Társilo Girona

USA

Geophysical Institute - University of Alaska Fairbanks
Alaska Volcano Observatory
2156 Koyukuk Drive – Rm 413C
Fairbanks AK 99775-7320

Born: 22nd August 1985, Rojales, Alicante, Spain
tarsilo.girona@alaska.edu / www.tgirona.com

Presentation

Prof. Társilo Girona loves nature, cycling, reggae music, dancing bachata, and ice creams. In addition to that, Társilo is a physics-based modeler and data scientist. He graduated in 2009 from the Complutense University of Madrid with a B.Sc. in Physics, and went on to obtain a M.Sc. in Geophysics and Meteorology at the same university. In 2015, he was granted a Ph.D. in Earth Science from Nanyang Technological University, Singapore; and in December 2018, he was granted a Post-Graduate Certificate in Data Science from the University of California, Los Angeles. Between February 2015 and August 2017, Társilo was a postdoctoral researcher at the Earth Observatory of Singapore, Georgia Institute of Technology, and Brown University. Between August 2017 and June 2020, Társilo was a NASA Postdoctoral Fellow at Jet Propulsion Laboratory, California Institute of Technology. Since September 2020, he has been working as a Research Assistant Professor of Volcanology at the University of Alaska Fairbanks (UAF), becoming a member of the Alaska Volcano Observatory and the Leader of the UAF Geophysical Institute's Volcanology Group early in 2022.

Research interests

Társilo's research goal is to understand the subsurface processes that precede and control volcanic eruptions and earthquakes, by deriving new process-based and data-based methodological frameworks. In particular, his work revolves around investigating the physicochemical processes that occur in the solid Earth, and hence he integrates space-borne and ground-based data with a large array of theoretical/numerical approaches that combine multiphase fluid dynamics, rock mechanics, heat transfer, chemical diffusion, phase transitions, and data science techniques. Társilo has over 20 journal publications, including in *Journal of Geophysical Research: Solid Earth, Scientific Reports, PNAS, Nature Geoscience* and *Science*; and over 50 contributions to international conferences.

Honors

- 2023 IUGG Early Career Scientist Award.
- 2019 JPL Outstanding Postdoctoral Research Award (given by the Jet Propulsion Laboratory to best postdoctoral research in Earth Science).
- 2016 AGU Natural Hazards Award for Graduate Research (given by the American Geophysical Union for *"outstanding contributions to natural hazards research by a young scientist"*).

Some ongoing projects

- 2021-2024. NASA NIP (Early Career Investigator Program in Earth Science): "*Large-scale thermal anomalies on volcanoes and their potential as a precursor to eruptions*". PI.
- 2021-2024. NASA ESI (Earth Surface and Interior Program): "*Top-down vs bottom-up: Constraining volcano dynamics by integrating InSAR and thermal time series*". Co-I.
- 2020-2024. NASA IDS (Interdisciplinary Research in Earth Science Program): "Volcanic aerosol impacts on satellite trace gas retrievals: enabling volcanic emission plume composition measurements to track evolving sub-surface magmatic conditions". Co-I.