

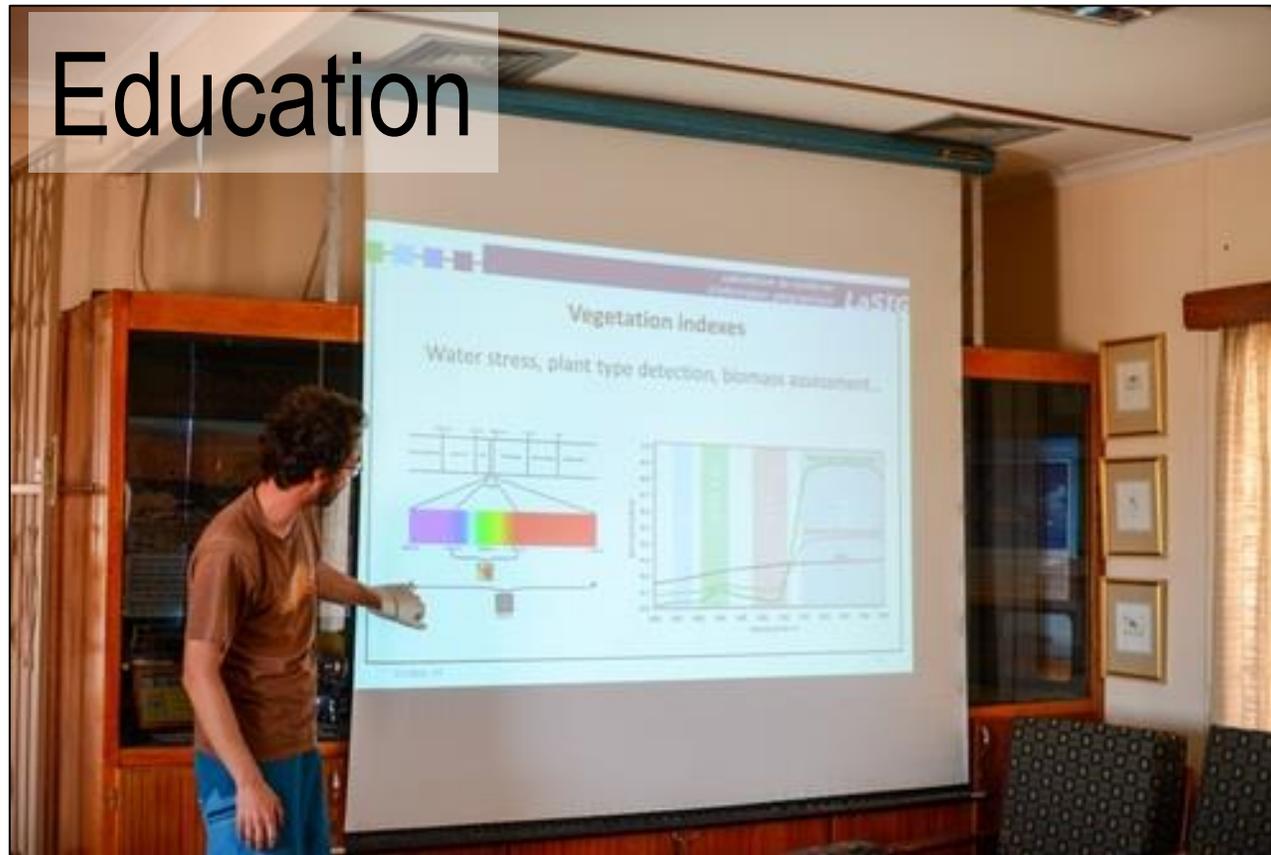
Open science practices in geospatial education and research

stephane.joost@epfl.ch

Laboratory of Geographic Information Systems (LASIG, EPFL)
Geographic Information Research and Analysis for Public Health (GIRAPH, EPFL&HUG)

GIS Lab – 2 missions

Education



Timothée Produit (LASIG) at Gobabeb Research & Training Center, Namibia

OPEN Heredity (2017), 1–11
Official journal of the Genetics Society
www.nature.com/hdy

ORIGINAL ARTICLE

Persistence of butterfly populations in fragmented habitats along urban density gradients: motility helps

E Rochat¹, S Manel², M Deschamps-Cottin³, I Widmer^{1,4,6} and S Joost^{1,5,6}

In a simulation study of genotypes conducted over 100 generations for the increase of anthropogenic fragmentation and reduction of habitat (impervious land cover) influences genetic diversity and population per characterised by a high urbanisation rate (>56% impervious land cover 60–80% of initial observed heterozygosity) and population size (loss confirmed by empirical data available for the mobile butterfly species simulated data for *P. rapae* with its normal dispersal ability and with dispersal ability can be an advantage to survive in an urban or highly that it is of high importance to account for population persistence, an connectivity in the context of land-use planning.
Heredity advance online publication, 9 August 2017; doi:10.1038/hdy

(c)

ARS-46 (GG)

- $I < 0.3$
- $-0.5 \leq I < -0.1$
- $-0.1 \leq I < -0.1$
- $0.1 \leq I < 0.5$
- $I \geq 0.5$
- Frontiers
- Lakes

