

## Education

- 01/2018 - **PhD candidate in data-driven modeling of socio-historical systems**,  
09/2022 *Thesis: Social differentiation during the European Reformation: Statistical analyses of letter correspondence networks*,  
*Chair of Systems Design, ETH Zurich, Switzerland*,  
*Supervisor: Prof. Frank Schweitzer.*
- 09/2018 **Reproducibility in Computational Science Summer School**,  
*EPFL Lausanne, Magliaso, Switzerland.*
- 09/2015 - **M.Sc. Computational Science**,  
12/2017 *University of Amsterdam, Netherlands.*
- 06/2017 - **Complex Systems Summer School**,  
07/2017 *Santa Fe Institute, NM, USA.*
- 10/2011 - **B.Sc. Psychology with Cognitive Science**,  
07/2014 *University of Sussex, UK.*

## Employment

- 10/2022 - **PostDoc in computational social science**,  
*Chair of Systems Design, ETH Zurich, Switzerland*,  
*Prof. Frank Schweitzer.*
- 11/2014 - **Intern at Netherlands Organisation for Applied Scientific Research (TNO)**,  
06/2015 *Soesterberg, Netherlands.*
- 06/2013 - **Junior research associate at Department of Informatics**,  
06/2014 *University of Sussex, UK.*

## Publications

- 2023 **Roller, R. 2023: Modell.**,  
*Zeitschrift für digitale Geisteswissenschaften. Forthcoming.*
- 2022 **Schweitzer, F., Andres, G., Casiraghi, G., Gote, C., Roller, R., Scholtes, I., Vaccario G. and Zingg, C. 2022: Modeling social resilience: Questions, answers, open problems.**,  
*Advances in Complex Systems*, vol 5, no. 8.
- 2022 **Roller, R. 2023: Theory-Driven Statistics for the Digital Humanities: Presenting Pitfalls and a Practical Guide by the Example of the Reformation.**, *Journal of Cultural Analytics*, vol 7, no. 4.
- 2022 **Roller, R., Schweitzer, F. and Strohm, C. 2021: The role of neighbourhood relations in confessionalisation.**,  
*socarxiv. 10.31235/osf.io/67vgr.*
- 2021 **Roller, R. and Schweitzer F., 2021: A new theory of social roles in networks.**,  
*socarxiv. doi=10.31235/osf.io/xkafb.*

## Talks

- 02/2023 **Netzwerkanalyse zur Komposition und Evolution innerprotestantischer Gruppen im 16. Jahrhundert**,  
*CAIDAS Workshop*,  
*Würzburg, Germany.*

- 01/2023 **Role detection in communication networks: About specialising protestants and deceived & deceiving employees,**  
*Research visit at Department of Sociology/SCOOP Project,*  
Groningen, Netherlands.
- 07/2022 **Reuchlins Briefwechsel: Statistische Analysen für Korrespondenznetzwerke,**  
*Internationaler Reuchlin Kongress,*  
Pforzheim, Germany.
- 02/2022 **Statistische Analysen für Briefkorrespondenznetzwerke und ihren geografischen Raum,**  
*Möglichkeiten computergestützter Auswertung von historischen Korrespondenzen,*  
Heidelberg, Germany.
- 01/2022 **Nachbarschaftseffekte während der europäischen Reformation,**  
*Oberseminar Digital Humanities,*  
Passau, Germany (online).
- 09/2021 **Polarization in the 16th century: Ideological groups during the Reformation,**  
*European Conference on Social Network Analysis (EUSN) ,*  
Naples, Italy (online).
- 07/2021 **Role detection in networks: Social differentiation during the Reformation,**  
*Historical Network Research conference (HNR),*  
Luxembourg, Luxembourg (online).
- 04/2021 **Modeling Time in Interactions: Temporal paths in a 16th century network,**  
*Historical Network Research lunch lecture (HNR),*  
online.
- 03/2021 **Räumliche Aspekte der Konfessionalisierung: Vektorisierte Territorien des HRR erstellen und nutzen,**  
*Geography meets Digital Humanities: Neuere Ansätze raumbezogener Modellierung,*  
Erlangen, Germany (online).
- 10/2020 **Warum wurde Luther protestantisch? Erklärungsnarrative mit statistischen Modellen entwickeln und zur Theoriebildung nutzen,**  
*Theorytellings Workshop der DHd AG Theorie,*  
Leipzig, Germany.
- 09/2020 **A letter network to test theories,**  
*CUDAN Satellite at NetSci,*  
Rome, Italy (online).
- 03/2020 **Wie steuert geografische Distanz das Briefkorrespondenznetzwerk der Reformatoren? Eine Netzwerkanalyse,**  
*Digital Humanities im deutschsprachigen Raum Konferenz (DHd),*  
Paderborn, Germany.
- 09/2019 **Statistical inference for letter network of Reformation,**  
*European Conference on Social Network Analysis (EUSN),*  
Zurich, Switzerland.
- 07/2019 **Network regression reveals factors driving the letter correspondence of 16th century reformers,**  
*International Conference on Computational Social Science (IC<sup>2</sup>S<sup>2</sup>),*  
Amsterdam, Netherlands.

