

Javier Ojeda Vargas

Doctoral Researcher in Earth Sciences

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CURRENT POSITION	Ph.D. candidate in Earth and Environmental Sciences (<i>cotutelle</i>) <ul style="list-style-type: none">• Universidad de Chile, Departamento de Geofísica & Departamento de Geología• Université Paris Cité, Institut de Physique du Globe de Paris Project: Interaction between fast and slow earthquakes along the Chilean subduction zone	2021 – Today
EDUCATION	M.Sc. in Geophysics • Universidad de Chile B.S. in Geophysics • Universidad de Chile Engineering and Science Program • Universidad de Chile	2017 – 2018 2015 – 2016 2011 – 2014
RESEARCH INTERESTS	Seismology and Geodesy Research • Seismic and aseismic slip behavior in subduction zones and active fault systems • Earthquake engineering and strong ground motion simulations to assess seismic hazard • Social seismology and science communication	
PUBLICATIONS	In Prep., Submitted or Under Revision [12*] Ojeda, J., Nocquet, J.-M., Ruiz, S., et al. (2024). Global distribution of short-term transient deformation in continuous GPS times series. [11*] Kondo, Y., Obayashi, M., Sugioka, H., Shiobara, H., Ito, A., Shinohara, M., Iwamori, H., Kinoshita, M., Miller, M., Tassara, C., <u>Ojeda, J.</u> (2024). Seismic Image of the Central to Southern Andean Subduction Zone Through Finite-Frequency Tomography. [10*] Arriola, S., Gutierrez, C., <u>Ojeda, J.</u> , Flores, Ch., Otarola, C., Akinci, A., Ruiz, S. (2024). Parallel Wave SIMulation code (PWSIM) to reproduce high-frequency strong ground motion records. In Peer-reviewed journals [9] Flores, Ch., <u>Ojeda, J.</u> , Otarola, C., Arriola, S., Ruiz, S. (2023). Stochastic strong ground motion simulation in the Santiago Metropolitan region considering an Mw 7.8 intraplate intermediate-depth earthquake. <i>J. South. Am. Earth Sci.</i> , 130, 104501 [8] Ito, A., Shiobara, H., Miller, M., Sugioka, H., <u>Ojeda, J.</u> , Tassara, C., Shinohara, M., Kinoshita, M., Iwamori, H. (2023). Long-term Array Observation by Ocean Bottom Seismometers at the Chile Triple Junction. <i>J. South. Am. Earth Sci.</i> , 124, 104285 [7] <u>Ojeda, J.</u> , Morales-Yáñez, C., Ducret, G., Ruiz, S., Grandin, R., Doin, M.-P., Vigny, C., Nocquet, J.-M. (2023). Seismic and aseismic slip during the 2006 Copiapó swarm in North-Central Chile. <i>J. South. Am. Earth Sci.</i> , 123, 104198 [6] Tissandier, R., Nocquet, J.-M., Klein, E., Vigny, C., <u>Ojeda, J.</u> , and Ruiz, S. (2023). Afterslip of the Mw8.3 2015 Illapel earthquake imaged through a time-dependent inversion of continuous and survey GNSS data. <i>J. Geophys. Res.: Solid Earth</i> , 128, e2022JB024778 [5] <u>Ojeda, J.</u> , Akinci, A., Tinti, E., Arriola, S., and Ruiz, S. (2021). Hybrid Broadband Strong-Motion Simulation to investigate the near-source Characteristics of the M6.5, 30 October 2016 Norcia, Italy Earthquake. <i>Soil Dyn. Earthq. Eng.</i> , 149, 106866 [4] <u>Ojeda, J.</u> and Ruiz, S. (2021). Seismic noise variability as an indicator of urban mobility during the COVID-19 pandemic in the Santiago metropolitan region, Chile. <i>Solid Earth</i> , 12, pp. 1075-1085 [3] Lecocq, T., et al., including <u>Ojeda, J.</u> (2020). Global quieting of high-frequency seismic noise due to COVID-19 pandemic lockdown measures. <i>Science</i> , 369(6509), 1338-1343 [2] <u>Ojeda, J.</u> , Ruiz, S., del Campo, F., Carvajal, M. (2020). The 1960 May 21 Mw 8.1 Concepción earthquake: A deep megathrust foreshock that started the 1960 central-south Chilean seismic sequence. <i>Seismol. Res. Lett.</i> , 91(3), 1617-1627 [1] Ruiz, S., <u>Ojeda, J.</u> , et al. (2018). Stochastic strong motion simulation in borehole and on surface for the Mw 9.0 Tohoku-Oki 2011 mega-earthquake considering P, SV and SH amplification transfer functions. <i>Bull. Seismol. Soc. Am.</i> , 108(5A), 2333–2346	