Lake Victoria

0 100 200 km

Research

¹Laboratory of Geographic Information Systems (LASIG), School of Architecture, Lausanne, Switzerland; ²Ecole Pratique des Hautes Etudes, PSL Research University, Paris, France; ³Centre National de la Recherche Scientifique, Université de Montpellier, Université Paul-Valéry Montpellier, Institut de Recherche pour le Développement, Marseille, France; ⁴Swiss Academy of Sciences, Swiss National Science Foundation, Swiss Research Institute for Cultural Heritage, University of Applied Sciences Western Switzerland, University of Applied Sciences Western Switzerland, University of Applied Sciences Western Switzerland; ⁵Centre National de la Recherche Scientifique, Université de Montpellier, Université Paul-Valéry Montpellier, Institut de Recherche pour le Développement, Marseille, France; ⁶Swiss Academy of Sciences, Swiss National Science Foundation, Swiss Research Institute for Cultural Heritage, University of Applied Sciences Western Switzerland, University of Applied Sciences Western Switzerland, University of Applied Sciences Western Switzerland

Correspondence: E. Rochat, Laboratory of Geographic Information Systems, EPFL, Station 18, 1015 Lausanne, Switzerland. E-mail: estelle.rochat@epfl.ch

Received 22 December 2016; revised 19 May 2017; accepted 2 June 2017

Education

- Teach students how to use GIS software
- Avoiding **Buttonology** →
- Empower the students by revealing the logic of algorithms
- **Open source code as text:** available for reading, manipulating, understanding
- Consider geospatial methods as tools in own research & as subjects for research
- Global situation “open source vs commercial” in geo education is mixed
- Since 2010, GIS teaching at EPFL is exclusively based on open solutions



«How to use tools constrained by software licenses and negotiated by universities over

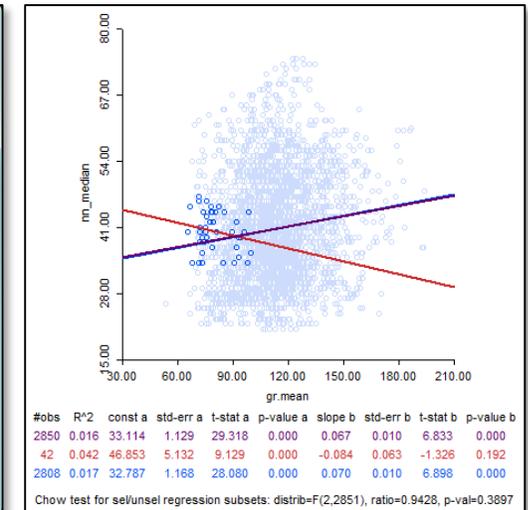
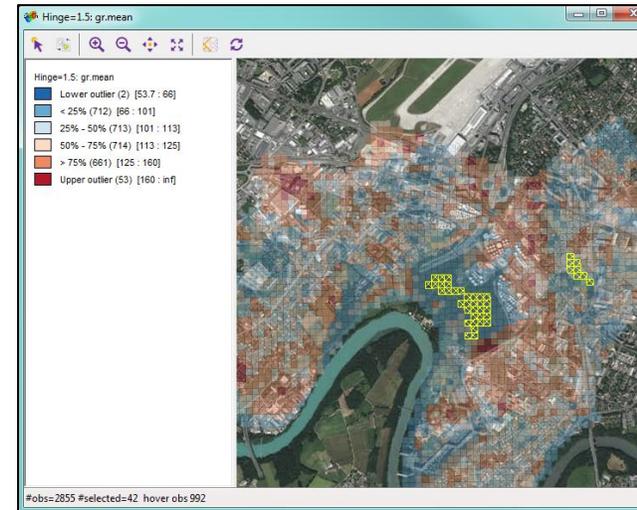
```
1 var map;
2
3
4 //Script exécuté lorsque la page est chargée
5
6 (document).ready(function(){
7
8   map = new ol.Map({
9     target: 'map',
10    view: new ol.View({
11      center: ol.proj.fromLonLat([55.47, -4.67]),
12      zoom: 12
13    })
14  });
15
16 // create and add the tile layer
17 var osmlayer = new ol.layer.Tile({
18   source: new ol.source.OSM()
19 })
20 map.addLayer(osmlayer);
21
22 //Ajout de fichiers geojson
23 var vector = new ol.layer.Vector({
24   style: District_Style,
25   source: new ol.source.Vector({
26     url: './geojson/districts.geojson',
27     format: new ol.format.GeoJSON(),
28   })
29 });
30 map.addLayer(vector);
31
32 });
```

Ajout de la couche des districts



Education – collaborative writing & open access data, data repositories

- ENV-444 EDA & GVIZ
- Create an original geodataset
- Working hypothesis
- Collaborative writing with Authorea
- Manage research sources with Zotero
- Fake paper submission to Moodle
- Upload open access dataset to Zenodo Sandbox



Title (as explicit as possible, should “sell” the study carried out, cannot be too long, should not be too scholar like “Study of the distribution of...”, should correctly give an idea of what the content is about)

Caroline Salamin (EPFL)

Introduction
This section has to contain:

- A global introduction about the thematics including a brief explanation of the problematics addressed (here the relationship between green urban areas and the level of noise that characterize them; noise due to road traffic has an influence on the health of urban residents)
- A brief state of the art: you have to look for 2 published scientific papers that investigated this topic, and mention here how the authors did and what is their main conclusion.
- Finally, mention your working hypothesis and explain how you will proceed to verify it or possibly to infirm it. (here for instance the hypothesis is that there is an inverse relationship between the degree of greenness of a city and the noise due to road traffic.



