

# LUKAS BODENMANN

Update: January 2023

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 Mail ·  Website ·  GitHub ·  LinkedIn

## SUMMARY

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Doctoral student in engineering with strong background in statistics and professional experience in infrastructure asset management.

## EDUCATION

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### ETH Zürich

#### Doctoral student

Research group of Professor Božidar Stojadinović

Thesis: Probabilistic modelling and data analytics to advance regional risk assessments for residential buildings exposed to natural hazards (working title)

**8/2019 - present**

Zurich, Switzerland

### Stanford University

#### Visiting Student Researcher

Research group of Professor Jack W. Baker

Project: Accounting for path and site effects in spatial ground-motion correlation models using Bayesian inference

**3/2022 - 9/2022**

Stanford, California

### ETH Zürich

#### MSc in Civil Engineering

Major in Structural and Geotechnical Engineering

Thesis: Application and comparison of financial risk measures in earthquake engineering

**9/2015 - 6/2017**

Zurich, Switzerland

### ETH Zürich

#### BSc in Civil Engineering

Thesis: Strength development of fibre-reinforced concrete during hydration phase

**9/2011 - 6/2014**

Zurich, Switzerland

## PROFESSIONAL EXPERIENCE

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### Asset Manager for Engineering Structures

#### Swiss Federal Railways (SBB)

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

**9/2017 - 6/2019**

Bern, Switzerland

### Engineering Intern

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Feasibility studies and stress analysis in structural and geotechnical engineering

**9/2014 - 5/2015**

Zurich, Switzerland

## SKILLS

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### Languages

**Native:** German

**Professional:** English | French

**Beginner:** Spanish

### Programming

Python | Matlab | QGIS | Latex

## HONORS & AWARDS

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### 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

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### Journal Publications

**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* [in review] doi:10.5194/nhess-2022-267 **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* [in review] **2022**

**Bodenmann, L.**, Reuland, Y., and Stojadinović, B.: Dynamic post-earthquake updating of regional damage estimates using Gaussian processes. *Reliability Engineering & System Safety* [in review] doi:10.31224/2205 **2022**

**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**