

WELCOME

VGI-Analytics 2017

VGI-Analytics - Volunteered Geographic Information (VGI): Integration, ANALYSIS, and applications

Tuesday, 9th May 2017, [Wageningen University](#), The Netherlands at [AGILE 2017](#)

Who are we?



VGI-Analytics 2017: The Organisers

The VGI-Analytics 2017 workshop will be organised and co-chaired by:

- **Peter Mooney**: Maynooth University, Ireland; Email: Peter.Mooney@nuim.ie
- **Alexander Zipf**: University of Heidelberg, Germany; Email: zipf@uni-heidelberg.de
- **Jamal Jokar**: Aalborg University Copenhagen, Denmark; Email: jja@plan.aau.dk
- **Hartwig H. Hochmair**: University of Florida, United States; Email: [hhhochmair@ufl.edu](mailto:hhochmair@ufl.edu)

VGI-Analytics – Core Concept

- Volunteered Geographic Information (VGI) and social media data have become part of our everyday lives over the past few years. Recent data contribution trends show also that **geographic data are beginning to be linked across different VGI and social media platforms.** This cross-linkage of data between different platforms brings new opportunities and challenges, including questions of data quality and the formation of user communities across platforms. It can also be observed that **the number of VGI and social media platforms is continuously growing, providing new data sets to be analyzed.** All these changes in the VGI world bring **new opportunities and research challenges**, including questions of data quality and the formation of user communities across platforms.

Link-VGI: LINKing and analyzing Volunteered Geographic Information (VGI) across different platforms

Link-VGI is a single-day pre-conference workshop at the AGILE 2016 Conference in Helsinki, Finland on June 14th 2016. The workshop will be held in [Helsinki University Main building](#), Fabianinkatu 33, Helsinki.

Link-VGI: Workshop Summary

The number of Volunteered Geographic Information (VGI) and social media platforms is continuously growing, providing massive datasets of georeferenced content that is either actively contributed (e.g. adding data to OSM, Mapillary, or Flickr) or collected through more passive modes (e.g. enabling geolocation in Twitter feeds). Whereas contribution behavior for individual crowdsourcing applications has already been extensively analyzed in the literature, it is less understood if and how users participate in several crowd sourcing activities. Hence several research questions relevant to a better understanding of community involvement in data contributions have evolved. These include for example, whether activity spaces in different sources are spatially co-located or spatially distinct for individual contributors, or whether contributor communities evolve across platforms. As an example, users started to cross-link data from different platforms, e.g. by mapping OSM point of interests (POIs) and street features (e.g. street lamps, sidewalk information) based on Mapillary photographs, or by tagging Flickr pictures with OSM tags.

This workshop provides an opportunity for interested researchers to share ideas and findings on cross-platform data contributions. One portion in the workshop is dedicated to a hands-on session. In this session, basics of spatial data access through selected APIs and the extraction of summary statistics of the results will be illustrated.

VGI Analytics and Linked VGI

<http://www.cs.nuim.ie/~pmooney/LinkVGI2016/report.html>

- People are the most important factor in the generation of this new form of geographic data
- Linked data provides a framework to link data together. But what will define the geospatial linkage? Will this be done automatically or manually?
- Suppose we take VGI datasets A, B and C and join them. The linked dataset (A + B + C) is a "new" dataset. But we must realise that this "new" dataset has collected all of the bias and the problems of its individual components. The linkage of these three datasets has created a new dataset with very undefined characteristics.
- The more data we collect the more heterogeneous our data becomes.
- Our methods and applications must scale both geographically and temporally.
- The nature of the exact VGI information or data used and which use-case it is applied to may help to determine which legal, ethical and privacy issues which are most prominent.
- Now that we are attempting to link different sources or streams of data together there is a need to identify the same object across multiple datasets.

