

# LUKAS BODENMANN

Stefano Franscini-Platz 5, 8044 Zürich, Switzerland  
Website · GitHub · LinkedIn

## SUMMARY

---

Engineer and doctor of sciences with professional experience in infrastructure asset management and climate risk modelling.

## EDUCATION

---

- |   |  |
|---|--|
| <b>ETH Zürich</b><br><b>Doctor of Sciences (Dr.Sc.)</b><br>Research group of Professor Božidar Stojadinović<br>Thesis: Data-efficient learning techniques to improve probabilistic modelling of earthquake consequences on spatially distributed assets | <b>8/2019 - 10/2023</b><br>Zurich, Switzerland |
| <b>Stanford University</b><br><b>Visiting Student Researcher</b><br>Research group of Professor Jack W. Baker<br>Project: Accounting for path and site effects in spatial ground motion correlation models using Bayesian inference                     | <b>3/2022 - 9/2022</b><br>Stanford, California |
| <b>ETH Zürich</b><br><b>MSc in Civil Engineering</b><br>Major in Structural and Geotechnical Engineering<br>Thesis: Application and comparison of financial risk measures in earthquake engineering   | <b>9/2015 - 6/2017</b><br>Zurich, Switzerland  |
| <b>ETH Zürich</b><br><b>BSc in Civil Engineering</b><br>Thesis: Strength development of fibre-reinforced concrete during hydration phase  | <b>9/2011 - 6/2014</b><br>Zurich, Switzerland  |

## PROFESSIONAL EXPERIENCE

---

- |  |   |
|--|---|
| <b>Climate risk scientist</b><br><b>Climada technologies</b><br>Development of probabilistic event sets for climate-related natural hazards   implementation and development of vulnerability models for residential, industrial and commercial assets   | <b>11/2023 - present</b><br>Zurich, Switzerland |
| <b>Asset Manager for Engineering Structures</b><br><b>Swiss Federal Railways (SBB)</b><br>Data analysis for risk management and long term financial planning   technical consultancy for construction projects   development of guidelines for bridge inspection and maintenance   specification of requirements for asset management software | <b>9/2017 - 6/2019</b><br>Bern, Switzerland     |

## SKILLS

---

**Languages** Native: German      Professional: English | French

**Programming** Python | Matlab | QGIS | Latex

## HONORS & AWARDS

---

- ETH Medal** 07/2017  
Award for an outstanding master's thesis at ETH Zurich.
- Willi Studer Prize** 07/2017  
Award for the best master's degree in civil engineering at ETH Zurich.

## PUBLICATIONS

---

### Journal Publications

- Bodenmann, L.**, Baker, J.W., and Stojadinović, B.: Accounting for ground motion uncertainty in empirical seismic fragility modeling. *Earthquake Spectra* doi:10.1177/87552930241261486 2024
- Bodenmann, L.**, Baker, J.W., and Stojadinović, B.: Accounting for path and site effects in spatial ground-motion correlation models using Bayesian inference. *Natural Hazards and Earth System Sciences* doi:10.5194/nhess-23-2387-2023 2023
- Bodenmann, L.**, Broccardo, M., Galanis, P., and Stojadinović, B.: The Role of risk measures in relating earthquake risks at building and portfolio levels. *Earthquake Engineering & Structural Dynamics* doi:10.1002/eqe.3878 2023
- Bodenmann, L.**, Reuland, Y., and Stojadinović, B.: Dynamic post-earthquake updating of regional damage estimates using Gaussian processes. *Reliability Engineering and System Safety* doi:10.1016/j.res.2023.109201 2023
- Bodenmann, L.**, Galanis, P., Broccardo, M., and Stojadinović, B.: The role of risk measures in making seismic upgrading decisions. *Earthquake Spectra* doi:10.1177/8755293020919423 2020

### Conference Proceedings

- Blagojević, N., **Bodenmann, L.**, Reuland, Y., and Stojadinović, B.: Validating a resilience quantification framework: The case of 2010 Kraljevo earthquake. 3rd European Conference on Earthquake Engineering and Seismology (3ECEE), Bucharest, Romania. 2022
- Blagojević, N., **Bodenmann, L.**, Reuland, Y., and Stojadinović, B.: Improving community disaster resilience by providing adequate supply of recovery resources and services. 3rd European Conference on Earthquake Engineering and Seismology (3ECEE), Bucharest, Romania. 2022
- Bodenmann, L.**, Reuland, Y., and Stojadinović, B.: Dynamic updating of building loss predictions using regional risk models and conventional post-earthquake data sources. 31st European Safety and Reliability Conference (31ESREL), Angers, France. 2021
- Bodenmann, L.**, Reuland, Y., and Stojadinović, B.: Using regional earthquake risk models as priors to dynamically assess the impact on residential buildings after an event. Croatian Conference on Earthquake Engineering (1CroCEE), Zagreb, Croatia 2021
- Bodenmann, L.**, Galanis, P., Broccardo, M., and Stojadinović, B.: Comparison of different risk measures for portfolio-level earthquake risk assessment.. 17th World Conference on Earthquake Engineering (17WCEE), Sendai, Japan. 2020
- Bodenmann, L.**, Galanis, P., Broccardo, M., and Stojadinović, B.: The financial benefit of earthquake retrofitting in different hazard environments.. 11th U.S. National Conference on Earthquake Engineering (11NCEE), Los Angeles, California. 2018