

Stanford



Adam Zsarnoczay

Research Engineer

Civil and Environmental Engineering

 Curriculum Vitae available Online

Bio

BIO

Adam Zsarnóczyay is a Research Engineer at the John A. Blume Earthquake Engineering Center at Stanford University, where his work focuses on disaster simulations that support multi-hazard risk assessment and management at a regional scale. As Associate Director for Research Outreach at the NHERI SimCenter, he connects to researchers and practitioners to monitor the state of the art and foster collaboration in the natural hazards engineering community. Adam obtained his Ph.D. in civil engineering at the Budapest University of Technology and Economics and also completed a graduate program at the University of Tokyo. He has experience working at scales that range from an individual structural member through a building up to cities with hundreds of thousands of assets. His research interests include probabilistic natural hazard assessment, model development and calibration for structural response estimation and performance assessment, surrogate modeling and uncertainty quantification in large-scale, regional simulations, and using quantitative disaster simulations to support risk management and mitigation.

ACADEMIC APPOINTMENTS

- Research Engineer, Civil and Environmental Engineering

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Adam's research focuses on disaster simulations that support multi-hazard risk assessment and management at a regional scale. He has experience working at scales that range from an individual structural member through a building up to cities with hundreds of thousands of assets. His research interests include probabilistic natural hazard assessment, model development and calibration for structural response estimation and performance assessment, surrogate modeling and uncertainty quantification in large-scale, regional simulations, and using quantitative disaster simulations to support risk management and mitigation.

Publications

PUBLICATIONS

- **Community Perspectives on Simulation and Data Needs for the Study of Natural Hazard Impacts and Recovery** *NATURAL HAZARDS REVIEW*
Zsarnoczay, A., Deierlein, G. G., Williams, C. J., Kijewski-Correa, T. L., Esnard, A., Lowes, L. N., Johnson, L.
2023; 24 (1)
- **Machine learning-based regional scale intelligent modeling of building information for natural hazard risk management** *AUTOMATION IN CONSTRUCTION*
Wang, C., Yu, Q., Law, K. H., McKenna, F., Yu, S. X., Taciroglu, E., Zsarnoczay, A., Elhaddad, W., Cetiner, B.
2021; 122
- **A Cloud-Enabled Application Framework for Simulating Regional-Scale Impacts of Natural Hazards on the Built Environment** *FRONTIERS IN BUILT ENVIRONMENT*
Deierlein, G. G., McKenna, F., Zsarnoczay, A., Kijewski-Correa, T., Kareem, A., Elhaddad, W., Lowes, L., Schoettler, M. J., Govindjee, S.

2020; 6

- **Using model error in response history analysis to evaluate component calibration methods** *EARTHQUAKE ENGINEERING & STRUCTURAL DYNAMICS*
Zsarnoczay, A., Baker, J. W.
2019