

Quentin Higuieret

Nationality: French
Born on: May 9, 1997
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Tertiary Education

Grenoble Alpes University, France February 2022 – Present
Ph.D. in Geophysics
Co-advisors: Prof. Florent Brenguier and Prof. Aurelien Mordret

Strasbourg University, France September 2020 – June 2021
M.S. in Geophysics
Co-advisors: Prof. Florent Brenguier and Prof. Aurelien Mordret

Research Experience

Doctoral Research February 2022 – Present

- Modelling body-waves in noise correlations using full waveform simulation
- Noise-based seismic monitoring using ballistic waves on the San Jacinto Fault (CA).
- Detection of microseismicity along the San Jacinto Fault (CA).

Master's Research February 2021 – June 2021

- Analysis of earthquakes on the San Jacinto Fault (CA) using seismic stereometry.

Field Experience

- Led a small team to deploy and manage 300 seismic stations for the FaultScan array along the San Jacinto Fault Zone.
- Coordinated daily operations, including setup, maintenance, and data acquisition to ensure array functionality.

Teaching

Courses on seismology and seismic imaging for Master's students (40 hours).

Activities

PhD Delegate

August 2022 – July 2023

Leadership role (80 members, \$6k annual budget)

- Organized the 2023 annual PhD congress, including 70 PhD students oral submissions.

Journal Articles

Higueret Quentin, Sheng Yixiao, Mordret Aurelien, Brenguier Florent, Boué Pierre, Fichtner Andreas, Vernon Frank, Krischer Lion, Hollis Dan, Aubert Coralie, Ben-Zion Yehuda (2024). “Body-Waves from Train Noise Correlations: Potential and Limits for Monitoring the San Jacinto Fault, CA”. In: *Geophysical Journal International*. Submitted.

Higueret Quentin, Sheng Yixiao, Mordret Aurelien, Brenguier Florent, Boué Pierre, Vernon Frank, Hollis Dan, Aubert Coralie, Ben-Zion Yehuda (2024). “A Novel Large-N Seismic Array for an Enhanced Understanding of the San Jacinto Fault Dynamics”. In: *Seismological Research Letters*. In preparation.

Paris Nicolas, Itoh Yuji, Brenguier Florent, Wang Qing-Yu, Sheng Yixiao, Okada Tomomi, Uchida Naoki, **Higueret Quentin**, Takagi Ryota, Sakai Shin’ichi, Hirahara Satoshi, Kimura Shu’utoku (2024). “Coseismic crustal seismic velocity changes associated with the 2024 Mw 7.5 Noto earthquake, Japan”. In: *Earth, Planets and Space*. Submitted.

Sheng Yixiao, Brenguier Florent, Mordret Aurélien, **Higueret Quentin**, Aubert Coralie, Pinzon-Rincon Laura, Hollis Daniel, Vernon Frank, Wyatt Frank, Ben-Zion Yehuda (2024). “In situ velocity-strain sensitivity near the San Jacinto Fault Zone analyzed through train tremors”. In: *Geophysical Research Letters* 51.15, e2024GL110113.

Sheng Yixiao, Mordret Aurélien, Brenguier Florent, Tomasetto Lisa, **Higueret Quentin**, Aubert Coralie, Hollis Dan, Vernon Frank, Ben-Zion Yehuda (2024). “Tracking Seismic Velocity Perturbations at Ridgecrest Using Ballistic Correlation Functions”. In: *Seismological Research Letters* 95.4, pp. 2452–2463.

Sheng Yixiao, Mordret Aurélien, Sager Korbinian, Brenguier Florent, Boué Pierre, Rousset Baptiste, Vernon Frank, **Higueret Quentin**, Ben-Zion Yehuda (2022). “Monitoring seismic velocity changes across the San Jacinto Fault using train-generated seismic tremors”. In: *Geophysical Research Letters* 49.19, e2022GL098509.

Conference Proceedings

Brenguier Florent, Sheng Yixiao, **Higueret Quentin**, Mordret Aurélien, Vernon Frank, Hollis Dan, Aubert Coralie, Pinzon-Rincon Laura, Ben-Zion Yehuda (2023). “A long-term, 300 nodes seismic array to monitor seismic velocities across the San Jacinto Fault (South. Cal.)” In: *AGU Fall Meeting Abstracts*. Vol. 2023. 396, S23D–0396.

Higueret Quentin, Sheng Yixiao, Mordret Aurélien, Brenguier Florent, Boué Pierre, Fichtner Andreas, Vernon Frank, Ben-Zion Yehuda, Hollis Dan, Aubert Coralie (2023). “Modelling Body-Waves in Noise Correlations: Seismic Velocity Monitoring at the San Jacinto Fault, CA”. In: *AGU Fall Meeting Abstracts*. Vol. 2023, S13A–03.

Hollis Dan, Aubert Coralie, Brenguier Florent, Sheng Yixiao, Vernon Frank, Ben-Zion Yehuda, Mordret Aurélien, Pinzon-Rincon Laura, Jung Axel, **Higueret Quentin** (2023). “Field Management of a Long-Term, Large-N Nodal Seismic Array”. In: *AGU Fall Meeting Abstracts*. Vol. 2023, S13A–07.

Sheng Yixiao, Mordret Aurélien, Tomasetto Lisa, **Higueret Quentin**, Brenguier Florent, Boué Pierre, Vernon Frank, Hollis Dan, Aubert Coralie, Ben-Zion Yehuda (2023). “Body-wave-based seismic velocity perturbation analyses in Ridgecrest, CA”. In: *AGU Fall Meeting Abstracts*. Vol. 2023, S12A–07.

Higueret Quentin, Sheng Yixiao, Mordret Aurélien, Boué Pierre, Brenguier Florent, Fichtner Andreas, Vernon Frank, Ben-Zion Yehuda (2022). “Long-range Noise Correlation Modeling for Seismic Velocity Monitoring of Fault Zones.” In: *AGU Fall Meeting Abstracts*. Vol. 2022, S12A–06.