

# JUAN F. FUNG

juan.fung@nist.gov ◇ [juanfung.github.io](https://juanfung.github.io)

## EDUCATION

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<b>University of Illinois, Urbana-Champaign</b> <i>Ph.D. in Economics, M.S. in Statistics</i>	August 2016 Urbana, IL
<b>University of Missouri-St. Louis</b> <i>M.A. in Economics</i>	May 2008 St. Louis, MO
<b>New York University</b> <i>B.A. in Economics</i>	May 2003 New York, NY

## EXPERIENCE

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| <b>National Institute of Standards and Technology (NIST)</b><br><i>Economist (ZP-04), 40 hours per week</i> | September 2016 - present<br>Gaithersburg, MD |
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- On detail to NIST Office of Diversity, Equity, and Inclusion as Statistical Analyst: Jan 2022-June 2022
  - Developed and disseminated small-business surveys as part of ongoing inter-agency COVID-19 research
  - Leading project to develop statistical models to estimate seismic retrofit costs for Federal buildings, resulting in publications in national and international conferences, peer-reviewed journal articles, and NIST technical series reports
  - Leading empirical and computational modeling and analysis of indirect impacts of investing in resilience
  - Initiated and leading project to conduct economic analysis of enhanced building codes, in collaboration with team of engineers and social scientists from NIST, academia, and industry
  - Initiated and leading cross-OU collaboration to apply Natural Language Processing (NLP) methods to analyze urban planning documents for complementarities and tradeoffs
  - Mentored undergraduate interns (2017, 2018, 2019, 2021) and post-doctoral scholars (2019-present), with diverse backgrounds (physics, engineering, statistics)
  - In collaboration with summer intern (2017), developed open-source (Python) software package to solve Computable General Equilibrium (CGE) models, <https://github.com/juanfung/pycge>.
  - Developed procedure to disseminate our group's research across NIST via economics seminar series

## SELECT PUBLICATIONS

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Fung, Sattar, Butry, McCabe (2021). "The Total Costs of Seismic Retrofits: State of the Art," *Earthquake Spectra*.

Helgeson, Fung, Roa-Henriquez, Zycherman, Nierenberg, Butry, Ramkissoon, Zhang (2021). "Longitudinal Study of Complex Event Resilience of Small- and Medium-Sized Enterprises: Natural Disaster Planning and Recovery During the COVID-19 Pandemic (Wave 2)," NIST Special Publication 1267.

Fung, Hsu (2020). "A Cumulative Offer process for Supply Chain Networks," *Review of Economic Design*.

Fung, Helgeson, Webb, O'Fallon, Cutler (2020). "Does Resilience Yield Dividends? Co-benefits of Investing in Increased Resilience in Cedar Rapids," *Economic Systems Research*.

## TECHNICAL SKILLS

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<b>Programming Languages</b>	R, Python, SQL, TensorFlow, Keras, PyTorch, Spark
<b>Coursera</b>	English (fluent), Spanish (native)
	Deep Learning Specialization (Nov 2018), TensorFlow (May 2020)
	Natural Language Processing (Dec 2020), Reinforcement Learning (in progress)

## OTHER ACTIVITIES

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NIST Toastmasters VP Education	Software Carpentry Instructor	Data Carpentry Maintainer
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