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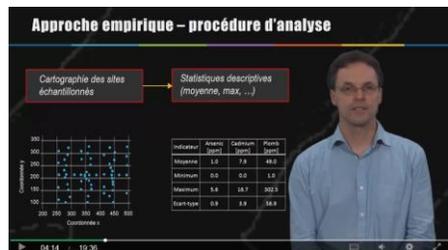
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Education – 2 MOOCs, open source software only (french & english soon)



Research – open publications

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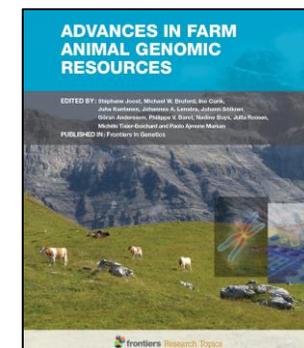
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Resource Article

High performance computation of landscape genomic models including local indicators of spatial association

S. Stucki, P. Orozco-terWengel, B. R. Forester, S. Duruz, L. Colli, C. Masembe, R. Negrini, E. Landguth, M. R. Jones, The NEXTGEN Consortium, M. W. Bruford, P. Taberlet, S. Joost

First published: 28 November 2016 [Full publication history](#)

DOI: 10.1111/1755-0998.12629 [View/save citation](#)

Early View



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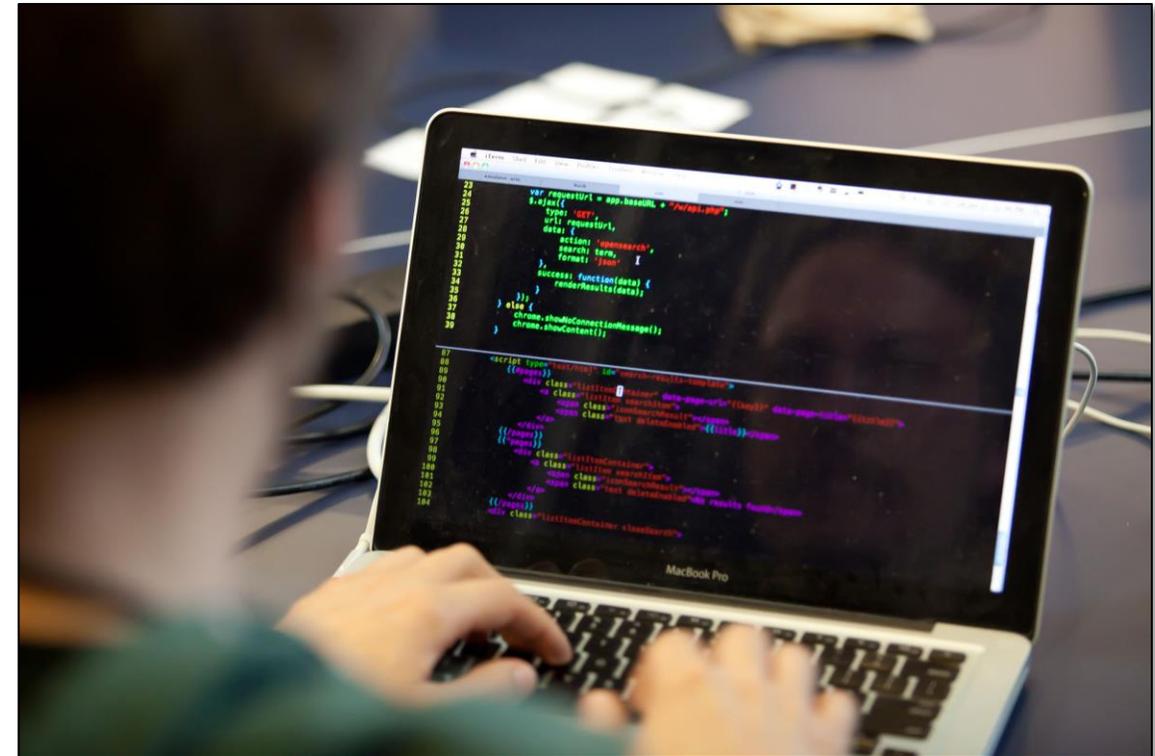
Resources

Software availability

SAMβADA is an open source software written in C++ available at <http://lasig.epfl.ch/sambada> (under the license GNU GPL 3). Compiled versions are provided for Windows, Linux and MacOS X.