---

## Research Visits

- 01/2023 **SCOOP Project: Sustainable Cooperation,**  
*Talk: Role detection in communication networks: About specialising protestants and deceived & deceiving employees ,*  
Groningen, Netherlands.

- 06/2019 **Austrian Centre for Digital Humanities**,  
*Talk: A workflow for automated vectorisation of raster maps*,  
Vienna, Austria.
- 01/2019 **Heidelberg Academy of Sciences and Humanities**,  
*Talk: Das Briefkorrespondenznetzwerk der Reformatoren*,  
Heidelberg, Germany.

## Teaching

### University courses

- 02 - 06/2023 **Introductions to Digital Humanities**,  
*Invited speaker for 2 hour lecture on 'Network analysis in the DH'*,  
University of Bern, Switzerland.
- 09 - 12/2022 **Data Science for Social Challenges**,  
*Co-organiser and co-lecturer of a 3 ECTS Master course*,  
ETH Zurich, Switzerland.
- 08/2021 **Digital Humanities Netzwerke**,  
*Invited speaker for 2 hour slot on 'Modeling time in historical networks'*,  
Heinrich-Heine-Universität Düsseldorf, Germany.

### Thesis supervision

- 03/2019 **Master thesis of Leonie Bauer on the prediction of needed help in disaster regions from Instagram posts**,  
*ETH Zurich, Switzerland.*

## Community activities

### Organisation of Scientific Events

- 01/2021 - **Workshop on 'Möglichkeiten computergestützter Auswertung von historischen Korrespondenzen'**,  
02/2022 *Co-organiser and speaker*,  
9 - 11 February 2022,  
Heidelberg, Germany.
- 06/2018 **Big Data in the Field Weekend Seminar**,  
*Co-organiser and participant*,  
German Academic Foundation,  
Berlin, Germany.

### Reviewing activities

- 2023 - **Perspectives on Psychological Science journal**.
- 2021 - **Conference on Computational Humanities Research (CHR)**.
- 2021 - **Conference of the Digital Humanities in the German-speaking area**,  
*Jahrestagung des Verbands "Digital Humanities im deutschsprachigen Raum" (DHd)*.
- 2020 - **Advances in Complex Systems journal**.

### Editorial activities

- 2022 **Advances in Complex Systems journal**,  
*Special Issue on "Cultural Complexity"*,  
Co-guest editor.

### Memberships

- 2020 - **Digital Humanities in the German-speaking area**,  
*Verband "Digital Humanities im deutschsprachigen Raum" (DHd)*.
- 2020 - **Working group "Theory" of the DHd**,  
*Organisor of a bi-monthly paper-circlce*.

---

## Awards

- 09/2020 **Student grant for NetSci conference,**  
*Reduced conference fee from 180€ to 50€.*
- 01/2020 **Travel grant for DHd conference (Digital Humanities im deutschsprachigen Raum),**  
*400€.*
- 02/2012 - **Member of German National Academic Foundation.**  
12/2017
- 07/2014 **Stuart Sutherland Prize,**  
*For an outstanding undergraduate dissertation in psychology at the University of Sussex.*