draft-biodiversity-status-maps— 6nr-18-cartes-préliminaires-sur-létat-de

• Big Data, Modeling, and Simulation in Urban Sustainability

Register Now

Data, modeling, and simulations are critical to planning for and maintaining sustainable communities. The National Academies organized a workshop and webcast in January 2019 that brought together an interdisciplinary network of practitioners, business leaders, academics, and policy makers using data for urban sustainability. Building off the success of the workshop, National Academies are excited to announce an upcoming webinar series in October 2019 where invited speakers will delve further into four important topic areas that emerged during the January workshop.











Webinar Topics:

- Theoretical Approaches to Urban Planning Tuesday, October 8, 2019 from 4-5pm ET
- Exploring New Data Sources and Investigating Privacy Issues
 - Tuesday, October 15, 2019 from 4-5pm ET
- Spatial-Temporal Modeling for Urban Analytics
 Wednesday, October 23, 2019 from 4-5pm ET
- The Power and Limitations of Urban Analytics in Supporting Cities
 - Wednesday, October 30, 2019 from 4-5pm ET

7. Training programs

- GeoForAll educational materials have been transferred to our new web site. <u>GeoForAll</u> <u>educational inventory system, a place to search</u> and share educational materials
- The CODATA-RDA Research Data Science school. December 2-13, 2019, Jan Jose, Costa Rica. This school will provide early career researchers (at MSc-level to 3 years after their PhD) from the Latin American Region with the necessary set of foundational data science skills to enable them to analyze their data in an efficient and effective manner for the 21st century.

Description:

The material covered here is fundamental to all areas of data science and hence open to researchers and professionals from all disciplines that deal with significant amounts of data. The goal is to provide a practical introduction to these topics with extensive labs and seminars.

Topics:

- Open Science
- Introduction to Unix Shell
- Programming for Analysis
- Git
- Research Data Management
- Author Carpentry
- Data Visualization

- Information Security
- Machine Learning

Computational Infrastructures

Online application:

https://www.ictp-saifr.org/sis/datasci2019.php

 University of Pretoria – Department of Information Science in collaboration with DIRISA, SADiLaR and NeDICC

Duration: 13–24 January 2020 Location: Pretoria, South Africa

The school provides early career researchers (M-level to postdoc) with the foundational data science skills, which include technical skills and responsible research practices, to enable them to work with their data in an effective and efficient manner required by 21st-century research.

Description

The material covered by the programme is fundamental to all areas of research, and thus open to researchers and professionals from all disciplines that deal with signifi amounts of research data. The goal is to provide a practical introduction to these topics with some theory and extensive hands-on training.

Topics

- Open Science
- Introduction to Unix Shell
- Introduction to Git
- Open and Collaborative Research
- Research Data Management
- Data Cleaning using Open Refine
- Data Analysis and Visualisation using R
- Data Intensive Social Science
- Author Carpentry
- Information Security
- Machine Learning and Neural Networks
- Research Computational Infrastructure

Costs

The school is heavily sponsored. Successful applicants will be expected to pay a fee of R1 150 once the application is accepted. This fee includes all training and catering (lunches). Applicants are responsible for their own travel and accommodation arrangements.











How to Apply:

Application deadline: 15 October 2019

Online application and further information: https://www.dirisa.ac.za/calendar/codata-rda-research-data-science-applied-workshops-extreme-sources-data-bioinformatics-iotbig-data-analytics/

 Two weeks Summer School training from 11th-15th November 2019 on Data Science/Visualization at the University of Botswana Gaborone, Botswana, as part of the Symposium VizAfrica 2019.

10. New free and open software, data, etc.

 landscapemetrics: an open-source R tool to calculate landscape metrics

11. Free books, educational materials, etc.

- Live stream for the keynote/plenary parts of the third workshop
 (https://gsi.cigi.illinois.edu/workshop3/agenda/)
 of the NSF Geospatial Software Institute conceptualization project
 (http://gsi.cigi.illinois.edu/).
- The videos of this year's FOSS4G Conference in Bucharest are now available in the AV-Portal of TIB via this link: https://av.tib.eu/series/685 All videos are assigned a digital object identifier (DOI) and a media fragment identifier. This allows to cite videos as a whole or single segments separately.