SEVENTH FRAMEWORK PROGRAMME
EU-funded project



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Utilization of the Scythe C++ open source library for statistical geocomputation in livestock landscape genomics

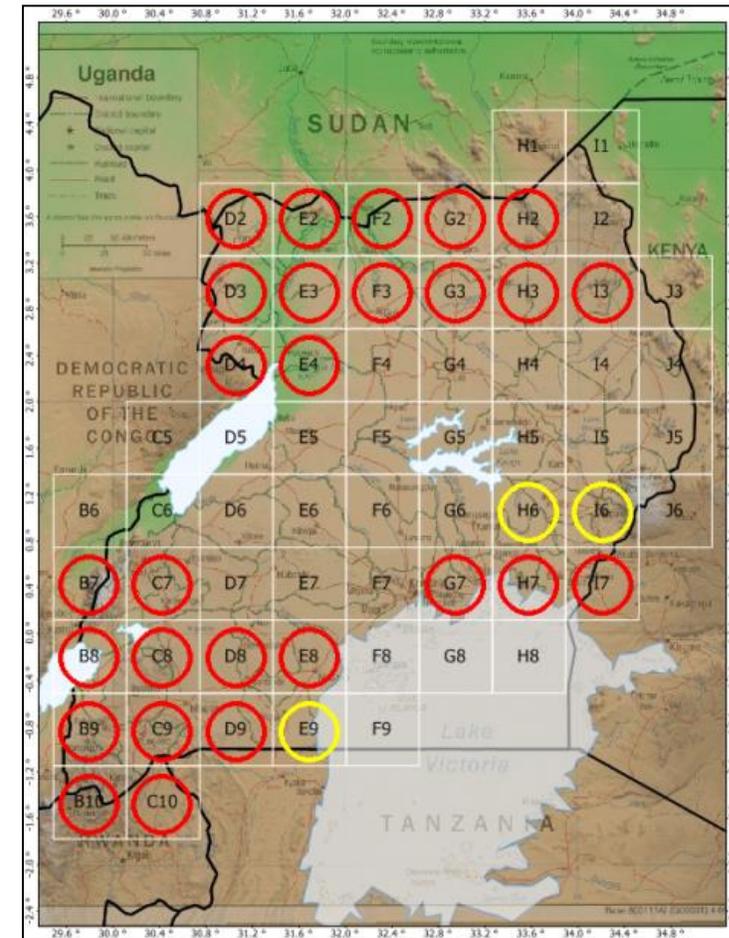
Authors

- Sylvie Stucki, Ecole polytechnique fédérale de Lausanne, Switzerland



Research – open data

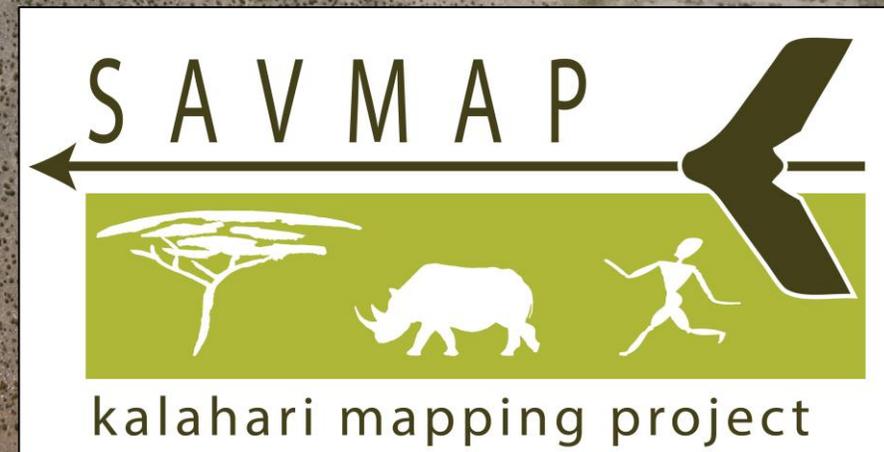
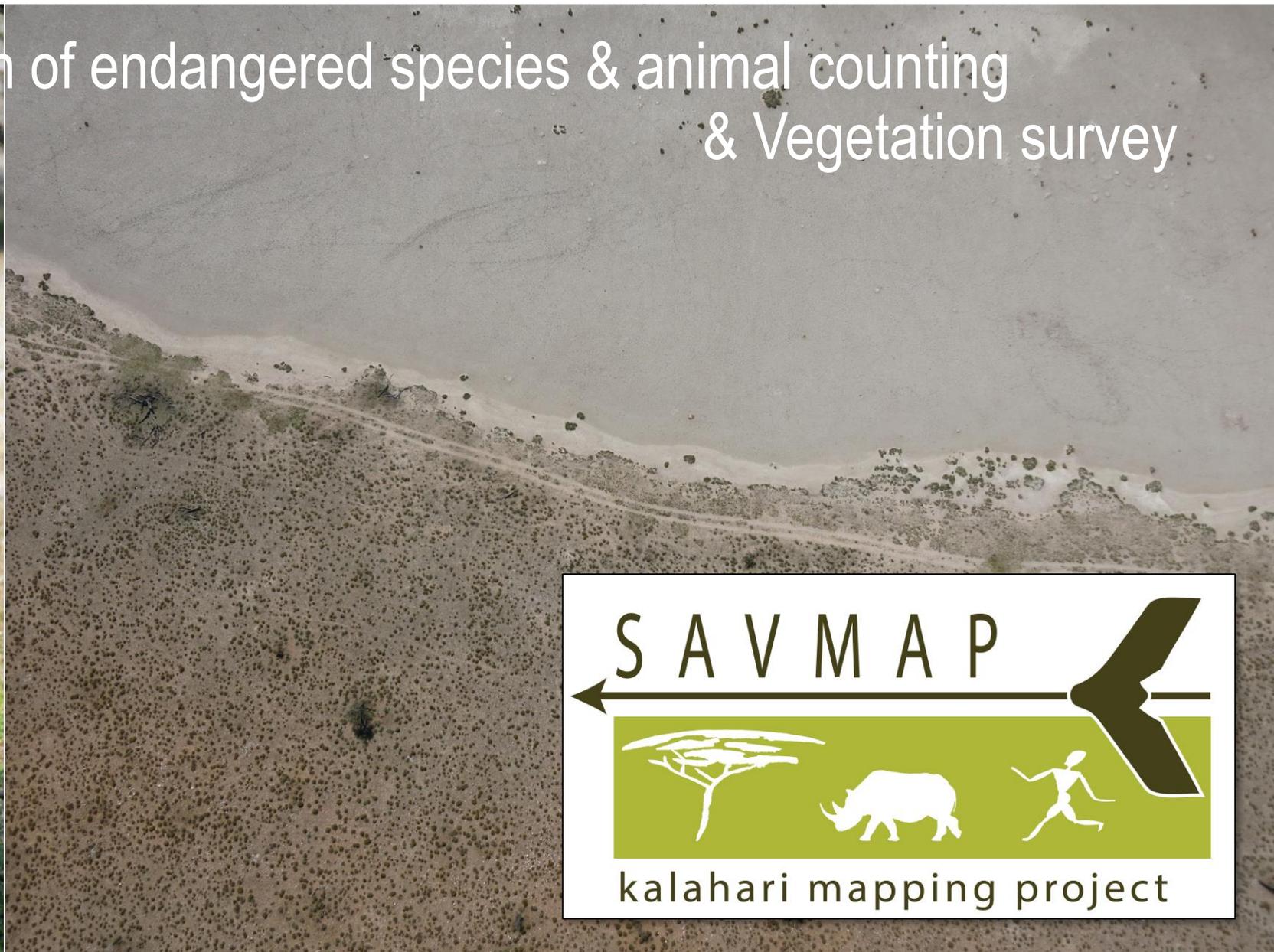
- Data released in accordance with the [Fort Lauderdale Principles](#) (2003)
- Public declaration in biomedicine supporting free and unrestricted use of genome sequencing data
- Data are made available under the “Responsible use”
- Balance between interests of the scientific community to access the data and the needs of data producers to receive recognition for their work



