Saeed Nozhati, Ph.D.

Saeed Nozhati 310-770-6982 saeed.nozhati@gmail.com

QUALIFICATION

- A Ph.D. in Engineering with a strong background in natural hazard simulation, risk assessment and management, probability, stochastic models, computer programming, and optimization techniques.
- 10+ years of experience in probabilistic risk assessment, catastrophe risk modeling, model calibration/validation, uncertainty quantification, data acquisition, analytics, and visualization.
- Outstanding leadership skills pertain to the execution and management of multidisciplinary projects, highly self-motivated and results-oriented, with exceptional communication skills.

PROFESSIONAL EXPERIENCE

Everest *Senior Modeler*   (June 2022 to Present)
- Implemented new and existing models in the context of current business needs, emerging market trends, and technical facilities to improve the effectiveness of the company's risk assessment capabilities.
- Validated Everest's vendors' catastrophe models globally.

Chubb *Research Scientist*   (Sept. 2020 to June 2022)
- Implemented new and existing models in the context of current business needs, emerging market trends, and technical facilities to improve the effectiveness of the company's risk assessment capabilities.
- Validated Chubb's vendors' catastrophe models (such as RMS Risk Link and Risk Modeler) globally.
- Communicated Chubb's view of risk to internal stakeholders such as CAT managers, underwriters, and actuaries to ensure appropriate understanding and execution.
- Performed global seismic and wildfire risk assessments and geotechnical earthquake engineering.
- Developed several scripts using R, SQL, and Python to process and visualize catastrophe model outputs.
- Managed activities of offshore resources across time zones for various projects and provide performance reviews, resulting in more effective process and additional time for analytics.
- Delivered technical presentations in internal and business partners' meetings.
- Drafted several technical documents, reports, and blogs.

University of California, Los Angeles (UCLA), the Garrick Institute for the Risk Sciences
Postdoctoral Research Scholar   (Sept. 2019 to Sept. 2020)
- Formulated wildfire risk assessment and management methodology (funded by PG&E).
- Built a computational framework to simulate and optimize large power and water networks, and household units under disaster.

Colorado State University, Department of Civil and Environmental Engineering
Ph.D. Researcher   (Aug. 2016 to Aug. 2019)
- Developed models for the probabilistic risk assessment of urban infrastructure under disasters.
- Simulated natural hazards of earthquake, tornado, and hail storms.
- Generated seismic and tornado fragility functions for a set of buildings to be employed in a community-level loss and resilience assessment.
- Evaluated spatial damage and loss induced by a simulated tornado and earthquake to a community.
- Quantified and predicted food insecurity impacts of a hazard by developing probabilistic resilience metrics at the community level.
- Collaborated with a broad spectrum of researchers from engineering, mathematics, social sciences, and computer science to develop a new comprehensive risk-informed decision-making framework.

Marquette University, Department of Mathematics, Statistics and Computer Science
Graduate Researcher   (Aug. 2014 to Aug. 2016)
- The application of neural networks in the evaluation of seismic reliability of structures.

Sharif University of Technology, Department of Civil and Environmental Engineering

Graduate Researcher (Sept. 2011 to Sept. 2013)
- Implemented PSHA and generated seismic hazard maps of Sabzevar and Kerman in Iran.
- Generated seismic fragility curves with IDA to evaluate the effect of asymmetry in seismic performance.

EDUCATION

Doctor of Philosophy in Civil Engineering

Colorado State University, Fort Collins, CO, USA   May 2019
- Thesis Topic: *Optimal Stochastic Scheduling of Restoration of Infrastructure Systems from Hazards: An Approximate Dynamic Programming Approach*
- Advisor: Prof. Bruce R. Ellingwood

Master of Science in Computational Sciences

Marquette University, Milwaukee, WI, USA   Aug. 2016
- Research Topic: *Artificial Neural Networks in Structural Reliability*

Master of Science in Civil Engineering

Sharif University of Technology, Tehran, Iran   Sept. 2013
- Thesis Topic: *Effect of Asymmetry on Seismic Behavior of Concrete Structures*

Bachelor of Science in Civil Engineering

Iran University of Science and Technology, Tehran, Iran   Sept. 2011

TECHNICAL SKILLS

Theory: Risk and Reliability Assessment, Natural Hazard Simulation, Optimization, Network Modeling, Portfolio Risk Management, Machine Learning, Performance-Based Engineering.

Programming/Application: R, Python, SQL, Matlab, LaTeX, GIS, Microsoft Office.

CERTIFICATIONS

- Chartered Property Casualty Underwriter (CPCU) by The Institute. Dec. 2022 (expected).
- Associate in Reinsurance (ARe™) by The Institute. Dec. 2022 (expected).
- Spatial Data Science and Applications by Yonsei University on Coursera. Oct. 2018.
- Machine Learning by Stanford University on Coursera. Nov. 2015.
- R Programming by Johns Hopkins University on Coursera. Aug. 2015.

SELECTED PUBLICATIONS (SEE MY GOOGLE SCHOLAR FOR FULL PUBLICATIONS)

1. **Nozhati, S.** (2021). "A resilience-based framework for decision making based on simulation-optimization approach." *Structural Safety.*

2. **Nozhati, S.**, Ellingwood, B.R., and Chong, E.K.P (2020). "Stochastic optimal control methodologies in community resilience planning." *Structural Safety.*

3. **Nozhati, S.**, Ellingwood, B.R., Mahmoud H., and van deLindt J. (2020). "Identifying and analyzing interdependent critical infrastructure in post-disaster urban reconstruction" *11NCEE, L.A., CA.*

4. **Nozhati, S.**, Rosenheim N., and Ellingwood, B.R. (2019). "Probabilistic framework for evaluating food security of households in the aftermath of a disaster." *Structure and Infrastructure Engineering.*