

CV

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CURDIN DERUNGS

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CV AT A GLANCE

Nationality/Citizenship: Swiss - Citizen of Brigels.

Studies: From 2002 until 2008. I studied Geography at the University of Zurich and finished with a master of science in GIScience. As a minor I studied Atmospheric Physics at ETH Zurich.

Academic Experience: From 2010 until 2013 I conducted my PhD in spatial information retrieval. Currently I'm heading the GISLab at the University of Zurich.

Work Experience: During and after my studies I worked for several years in the private (re-insurance company) and public (city of Zurich) sector.

ACADEMIC EXPERIENCE

Head of GISLab / Post-Doc, URPP Language and Space, University of Zurich

Zurich — January 2014 - now

The GISLab (<http://www.spur.uzh.ch/en/departments/gislab.html>) is one of three laboratories that constitute the University Research Priority Program (URPP) *Language and Space*. The role of the GISLab is twofold. On the one hand, we implement analysis workflows and toolboxes that allow spatio-temporal modelling of language evolution. On the other hand, the GISLab is engaged in spatial information retrieval where space relevant information is retrieved from large text data, such as historic corpora, blogs or Web pages in general.

The major part of my position at the URPP consists of carrying out my own research and supervising research of associated post-doc, PhD and master students. In addition, I teach an own master course in spatial statistics and advanced spatial analysis with R.

PhD Student, Geocomputation Group, University of Zurich

Zurich — March 2010 – November 2013

My thesis was on automatically mining spatial information from hundreds of digitized books and ten thousands of blog entries. The goal was to identify temporal changes the environment, on the one hand, and in how people perceive and experience landscapes. The major methodological contribution consists of algorithms for automatically georeferencing (historic) texts, consisting of descriptions of fine spatial detail, and for extracting space relevant information from these georeferenced texts.

WORK EXPERIENCE

GIS-Project Manager, Grün Stadt Zürich

Zurich — June 2008 – February 2010

Grün Stadt Zürich (GSZ) is a unit of the city of Zurich administration. At GSZ we were two people, responsible for the GIS-needs of some 50 active users. One key challenge therefore was the careful planning and managing of emerging projects. The work consisted of the design of spatial data models and databases, the implementation of data collection systems, data processing and automatic quality assessment.

Risk Analyst, GlacierRe

Pfäffikon — 2007 (February - October)

The main task at GlacierRe was to visualize and analyze large global geo-referenced datasets for the assessment of insurance accumulation risks. In addition, I created portfolios for industrial and commercial risks using catastrophe models of earth quake, windstorm, flood and hail.

Civilian Service/ GIS Practical, Swiss National Park

Zernez, GR — 2008

The civilian service I carried out at the Swiss National Park. As a GIS analyst, I mostly worked with GPS data of ungulates. The work thus consisted of data collection, the design of spatial (and temporal) databases and computational movement and habitat analysis. The data consisted of millions of GPS measures, collected over the last 10 years.

EDUCATION

PhD in GIScience, University of Zurich

Zurich — 2010-2013

The title of the PhD thesis was: *“From Text to Landscape: Extraction of Landscape Concepts through the Resolution of Ambiguity and Vagueness present in Descriptions of Natural Landscapes”*

Master in Geography, University of Zurich

Zurich — 2002-2008

I studied Geography with a focus on GIScience and remote sensing at the University of Zurich. As a minor I completed with atmospheric physics at ETH. My master thesis I accomplished in GIScience, on the question if mountains can be modelled on the basis of information retrieved through online questionnaires.

The title of the master thesis was; *“What is a mountain? Where is a Mountain?”*

SKILLS

Data management, analysis and statistics:

- Management of large text data in corpus management systems (e.g. corpus workbench) or relational databases (e.g. MySQL, PostgreSQL or SQL Server).
- Spatial analysis and spatial statistics, such as point pattern analysis, statistical interpolation methods, least cost path computation, geomorphometry and terrain analysis or network analysis.
- Statistical analysis such as (spatial) multivariate statistics, (spatial) regression analysis, principal component- and correspondence analysis.
- Numerous applications of machine learning and clustering algorithms. Examples are: SVM, Random Forest, hierarchical and density based clustering, SOM or LDA based topic modelling of text.
- Information retrieval and extraction from text, for instance using gazetteer, rule- or map-based algorithms.

Programming:

- I'm an experienced Java and R programmer. Both languages I use on a regular (i.e. daily) basis.
- I used various scripting languages such as Python, VBA, SQL or the Matlab programming language.
- I have experience with Scala and Spark

Software and Data Base Systems:

- I use a number of GIS software on a regular basis, most importantly ARCGIS, QGIS and FME.
- I have experience in using the following data base systems: SQL Server, MySQL, Filemaker, Oracle and PostgreSQL.