The videos of all FOSS4G Conferences in the AV-Portal are available here:

http://tib.eu/osgeo

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

AGS: American Geographical Society

AGU: American Geophysical Union

AM/FM: Automated Mapping/Facilities

Management

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

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

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

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

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

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













RCMRD: Regional Centre for Mapping of Resources for Development

RDA: Research Data Alliance

ROSHYDROMET: Russian Federal Service for Hydrometeorologyand Environmental Monitoring

RUFORUM: Regional Universities Forum for

capacity building in agriculture

SaaS: Software as a Service

SAR: Synthetic Aperture Radar

SDI: Spatial Data Infrastructure

SIG: Geographic Information System

SIGTE: The GIS and Remote Sensing Service of

the University of Girona, Spain

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

landscapemetrics: an open-source R tool to calculate landscape metrics

Quantifying landscape characteristics and linking them to ecological processes is one of the central goals of landscape ecology. Landscape metrics are a widely used tool for the analysis of patch-based, discrete land-cover classes. Existing software to calculate landscape metrics have several constraints, such as being limited to a single platform, not being open-source, or involving a complicated integration into large workflows. We present landscapemetrics, an open-source R package that overcomes many constraints of existing landscape metric software. The package includes an extensive collection of commonly-used landscape metrics in a tidy workflow. To facilitate the integration into large workflows, landscapemetrics is based on a well-established spatial framework in R. This allows pre-processing of land-cover maps or further statistical analysis without importing and exporting the data from and to different software environments. Additionally, the package provides many utility functions to visualize, extract, and sample landscape metrics. Lastly, we provide building-blocks to motivate the development and integration of new metrics in the future. We demonstrate the usage and advantages landscapemetrics by analysing the influence of different sampling schemes on the estimation of landscape metrics. In so doing, we demonstrate the many advantages of the package, especially its easy integration into large workflows. These new developments should help with the integration of landscape analysis in ecological research, given that ecologists are increasingly using R for the statistical analysis, modelling, and visualization of spatial data. (source: ECOGRAPHY, First published: 02 July 2019,

https://doi.org/10.1111/ecog.04617)











17. Ideas / Information

1. To post your FOSS4G educational information go to http://www.osgeo.org/education. There you can find more educational activities posted by members of our community.

FOSS4G is the annual global event of the Open Source Geospatial Foundation. It is the largest technical geospatial Open Source conference in the world. The FOSS4G conference focuses on Free and Open Source Software for Geospatial applications. In addition to high level technical talks four key domain are discussed every year to showcase the connection between free and open source software and communities from neighbouring domains.

- 2. Join the GEO Week 2019 and the GEO Ministerial Summit in Canberra, Australia (4-9th Nov 2019). Canberra means 'meeting place' in Ngunnawal, the local indigenous language. Recognizing the history of the land and its traditional custodians, GEO Week will bring together diverse people and cultures to support and sustain our planet and communities. Go to "Conferences" for more details.
- 3. From Kiringai Kamau (kiringai.kamau@godan.info), GODAN Africa Lead, The Global Open Data for Agriculture and Nutrition (GODAN)

The challenge in Africa is not just learning the use of ICTs and GIS tools alone, but even maintaining traction with the foundational courses like Agriculture or veterinary as an extension and hence the creation of champion farmers from which others can learn is a challenge. We have therefore, jointly with partners like CTA, Wageningen UR, and GODAN, decided to create rural Hubs where integrating ICTs, Data, and Agriculture all happen at the same time. We encourage you to visit us when you have the opportunity to do so to learn more from what we are doing.

Since the extension is a challenge, we are using students who will be domiciled in our Hubs to practice what they learn experientially and extend the knowledge to farmers as they also collect data that we then use to drive technology-based innovations. It

is for this reason that we have partnered with RCMRD/AfriGEO and now mooting collaboration with Digital Earth Africa, to promote GIS-anchored solutions development. We shall, therefore, need support in diverse ways which Suchith well captured in his introduction.

This December, RUFORUM will hold their continental forum in Accra, Ghana, and want to listen to what we are doing and proposing universities to do. We would like to go there with some case studies that we are discussing with RCMRD and some of the universities that we are working with.

We also have another forum on Geospatial Data and Internet Conference in October that we invite you to join in and explore how we can support many of the African Countries that shall be participating in this conference.