MAPPING THE WORLD WITH DRONES



Research - Conservation of endangered species & animal counting & Vegetation survey



Research – open data

- May 2014, May 2015
- 14'000 RGB images
- 6'000 NIR images
- Next mission October 2017
- How to store and make these data open access...
- ...using geographic characteristics (enabling spatial queries)
- Digital geo-repositories
- Open Data Hackdays, EPFL, November 2017



ORIGINAL ARTICLE

Combining Human Computing and Machine Learning to Make Sense of Big (Aerial) Data for Disaster Response

Ferda Ofli^{1,*}, Patrick Meier², Muhammad Imran¹, Carlos Castillo³, Devis Tuia⁴, Nicolas Rey⁴, Julien Briant⁴, Pauline Millet⁴, Friedrich Reinhard⁵, Matthew Parkan⁶, and Stéphane Joost⁶

Abstract

Aerial imagery captured via unmanned aerial vehicles (UAVs) is playing an increasingly important role in disaster response. Unlike satellite imagery, aerial imagery can be captured and processed within hours rather than days. In addition, the spatial resolution of aerial imagery is an order of magnitude higher than the imagery produced by the most sophisticated commercial satellites today. Both the United States Federal Emergency Management Agency (FEMA) and the European Commission's Joint Research Center (JRC) have noted that aerial imagery will inevitably present a big data challenge. The purpose of this article is to get ahead of this future challenge by proposing a hybrid crowdsourcing and real-time machine learning solution to rapidly process large volumes of aerial data for disaster response in a time-sensitive manner. Crowdsourcing can be used to annotate features of interest in aerial images (such as damaged shelters and roads blocked by debris). These human-annotated features can then be used to train a supervised machine learning system to learn to recognize such features in new unseen images. In this article, we describe how this hybrid solution for image analysis can be implemented as a module (i.e., Aerial Clicker) to extend an existing platform called Artificial Intelligence for Disaster Response (AIDR), which has already been deployed to classify microblog messages during disasters using its Text Clicker module and in response to Cyclone Pam, a category 5 cyclone that devastated Vanuatu in March 2015. The hybrid solution we present can be applied to both aerial and satellite imagery and has applications beyond disaster response such as wildlife protection, human rights, and archeological exploration. As a proof of concept, we recently piloted this solution using very high-resolution aerial photographs of a wildlife reserve in Namibia to support rangers with their wildlife conservation efforts (SAVMAP project, <http://lasig.epfl.ch/savmap>). The results suggest that the platform we have developed to combine crowdsourcing and machine learning to make sense of large volumes of aerial images can be used for disaster response.

Key words: Big Data analytics; crowdsourcing; machine learning; remote sensing; UAV

Introduction

Situational awareness—knowing who has been affected, how, where, and when—is an integral element of disaster response. Humanitarian organizations carry out rapid disaster damage and needs assessments following disasters to improve their situational awareness and take

more informed decisions. Reducing the time it takes to carry out these assessments provides aid organizations with more rapid situational awareness, which enables them to respond more quickly and thus speedup their life-saving relief efforts. This explains why satellite imagery has an important role in disaster

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⁴Section of Environmental Engineering, School of Architecture, Civil and Environmental Engineering (ENAC), Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland.

