

LEILA MIZRAHI

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Education

PhD in Statistical Seismology	<i>Jul 2019-2022 (expected)</i>
ETH Zurich (Switzerland), Swiss Seismological Service	
Visiting scholar at University of Southern California (Sep 2021-Jan 2022)	
MSc in Mathematics	<i>Feb 2014-Sep 2015</i>
University of Zurich (Switzerland)	
Master's Thesis: " Thoroughly Formalizing an Uncommon Construction of the Real Numbers "	
BSc in Mathematics	<i>Sep 2010-Feb 2014</i>
University of Zurich (Switzerland)	

Professional Experience

Actuary Methods & Processes (Assistant Vice President)	<i>Mar 2019-Jun 2019</i>
Swiss Re Ltd., Underwriting Strategy department, Zurich, Switzerland	
Underwriting Strategy Graduate (graduates@swissre program)	<i>Sep 2017-Feb 2019</i>
Swiss Re Ltd., Underwriting Strategy department, Zurich, Switzerland	
Modelling Intern	<i>Feb 2016-Jan 2017</i>
Swiss Re Ltd., Underwriting Strategy department, Zurich, Switzerland	

Other Relevant Experience

Lecturer	<i>May 2022-present</i>
Department of Earth Science, ETH Zurich (Switzerland)	
Integrated Practical Course on Seismic Networks and Data	
Convener	<i>Apr 2022</i>
SSA Annual Meeting	
Session: New Developments in Physics- and Statistics-based Earthquake Forecasting	
Reviewer	<i>Jun 2021-present</i>
Seismological Research Letters	
Earth and Planetary Science Letters	
Nature Communications Earth & Environment	
On-call Duty Seismologist	<i>Jun 2020-present</i>
Swiss Seismological Service, ETH Zurich (Switzerland)	
Communicate with Swiss authorities and with the public in case earthquakes in Switzerland or abroad.	
Teaching Assistant	<i>Sep 2020-present</i>
Department of Earth Science, ETH Zurich (Switzerland)	
Statistical Data Analysis with Matlab, Geophysical Field Course on Seismic Refraction	

Fieldwork	Jun 2021
Hengill geothermal area (Iceland), Swiss Seismological Service & Reykjavik Energy Assisted with the installation of a 500 node seismic array.	
Fieldwork	Aug 2020
Hengill geothermal area (Iceland), Swiss Seismological Service & ISOR Icelandic Geosurvey Assisted with the installation and dismantling of broadband seismic stations, including wind turbines and solar panels.	
Teaching Assistant	Sep 2013-Sep 2015
Institute of Mathematics, University of Zurich (Switzerland) Analysis I&II, Number Theory, Logic and Set Theory	

Publications

Articles

1. **Mizrahi, L.**, Nandan, S. and Wiemer, S., 2021. Embracing Data Incompleteness for Better Earthquake Forecasting. *Journal of Geophysical Research: Solid Earth*. doi.org/10.1029/2021JB022379
2. **Mizrahi, L.**, Nandan, S. and Wiemer, S., 2021. The Effect of Declustering on the Size Distribution of Mainshocks. *Seismological Research Letters*. doi.org/10.1785/0220200231

Conference Abstracts

1. **Mizrahi, L.**, Nandan, S. Savran, W., Wiemer, S. and Ben-Zion, Y., 2022. Relaxing ETAS's assumptions to better capture the real behavior of seismicity. *Talk*, EGU General Assembly, May 23-27 2022, Vienna, Austria
2. **Mizrahi, L.**, Nandan, S. Savran, W., Wiemer, S. and Ben-Zion, Y., 2022. Relaxing ETAS's assumptions to better capture the real behavior of seismicity. *Talk*, SSA Annual Meeting, April 19-23 2022, Bellevue, WA
3. **Mizrahi, L.**, Nandan, S. and Wiemer, S., 2021. Joint resolving of the fault plane ambiguity and anisotropic earthquake triggering in Southern California. *Poster*, AGU Fall Meeting, December 13-17 2021, New Orleans, LA
4. **Mizrahi, L.**, Nandan, S. and Wiemer, S., 2021. Towards next-generation earthquake forecasting by embracing short-term aftershock incompleteness. *Poster*, SCEC2021 Annual Meeting, September 12-17 2021, online
5. **Mizrahi, L.**, Nandan, S. and Wiemer, S., 2021. The Role of HPC in the Search of Next-Generation Earthquake Forecasting Models. *Talk*, Platform for Advanced Scientific Computing (PASC) Conference, July 5-9 2021, Geneva (Switzerland)
6. **Mizrahi, L.**, Nandan, S. and Wiemer, S., 2021. Embracing Data Incompleteness for Better Earthquake Forecasting. *Talk*, SSA Annual Meeting, April 19-23 2021, online
Receiver of 2021 Student Presentation Award
7. Nandan, S., **Mizrahi, L.** and Wiemer, S., 2021. Is Accounting for Spatial Variation of b-Values Useful for Earthquake Forecasting? *Talk*, SSA Annual Meeting, April 19-23 2021, online

8. **Mizrahi, L.**, Nandan, S. and Wiemer, S., 2020. The Effect of Declustering on the Size Distribution of Mainshocks. *Talk*, Swiss Geoscience Meeting, November 6-7 2020, online
9. **Mizrahi, L.**, Nandan, S. and Wiemer, S., 2020. How ETAS Can Leverage Modern Seismic Networks Without Renouncing Historical Data. *Poster*, EGU General Assembly, May 4-8 2020, online

Code Repositories

1. **Mizrahi, L.**, 2022. Imizrahi/etas: re-organized repository (3.0). *Zenodo*.
doi.org/10.5281/zenodo.6583993

Technical Skills

Sorted from most to least recently used

Python (pandas, numpy, matplotlib, scikit-learn, keras, PySpark, etc.), **Git** (GitLab, GitHub: [Imizrahi](#)), **distributed high performance computing** (using LSF workload management platform), **UNIX shell**, **LaTeX** (Overleaf), **Microsoft Excel**, **Matlab**, **JavaScript** (AngularJS), **SQL**, **MongoDB**

Languages

German (native), **English** (fluent), **French** (advanced), **Spanish** (basic), **Hebrew** (beginner)