- 4. The American Geographical Society (AGS) EthicalGEO Initiative seeks to activate thinkers, innovators, entrepreneurs, policymakers, practitioners, students, and everyday citizens and bring them in to a global dialog that shines a light on their best ideas about the ethical challenges and opportunities posed by the many geospatial technologies and data sources that are reshaping our society. Just as the EthicalAI dialog has enabled a broad-based discussion about the future implications of AI, and the ways in which our society might steer the technology to our purposes, the EthicalGEO initiative seeks to spur a similar conversation around the flurry of geospatial innovations that have become part of our daily lives. Fellowship opportunities available to those in North America only at this time.
- **5.** University of Colorado College of Liberal Arts & Sciences

Assistant Professor position

The University of Colorado Denver I Anschutz Medical Campus seeks individuals with demonstrated commitment to creating an inclusive learning and working environment. We value the ability to engage effectively with students, faculty and staff of diverse backgrounds.

The Department of Geography and Environmental Sciences (GES) at the University of Colorado Denver











(CU Denver) invites applications for a tenure-track appointment at the Assistant Professor level in the area of Human-Environment Interactions to begin in August 2020. We seek a Human Geographer focused on environment-society topics such as energy and justice, resources, environmental food agriculture, natural hazards, social vulnerability, urbanization and development, and/or resources. Candidates should demonstrate rigorous and innovative theoretical, methodological and public engagement/communication components to their social science research. We also seek candidates committed to excellent teaching and mentoring at the undergraduate and graduate levels.

Assistant Professor – 17211

Assistant Professor

https://cu.taleo.net/careersection/2/jobdetail.ftl 1 of 4 9/13/2019, 2:15 PM

The candidate will be expected to teach four courses (2/2) per academic year that may include undergraduate classes such as Environment, Society and Sustainability and Introduction to Human Geography as well as advanced undergraduate and graduate courses in their area of specialization. Candidates must have a PhD in geography or related discipline at the time of appointment and maintain an active research program that yields publications and external grant submissions.

Posting Date Sep 12, 2019, 9:09:30 AM

Unposting Date Ongoing

Posting Contact Name: Gregory Simon

Posting Contact Email: gregory.simon@ucdenver.edu

Position Number: 00636687

6. Assistant Professor Position in Spatial Data Science Target Date for Applications: 15 October 2019

Position Description: The Department of Geography at the University of Colorado Boulder invites applications for an Assistant Professor level tenure-track position in Geographic Information Science (GIScience) with specific focus on environmental or social applications of Spatial Data Science, beginning in August 2020.

We seek candidates whose work advances the frontiers of spatiotemporal analytics and geographic data science in creative and novel ways to drive emerging questions involving change and dynamics,

and in the interplay between human and environmental systems, as related to natural hazards or climate, natural or human resources, public health, demography, urbanization, or other questions at the nexus of human-natural dimensions of environmental change. The successful candidate has a strong foundation in GIScience, current and emerging methods in statistics, data science, and/or machine learning, and can demonstrate a commitment to interdisciplinary research in and beyond the geographical sciences.

As part of the normal three courses per year teaching expectation, the successful candidate will rotate regularly into three existing courses: Introductory GIScience, Basic Statistics and Advanced Quantitative Methods at least every other year. The candidate will teach an upper division elective in spatiotemporal analysis for undergraduate and graduate students. The candidate will also regularly teach a graduate level seminar on a research topic of their choosing and congruent with student demand and department needs. There is also the potential to align teaching with an interdisciplinary professional certificate / degree in Earth Data Analytics blending data science and Earth systems knowledge, which is run through Earth Lab.

This is a full-time, nine-month position. Research and service to the university are also components of the regular workload for all faculty. All requirements for the Ph.D. in Geography or a cognate discipline, else in Computer Science or in Informatics with demonstrated relevance to spatial data and spatial analysis must be completed by August 2020.

Applications are accepted electronically at https://jobs.colorado.edu/jobs/JobDetail/?jobId=205

and should include an application letter, a curriculum vitae, up to three relevant reprints of publications, evidence of teaching effectiveness, and 1-2 page statements of research and teaching plans. Also provide the names and e-mail addresses of three professional references. The search committee will solicit letters from these individuals. Applications received by 15 October 2019 will receive full consideration; and the review of applications will continue until the position is filled.

For further information and inquiries, please contact Professor Barbara Buttenfield (babs@colorado.edu).