Crowdsourced Geospatial Data – the new “data food” revolution

Research It

Grow It

Renew It

Make It

Raise It

Process It

Trade It

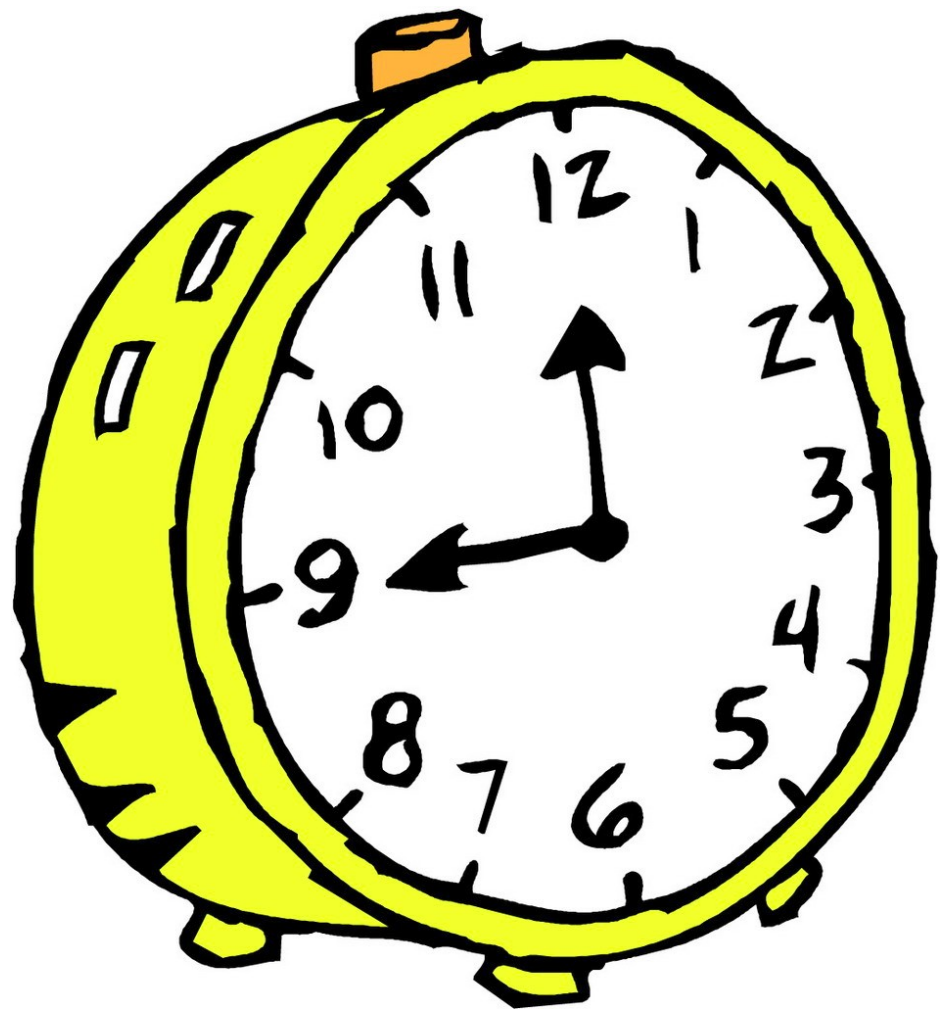
Manage It

Invent It

Innovate It

Change It

Solve It



Time Period	Workshop Activity
🕒 09:30 - 09:45	⌚ Workshop Opening: Welcome and some introductions from the organisers
🕒 09:45 - 10:30	<p>Invited Joint Keynote Presentation: "People, Patterns, and Populations: Considering multiple perspectives in the spatial analysis of VGI"</p> <p>Professor Robert Feick (University of Waterloo, Canada) and Dr. Colin Robertson (Wilfrid Laurier University, Canada)</p> <p>Abstract: As research into VGI matures and expands to include multiple platforms, a greater variety of representations, and a broader range of applications, the development of a 'VGI Analytics' requires new conceptual models and frameworks to underly the development of algorithms and spatial tools. In the 10 years since Goodchild's 2007 paper, the line between VGI and GI proper has continued to blur. In this paper we revisit the underlying tenets of VGI in an attempt to build up a three-part model of VGI analytics, considering the people that produce VGI, the aggregate patterns they produce, and the ways that these patterns (mis)-represent larger populations. We consider how geographical expertise relates to spatial knowledge production and representation in VGI datasets, and in turn, the analysis of VGI with traditional geospatial tools. Case studies from citizen science and geosocial media data are used to illustrate problems and articulate potential solutions</p>