⁵Kuzkus.org, Windhoek, Namibia.

⁶Laboratory of Geographical Information Systems (LASIG), School of Architecture, Civil and Environmental Engineering (ENAC), Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland.

*Address correspondence to: Ferda Ofli, Social Computing Group, Qatar Computing Research Institute (QCRI), Hamad bin Khalifa University (HBKU), Tomado Tower 13th Floor, Doha 5825, Qatar. E-mail: ofli@qcri.org

ANALYSIS OF AERIAL IMAGERY FOR DISASTER RESPONSE

42. Feng Q, Liu J, Gong J. UAV remote sensing for urban vegetation mapping using random forest and texture analysis. *Remote Sens.* 2015;7:1074–1094.
43. Hung C, Xu Z, Sukkarieh S. Feature learning based approach for weed classification using high resolution aerial images from a digital camera mounted on a UAV. *Remote Sens.* 2014;6:12037–12054.
44. Mueggler E, Faessler M, Fontana F, et al. Aerial-guided navigation of a ground robot among movable obstacles. In: *IEEE International Symposium on Safety, Security, and Rescue Robotics (SSRR)*, Toyako-Cho: IEEE, October 27–30, 2014, pp. 1–8.
45. Rudol P, Doherty P. Human body detection and geolocalization for UAV search and rescue missions using color and thermal imagery. In: *IEEE Aerospace Conference, Big Sky, MT: IEEE*, March 1–8, 2008, pp. 1–8.
46. Reinhard F, Hauptfleisch ML, Joost S; SAVMAP Consortium. 2015. Near real-time ultrahigh-resolution imaging from unmanned aerial vehicles for sustainable land use management and biodiversity conservation in semi-arid savanna under regional and global change (SAVMAP). Zenodo. Available online at <http://dx.doi.org/10.5281/zenodo.16445> (last accessed December 10, 2015).
47. Meier P. 2014. More results from our digital expedition to Namibia. Available online at <https://micromappers.wordpress.com/2016/11/01/more-results-digital-expedition-namibia/> (last accessed December 10, 2015).
48. Dalal N, Triggs B. Histograms of oriented gradients for human. In: *IEEE Computer Science Society Conference on Computer Vision and Pattern Recognition (CVPR)*, San Diego, CA: IEEE, June 25, 2005, pp. 886–893.
49. Batista GEAPA, Prati RC, Monard MC. A study of the behaviour of several methods for balancing machine learning training data. *SIGKDD Explorations.* 2004;6:20–29.
50. Batuwita R, Palade V. Efficient resampling methods for training support vector machines with imbalanced datasets. In: *Proceedings of the 2010*

International Conference on Neural Networks (IJCNN), Barcelona: IEEE, July 18–23, 2010, pp. 1–8.

51. Yen S-J, Lee Y-S. Cluster-based under-sampling approaches for imbalanced data distributions. *Expert Syst Appl.* 2009;26:5718–5727.

Cite this article as: Ofli F, Meier P, Imran M, Castillo C, Tuia D, Rey N, Briant J, Millet P, Reinhard F, Parkan M, Joost S (2016) Combining human computing and machine learning to make sense of big (aerial) data for disaster response. *Big Data* 4:1, 47–59, DOI: 10.1089/big.2014.0064.

Abbreviations Used

AIDR = Artificial Intelligence for Disaster Response
AUC = area under the curve
HOG = histogram of oriented gradient
LOG = logistic regression
NB = naive Bayes
RBF = radial basis function
RF = random forest
ROC = receiver operating characteristic
SVM = support vector machines
UAV = unmanned aerial vehicle



Reinhard, F., Hauptfleisch, M. L., Joost, S., & SAVMAP, C. (2015). Near real-time ultrahigh-resolution imaging from unmanned aerial vehicles for sustainable land use management and biodiversity conservation in semi-arid savanna under regional and global change (SAVMAP). Zenodo. <http://doi.org/10.5281/zenodo.16445>

Knowledge must be accessible to African wildlife conservation community



ELSEVIER

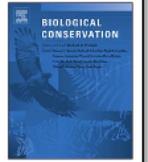
Detecting animals in A

Nicolas Rey^a, Michele Volpi^b

^a Laboratory of Geographic Information Systems
Lausanne (EPFL), Switzerland

^b MultiModal Remote Sensing, Department of Ge
The Savmap Consortium

^d Laboratory of Geo-Information Science and Re



the CrossMark

de Lausanne

RISK

LASIG - Active to spread open geoscience practices since 2008

Open source GIS tools

- 1978 MOSS a pioneer vector-based GIS by the US Dpt of Interior
- 1982 GRASS GIS by US Army Corps of Engineers
- 2002 QGIS – most used

Open Spatial Communities

- Free and Open Source Software for Geoinformatics 2004 (FOSS4G)
- FOSS4G 2006 Lausanne
- Quickly like any Business conference
- Education, academic
- Main outputs



The screenshot shows the OGRS website homepage. The header features the OGRS logo (a green leaf) and the text "OPEN SOURCE GEOSPATIAL RESEARCH & EDUCATION SYMPOSIUM". A navigation menu includes links for Home, Conference aims, Boards, Proceedings, and News. Below this, there are sections for "UPCOMING" (Somewhere ... in 2018) and "PAST SYMPOSIA" (listing years and locations: 2016, Italy; 2014, Finland; 2012, Switzerland; 2009, France). A "Supported by" section lists logos for LabSTICC, heig-vd, EPFL, and irpi. The main content area is titled "Open Source Geospatial Research & Education Symposium" and contains a paragraph about OGRS's mission, a list of founding articles, and a call to subscribe to the mailing list.