Language:

- Excellent knowledge of written and spoken English
- Mother tong German
- Knowledge of spoken and written French
- Communication skills in Italian and Romansch

Teaching related experience:

- Organizing and teaching a master course in spatial statistics and advanced spatial analysis with R.
- Assisting in master courses on implementing spatial algorithms in Java and supervising a block course on introducing the concept of class-based programming
- Teaching introductory course in methodological geography for some 140 bachelor students
- Organization and supervision of field excursions and company visits for GIScience focused students
- Organization of three interdisciplinary workshops together with colleagues on *Language and Space*, *Visualization of Linguistic Data* and *Uncertainty in a Changing Climate*.

REFEREES

If there is further interest I'm happy to provide contact details of former and current employers.

LEISURE ACTIVITIES

I appreciate spending my leisure time in nature for instance hiking, climbing, mountaineering, skiing or surfing. Some beautiful moments are summarize on my partner and mine outdoor blog: curdinderungs.com/blog/.

SCIENTIFIC PUBLICATIONS

Derungs C. Samardžić T. Submitted. The Impact of Geography on Toponym Frequency. *EACL2017*.

Derungs C. and Purves R.S. 2016. Mining Nearness Relations from an N-Gram Web Corpus in Geographical Space. *Spatial Cognition and Computation*.

Derungs C. and Purves R.S. 2016. Characterising Landscape Variation through Spatial Folksonomies. *Applied Geography*.

Ljubešić N. Samardžić T. Derungs C. 2016. TweetGeo -- A Tool for Collecting, Processing and Analysing Geo-encoded Linguistic Data. *COLING2016*.

Fravolini G. Egli M. Derungs C. Paolo Cherubini, Ascher-Jenull J. Gómez-Brandón M. Bardelli T. Tognetti R. Lombardi F. Marchetti M. 2016. Soil attributes and microclimate are important drivers of initial deadwood decay in sub-alpine Norway spruce forests. *Science of The Total Environment*.

Sautier J. and Derungs C. 2016. Spatial Characteristics of a large Web N-gram Corpus. *9th Workshop on Geographic Information Retrieval*. November 26-27, 2015. Paris, France.

Wartmann, F.M. Egorova, E. Derungs, C. Mark, D.M. Purves, R. 2015. More Than a List: What Outdoor Free Listings of Landscape Categories Reveal about Commonsense Geographic Concepts and Memory Search Strategies. *Springer 2015 Lecture Notes in Computer Science*.

Palacio D. Derungs C. Purves R.S. 2015. Using User Generated Content for GIR Evaluation. *Journal of Spatial Information Science*.

Addor N. Ewen T. Johnson L. Çöltekin A. Derungs C. Mulkione V. 2015. Introducing students to uncertainties in a changing climate to support future decision-making. *Earth's Future*.

Purves, R.S. and Derungs, C. 2015. From space to place: place-based explorations of text. *International Journal of Humanities and Arts Computing*.

Derungs C. Purves R.S. 2014. Where is near? *GIScience 2014 8th International Conference on Geographic Information Science*, September 23-26, 2014, Vienna, Austria.

Derungs, C. and Purves, R.S. 2014. From text to landscape: Locating, identifying and mapping the use of landscape features in a Swiss Alpine corpus. *International Journal of Geographical Information Science*.

Derungs, C. Wartmann, F. Purves, R. Mark, DM. 2013. The Meanings of the Generic Parts of Toponyms: Use and Limitations of Gazetteers in Studies of Landscape Terms. *Springer 2013 Lecture Notes in Computer Science*.

Palacio, D. Derungs, C. Purves, R.S. 2013. Creating test collections from user generated content for GIR evaluation. *Proceedings of the 7th Workshop on Geographic Information Retrieval*, November 5-8, 2013, Orland (FL), USA.

Derungs, C. Palacio, D. Purves, R.S. 2012. Resolving fine granularity toponyms: Evaluation of a disambiguation approach. *GIScience 2012 7th International Conference on Geographic Information Science*, September 18-21, 2012, Columbus (Ohio), USA.

Derungs, C. and Purves, R.S. 2012. Measuring topographic similarity of toponyms. *AGILE'2012 15th International Conference on Geographic Information Science*, April 24-27, Avignon, France.

Derungs, C. Purves, R.S, Waldvogel, B. 2011. Toponym disambiguation of landscape features using geomorphometric characteristics. *Geocomputation 2011*, July 18-19, London, England.

Derungs, C. and Purves, R.S. 2007. Empirical experiments on the nature of Swiss mountains. *GISRUK 2007*, April 11-13, Maynooth, Ireland.

The .pdf documents of these publications are available from http://curdinderungs.com/profil/en/?page_id=66.