🕒 10:30 - 11:00	☕ COFFEE (This is in parallel with the other workshops)
🕒 11:00 - 12:30	<p>SESSION 1: VGI-Analytics Research Papers</p> <ol style="list-style-type: none"> Exploring vernacular perceptions of spatial entities: Using Twitter data and R for delimiting vague, informal neighbourhood units in Inner London, UK. Author: Luke Clasper (University of Salford) [Download Paper] DeepTags: Integration of Various VGI Resources Towards Enhanced Data Quality Author: Ahmed Loai Ali (University of Bremen) and Rami Al-Salman [Download Paper (12 MB)] The Inevitability of Calibration in VGI Quality Assessment Author: Franz-Benjamin Mocnik (Heidelberg University), Alexander Zipf, Hongchao Fan [Download Paper] Experiences with VGI in challenging circumstances Authors: Mustafa Hameed (University of Newcastle) and David Fairbairn, <p>Presentations will be a maximum of 20 minutes in duration with around 5 minutes for questions. In some cases presentations may be shorter by prior agreement.</p>
🕒 12:30 - 13:30	🍴 LUNCH (This is in parallel with the other workshops)
🕒 13:30 - 14:20	<p>SESSION 2: VGI-Analytics Research Papers (cont)</p> <ol style="list-style-type: none"> Where to catch 'em all? – A geographic analysis of Pokémon Go locations Authors: Levente Juhász (University of Florida) and Hartwig Hochmair [Download Paper] Analysing tweets describing during natural disasters in Europe and Asia Authors: Kiran Zahra (University of Zurich) and Ross Purves [Download Paper] <p>Presentations will be a maximum of 20 minutes in duration with around 5 minutes for questions.</p>
🕒 14:20 - 14:30	Planning outline for the Collaborative Session

🕒 14:30 - 15:30	Collaborative Session - the idea here would be to break the workshop up into 4 - 5 small groups. Each group would be led by one of the organisers or an experienced academic/researcher. Then each group would try to tackle some of the current challenges in VGI-Analytics with the view of working towards the draft for a multi-author journal paper. At the end of the session each group will have gathered together a roughwork document of ideas, formulations, plans, etc to bring their paper forward after the workshop. Very often one of the negative aspects of workshops is that the potential energy for collaboration and future networking diminishes after the workshop is finished. A tangible and shared collaborative output like this could help build capacity for sustaining this collaboration. This is also an excellent opportunity for PhD students and other young researchers to work and collaborate with more experienced academics/researchers.
🕒 15:30 - 16:00	☕ COFFEE (This is in parallel with the other workshops)
🕒 16:00 - 16:30	Feedback and Discussion: Short feedback and summary from each group leader. Discussions from the floor
🕒 16:30 - 17:00	🕒 Closing: Workshop Closing - summary and overview of the day from the Workshop Chair. Plans for the future.

Collaborative Session

- **Please give me your email on the sheet of paper passing around (in a few minutes)**
- We will create some Google Docs where we will add content.
- We will create maybe 3 groups
- One group leader, one reporter (to type some notes into Google Docs)
- We will give each group a TOPIC or QUESTION
- Use the group as a means of developing this TOPIC or QUESTION

About me...



- Lecturer (Comp Sci) at Maynooth University
- RESEARCH
 - VGI and Crowdsourcing integration with government data and programmes
 - Automated quality analysis of VGI
 - Development of implicit quality indicators for VGI
 - Data quality for citizen science

**Let's have a great
workshop!**