Ramona Roller

Quantitative
social scientist

🛈 15 December 1991

✉ Weinbergstrasse 56/58,
Switzerland

🌐 https://www.sg.ethz.ch/team/
people/rroller/

@ rroller@ethz.ch

About me

Social scientist with a strong quantitative background. Fascinated by complex systems and their mathematical descriptions. Currently working on reconstruction methods for historical letter correspondence networks. Future aim: Develop spatio-temporal null models for historical letter correspondence networks.

Skill

Python

Social network analysis

Socio-historical data analysis

Data visualisation

Agent-based modeling
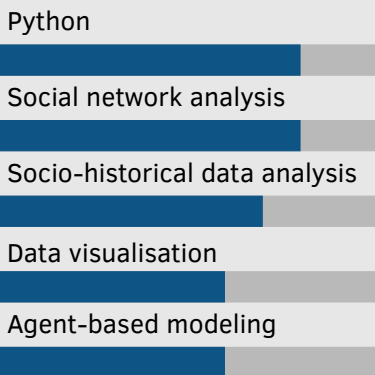
(*)[The skill scale is from 0 (Fundamental Awareness) to 5 (Expert).]

Education

since 01/2018	**Ph.D.** candidate in data-driven modeling of social systems ETH Zurich, CH

• *Develop quantitative statistical methods to analyse socio-historical data.*
• *Construct and visualise temporal network models.*
• *Expected graduation: November 2021.*

09/2018	Participant at EPFL's Reproducibility in Computational Science Summer School Magliaso, CH

• *Acquired profound skills in writing reproducible research papers and data management. Specific tools include Git, R Shiny, and Renga.*

09/2015 - 12/2017	M.Sc. Computational Science University of Amsterdam. NL

• *Thesis: Optimising Resource Allocation in Socio-economic Systems with the Minority Game: A Case Study on Electric Cars in Amsterdam.*

06/2017 - 07/2017	Participant at SFI's Complex Systems Summer School Santa Fe Institute, USA

• *Passed highly competitive world-wide application process.*
• *Deepened numerical and computational methods for the analysis of complex systems.*

10/2011 - 07/2014	B.Sc. Psychology with Cognitive Science University of Sussex, UK

• *Thesis: Differences between conscious and unconscious learning of social rules.*

Research and Work Experience

11/2014 - 06/2015	Intern at Netherlands Organisation for Applied Scientific Research (TNO) Soesterberg, NL

• *Developed a Linked Data model to cope with power cuts caused by flooding.*
• *Applied qGIS to visualise power stations and water levels.*

06/2013 - 06/2014	Junior research associate at Department of Informatics University of Sussex, UK

• *Developed a novel method to quantify and visualise cognitive chunks based on the sequences of participants' drawings of electrical circuit diagrams.*

Publications

- Roller, R, 2021: Vectorizing maps to generate geo-spatial data on territories of the Holy Roman Empire. *socarxiv*. doi=10.31235/osf.io/y9v68.

Conference attendances and research visits

03/2021	Geography meets Digital Humanities: Neuere Ansätze raumbezogener Modellierung Erlangen (online), DE

• *Talk: 'Räumliche Aspekte der Konfessionalisierung: Vektorisierte Territorien des HRR erstellen und nutzen'.*
• *Access talk at https://www.sg.ethz.ch/team/ramona_roller/data/2020-03-12_spathums.pdf*

10/2020	Theorytellings Workshop der DHd AG Theorie Leipzig, DE

• *Talk: 'Warum wurde Luther protestantisch? Erklärungsnarrative mit statistischen Modellen entwickeln und zur Theoriebildung nutzen'.*
• *Access talk at https://www.sg.ethz.ch/team/ramona_roller/data/DHd_Theorie_Leipzig.pdf*

09/2020	CUDAN Satellite at NetSci Rome (online), IT
	• *Talk: 'Letter network to test theory'.*
	• *Access talk at* `https://www.sg.ethz.ch/team/ramona_roller/data/satellite_NetSci2020.pdf`
03/2020	Digital Humanities im deutschsprachigen Raum Paderborn, DE
	• *Talk: 'Wie steuert geografische Distanz das Briefkorrespondenznetzwerk der Reformatoren? Eine Netzwerkanalyse'.*
	• *Access talk at* `https://www.sg.ethz.ch/team/ramona_roller/data/DHd2020.pdf`
09/2019	European Conference on Social Network Analysis (EUSN) Zurich, CH
	• *Talk: 'Statistical inference for letter network of Reformation'.*
	• *Access talk at* `https://www.sg.ethz.ch/team/ramona_roller/data/EUSN2019.pdf`
07/2019	International Conference on Computational Social Science (IC^2S^2) Amsterdam, NL
	• *Talk: 'Network regression reveals factors driving the letter correspondence of 16th century reformers'.*
	• *Access talk at* `https://www.sg.ethz.ch/team/ramona_roller/data/Amsterdam2019.pdf`
06/2019	Research visit at Austrian Centre for Digital Humanities Vienna, AU
	• *Enlarged skills on vectorisation of raster maps and management of spatial data.*
	• *Talk: 'A workflow for automated vectorisation of raster maps'.*
	• *Access talk at* `https://www.sg.ethz.ch/team/ramona_roller/data/Vienna2019.pdf`

Organisation of scientific events

since 01/2021	Co-organiser of the workshop 'Opportunities in computerised analyses of historical letter correspondences' Heidelberg, GER
	• *Teamed-up with project 'Theologenbriefwechsel im Südwesten des Reichs in der Frühen Neuzeit (1550-1620) led by Prof. Strohm in Heidelberg.*
	• *Organised talks, discussion groups and accomodations for 30 participants.*
	• *Speakers include international researchers from the humanities, computer- and data sciences.*
	• *Planned date: Spring 2022*
06/2018	Co-organiser and participant at Big Data in the Field Weekend Seminar Berlin, GER
	• *Organised talks, workshops, discussion rounds, and accommodation for 50 participants and 6 speakers.*
	• *Speakers included German Data Science professors and representatives of German companies that apply Big Data-based technologies.*

Awards

01/2020	Travel grant for DHd conference (Digital Humanities im deutschsprachigen Raum)
02/2012 - 12/2017	Member of German National Academic Foundation
07/2014	Stuart Sutherland Prize for an outstanding undergraduate dissertation in psychology at the University of Sussex