OGRS
OPEN SOURCE GEOSPATIAL
RESEARCH & EDUCATION
SYMPOSIUM

Home
Conference aims
Boards
Proceedings
News

UPCOMING
Somewhere ... in 2018

PAST SYMPOSIA
2016, Italy
2014, Finland
2012, Switzerland
2009, France

Supported by
LabSTICC
heig-vd
EPFL
irpi

DEPARTAMENTO DI
FISICA E GEOLÓGIA
UNIVERSITÀ DEGLI STUDI DI
PERUGIA, ITALIA

Open Source Geospatial Research & Education Symposium

OGRS is a meeting dedicated to sharing knowledge, new solutions, methods, practices, ideas and trends in the field of geospatial information through the development and the use of free and open source software in both research and education.

In recent years, the development of geospatial free and open source software (GFOSS) has breathed new life into the geospatial domain. GFOSS has been extensively promoted by FOSS4G events, which evolved from meetings which gathered together interested GFOSS development communities to a standardized business conference. More in line with the academic side of the FOSS4G conferences, OGRS is a rather neutral forum whose goal is to assemble a community whose main concern is to find new solutions by sharing knowledge and methods free of software license limits. This is why OGRS is primarily concerned with the academic world, from pure and applied research to industry through innovation which also involves present and future research partners like public institutions, organizations and companies.

See below some founding articles that explain in details the OGRS principles:

- **Special Feature Editorial, The open source dynamics in geospatial research and education**, (Olivier Ertz, Sergio J Rey & Stephane Joost)
- **Open source spatial analysis: lessons for research and education from PySAL**, (Sergio J. Rey)
- **Preface, Geospatial Free and Open Source Software in the 21st Century**, (Erwan Bocher & Markus Neteler), Springer edition
- **An Overview on Current Free and Open Source Desktop GIS Developments**, (Stefan Steiniger & Erwan Bocher), IJGIS Journal, 2008

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<http://www.ogrs-community.org/>

Papers about open geospatial R&E in open access geospatial journals...

JOURNAL OF SPATIAL INFORMATION SCIENCE
Number 8 (2014), pp. 67–71



doi:10.5311/JOSIS.2014.8.182

FEATURE SECTION EDITORIAL

The open source dynamics in geospatial research and education

1 Introduction

The open source revolution has breathed new life into the geospatial domain by means of the development of geospatial free and open source software (GFOSS). GFOSS has been extensively promoted by FOSS4G conferences, which evolved from meetings that gathered together interested GFOSS development “tribes” at a standard business conference. More in line with the academic side of FOSS4G events, the Open Source Geospatial Research and Education Symposium (OGRS) is a neutral forum dedicated to sharing knowledge, new solutions, methods, practices, ideas, and trends in the field of geospatial information through the development and the use of free and open source software in both research and education. The purpose is to gather communities whose main concerns are to find new solutions by sharing knowledge and methods free of software license limits. On this basis, a first edition took place in 2009 in Nantes (France). It brought together 130 participants who proposed 20 research contributions and 12 workshops related to current innovative projects from around the world. The main outcomes were published in the first OGRS proceedings “Geospatial Free and Open Source Software in the 21st Century” [1].

OGRS 2009, Vannes, France

- Wrong way!

The screenshot shows the Springer website interface. At the top, there is a search bar and navigation links for 'Home', 'Subjects', 'Services', 'Products', 'Springer Shop', and 'About us'. A promotional banner reads: '+++ More than 1,900 Springer Protocols eBooks at just \$9.99 each! Get yours today>> +++'. The main content area features a book listing for 'Geospatial Free and Open Source Software in the 21st Century' by Erwan Bocher and Markus Neteler. The book cover is visible on the left, and the title and editors are on the right. Below the title, it says '© 2012' and 'Editors: Bocher, Erwan, Neteler, Markus (Eds.)'. A 'Free Preview' button is also present. To the right of the book listing is a 'Buy this book' section with a price of 142,79 € for the eBook. Below this, there are options for Hardcover (176,79 €) and Softcover (176,79 €). Payment methods like VISA, MasterCard, American Express, and PayPal are listed. At the bottom, there is a 'Zahlen und Fakten' section with a 'Zitate' button and the page number 35.

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Lecture Notes in Geoinformation and Cartography

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Geospatial Free and Open Source Software in the 21st Century

Editors: **Bocher, Erwan, Neteler, Markus (Eds.)**

Free Preview

demonstrates the scientific community dynamism related to open source and free software

About this book

This book contains papers presented at the first Open Source Geospatial Research Symposium held in Nantes City, France, 8-10 July, 2009. It brings together insights and ideas in the fields of Geospatial Information and Geoinformatics. It demonstrates the scientific community dynamism related to open source and free software as well as in defining new concepts, standards or tools.

