

SINA NAEIMI DAFCHAHI

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EDUCATION

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| Ph.D. University of Delaware, Civil Infrastructure Systems | De. USA Aug. 2019-Present |
| M.Sc. K.N. Toosi university of Technology, Earthquake Engineering Thesis: "Application of Optimization Process & Seismic Loss Modeling Towards Designing Optimum Building Insurance Policy Conditions" Advisor: Dr. MR. Zolfaghari | Tehran, Iran February 2015 |
| B.Sc. University of Guilan, Civil Engineering | Rasht, Iran September 2012 |

RESEARCH EXPERIENCE

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| "Application of Optimization Process & Seismic Loss Modeling towards Designing Optimum Building Insurance Policy Conditions" K.N. Toosi University of Technology, Tehran Advisor: MR. Zolfaghari | 2015 |
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Relying on catastrophe models, insurance industries benefit from a basis for their assessment of portfolio probable losses & keeping those losses under management with the usage of policy conditions on both the insurers and re-insurers. However there are little applicable tools for managing a given sophisticated portfolio of probable liabilities if one is going to manage it under an optimized fashion. Consequently, in order to make a methodology for having an optimized portfolio of assets and liabilities for a catastrophe insurance market, there are some important challenges, some of which include:

- Making a programming model, representing the true index of an insurer and the Interaction between insurer/insured as well as other parties
- Choosing the right method for finding the best policy
- Solving problems arising from multi stage dynamic programming
- Solving the resulting challenge with so called "curse of dimensionality" which constrains the usage and choosing process of models and methods.
- Using proper optimization algorithms(usually meta-heuristic), in contribution to the multi stage dynamic optimization
- Finding the best or at least working parameters for the meta-heuristic optimization algorithm
- Implementing the model through fast computer coding (C++ program coded for this project is available at: <https://www.github.com/15plus15na/sipo>)

TEACHING ASSISTANT EXPERIENCE

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| University of Guilan , Rasht, Iran In Association with Dr. A. Bahar , "Strength of Materials and Steel Structures". | Autumn 2010 |
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PUBLICATIONS

Conference Papers

Zolfaghari, MR. and Naeimi (Dafchahi), Sina, "On Effects of Policy Conditions on Insurance Penetration in Tehran," Proceedings of IDRIM, October 1-3, 2016.

Zolfaghari, MR. and Naeimi (Dafchahi), Sina, "Application of Catastrophe models in Optimum Managements of Seismic Insurance Portfolio," Proceedings of 7th International Conference on Seismology & Earthquake Engineering, May. 18-21, 2015. (In Farsi)

TESTS RESULTS

TOEFL iBT: 105 (R: 28 L: 30 S: 23 W: 24) Dec. 2018

GRE General: 320 Overall (153 Verbal, 167 Quantitative, 3 Analytical Writing) Aug. 2018

PRESENTATIONS AND INVITED LECTURES

Paper Presentation, "On Effects of Policy Conditions on Insurance Penetration in Tehran," IDRIM, 2016.

ACCOMPLISHMENTS

Member of Second Team Winner of the *First National Student Robotic Competition*, Tehran, Iran, Iran's ministry of Education, Fall 2007.

PROFESSIONAL AFFILIATIONS

"Shaft" Delegation Office, Ministry of Roads & Urban Development, Jul. 2016-Apr. 2018
Assistant Engineering

A partial-paid, two-year job instead of conscription (civil service) in which I was in charge of partial monitoring rural roads construction procedures as the main activity of the office, as well as managing different office procedures.

Visroud Souleh, Nov. 2015-Mar. 2016

Re-Designer & Q.C Assistant:

Redesigning those steel structures compartments not applicable due to implantation restrictions. Also I was in charge of providing assistance to the Q.C supervisor

PROFESSIONAL SERVICE

Robotic Competition Co-organizer and 2D soccer Simulation technical panel

1st Caspian (National) Robotic competition, University of Guilan, Spring 2012

LANGUAGES

English: Advanced levels in almost all skills

Farsi: Native speaker

COMPUTER SKILLS

Programming: C++ (Advanced), MATLAB(Advanced), FORTRAN(Intermediate), PYTHON, SQL and PHP(Basic)

Applications: ARCGIS, Seismostruct, Seismosignal, ETABS, SAP

Platforms: Also familiar with Linux based operation systems

INTERESTS

- Machine Learning
- The Application of Optimization in Various Problems
- Catastrophe Risk Management
- Seismic Risk & Hazard Estimation
- Integrated Risk Management
- Agent-based & Numerical Simulation and Optimization
- Catastrophe Modeling & Simulation
- Meta-Heuristic Optimization
- Automation of Processes and Procedures Using Novel Technologies
- Application of Finite Element Modeling of Structures
- Structural Non-linear Modeling

PERSONAL

Date of birth: 20/10/1989

Nationality: Iranian