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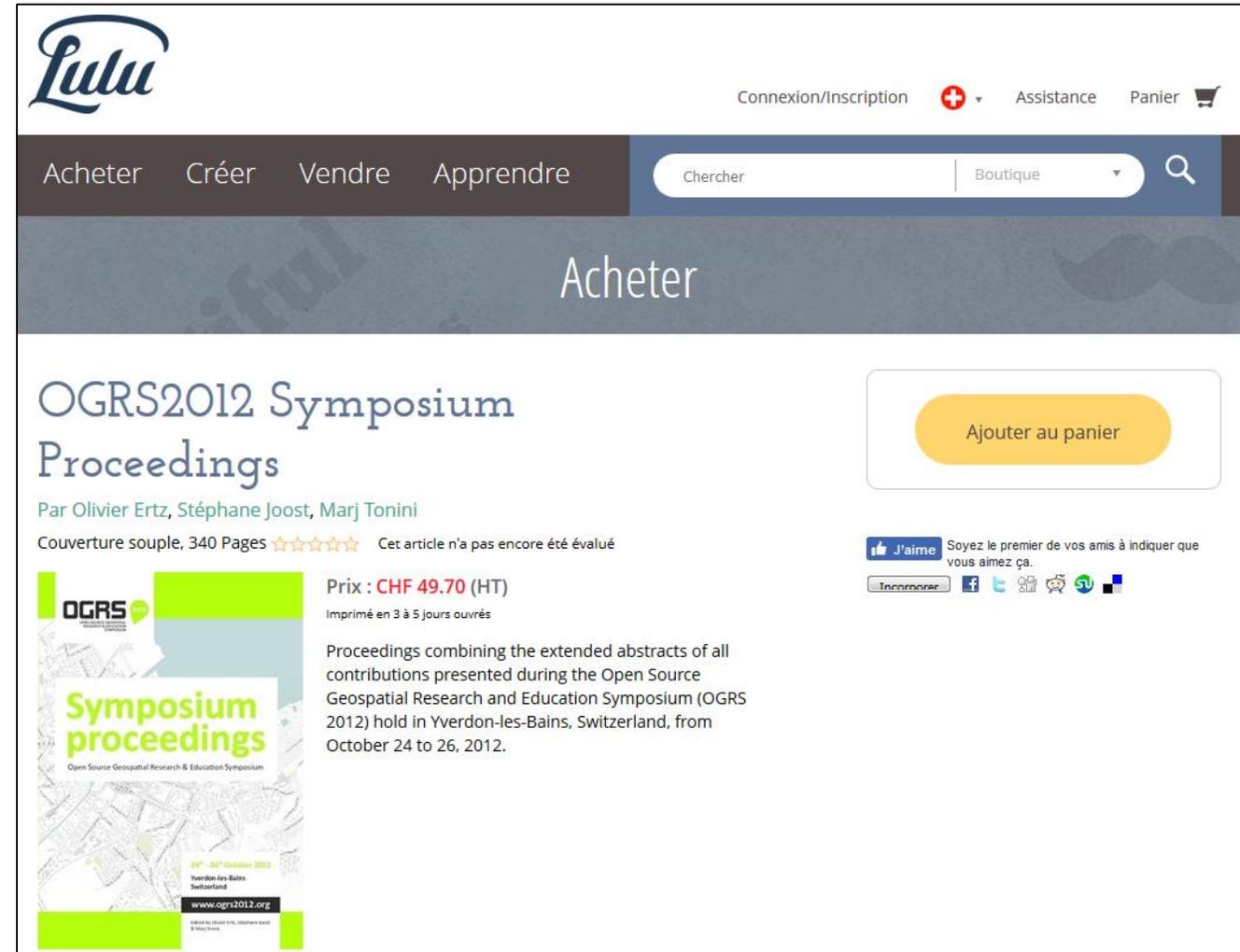
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Zahlen und Fakten

Zitate 35

OGRS 2012, Yverdon-les-Bains, Switzerland

- Self-edition, SNF funds
- Dissemination through Lulu.com
- Free download, cost for the book + shipping



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OGRS 2016, Perugia, Italy

- PeerJ platform
- Collection
- Open peer review

 575 days ago - Thomas Etherington

I agree that landscape genetics could benefit from greater input from geoscientists, and that this would be best achieved through the provision of open software.

1

However, I would suggest that any consideration of landscape genetics needs to include least-cost modelling approaches to measuring distance, as these have been a central component in the development of landscape genetics.

There have been some popular software that provides least-cost modelling software to try and aid landscape genetics approaches that incorporate proprietary software (disclaimer: I have published one of these), but there are fewer options that are open-source. The only one I am aware of is in the gdistance R package, but if you could identify more that that would be useful given how important least-cost modelling has been in landscape genetics.

[Login to reply to feedback](#)



Open Source Geospatial Research & Education Symposium (OGRS2016) - a PeerJ Collection

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World Wide Web and Web Science Software Engineering Computational Biology Data Mining and Machine Learning

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Conclusion



- It does not matter: it is definitely true for science
- For the while, it is not true for all scientists, at least for those who have not published in such high IF journals before...
- Looking forward to seeing how Openness will concretely be taken into account to promote the career of «open scientists»...

"... the scientific content of a paper is much more important than publication metrics or the name of the journal in which it was published", SNF

Thank you for your attention !