SCIENTIFIC COMM.	Seminars [1] Seismic and aseismic slip during the 2006 Copiapó swarm in North-Central Chile. Mardi Séismes, Géoazur, 29 Nov. 2022
	Selected presentations at conferences. Full list available here [4] Global search of short-term transient in continuous GPS time series. At the <i>American Geophysical Union Annual Meeting 2023</i> . Invited Talk [3] Exploratory Search of Fluid Signature along the North-Central Chile Subduction Margin using Seismo-geodesy. At the <i>American Geophysical Union Fall Meeting 2022</i> . Poster [2] High-frequency strong ground-motion simulation for the 2016 Mw 7.0 Kumamoto earthquake. At the <i>European Geoscience Union General Assembly 2021</i> . Talk [1] 60 years after the 1960 Central-South Chilean earthquakes: what have we learned and what we still need to understand. At the <i>American Geophysical Union Fall Meeting 2020</i> . Talk
RESEARCH EXPERIENCE	Research visits Géoazur, Université Côte d'Azur, Valbonne, France Nov 2022 Istituto Nazionale di Geofisica e Vulcanologia, Rome, Italy Jul 2019 & Dec 2019 Institute de Physique du Globe de Paris, France Nov 2017
	Departamento de Geofísica, Universidad de Chile Graduate Research Assistant 2020 & 2022 <ul style="list-style-type: none"> • Generation of artificial accelerograms in northern Chile • Analysis of ambient seismic noise in seismological stations within the Metropolitan Region, Chile
	Programa de Riesgo Sísmico, Universidad de Chile Research Assistant 2017 – 2019 <ul style="list-style-type: none"> • Simulation of synthetic strong motion records for shallow and mega-earthquakes • Bayesian inversion of the slip distributions for the Mw 8.1 and Mw 9.5 Chilean earthquakes occurred in May 1960 • Seismic hazard analysis in the coastal area of Navidad, Central Chile
	FONDECYT, ANID - Technical staff Nº 1170430. The relation among small, large, and mega-earthquakes in Central Chile 2016 & 2018 Nº 11130230. Mega-earthquakes scenarios in Chile and Synthetic Strong Motion Simulation
GRANTS, FELLOWSHIPS & AWARDS	<ul style="list-style-type: none"> ▪ International Mobility Grant • Institute de Physique du Globe de Paris 2023 ▪ ANID Complementary Benefit - Internship 2023 ▪ ANID Complementary Benefit - Cotutelle 2021 ▪ ANID Complementary Benefit - Operational costs 2021 & 2022 ▪ Travel Grant • American Geophysical Union 2020 ▪ ANID Chilean Doctoral Scholarship 2020 – 2024 ▪ Grant for a short stay in Japan • JASSO and SEELA Sep 2018 ▪ Grant for a short stay in France • VAA Universidad de Chile Nov 2017 – Feb 2018 ▪ Outstanding student • Universidad de Chile 2014 & 2015 ▪ Academic Excellence Scholarship • Universidad de Chile 2011 – 2016
SCIENTIFIC SERVICE	SZ4Grads Andes Sur Executive Committee Member 2023 - Today Meeting coordination AndesNet Scientific Discussion meetings 2023 GeoCharlas T3 talks: Tectónica, Terremotos y Tsunamis 2020 Conference coordination V Postgraduate workshop in Geophysics, U. Chile 2023 Congrès Des Doctorants 2022, École Doctorale 560 2022 III Postgraduate workshop in Geophysics, U. Chile 2020 I Postgraduate workshop in Geophysics, U. Chile 2018 II Colloquium of Geophysical Signatures of Earthquakes and Volcanoes, U. Chile 2016 Professional memberships Colegio de Geofísicas y Geofísicos de Chile, founder-partner since 2023 American Geophysical Union since 2018

TEACHING EXPERIENCE	Lecturer, main instructor , Universidad de Chile Postgraduate Geophysics Workshop	2023
	Teaching Assistant , Universidad de Chile Theoretical Seismology	2020; 2021; 2023
	Applied Seismology	2017 – 2018; 2022 – 2023
	Seismology Graduate Diploma	2016 – 2018; 2020 – 2022
	GNSS and their application to Earthquake Research	2021
	Seismology	2015 – 2018; 2020 – 2021
	Earthquakes in Chile	2017 – 2018
	Introduction to Meteorology and Oceanography	2015
FIELDWORK EXPERIENCE	Project ANR S5, ENS, ITES , GPS campaign and cGPS maintenance. Atacama, Chile ERI-U. Tokyo project , Recovery of BB and LT OBS. Taitao Peninsula, CTJ. PIA-Anillo ACT172002 project , Magnetic field measurements. Atacama, Chile. US-NSF PICTURES project , Short-period seismometers deployment. Iquique, Chile.	Nov 2023 Feb 2021 Oct 2018 Nov 2016
OUTREACH EXPERIENCE	Fundación Geonautas , Co-founder of a non-profit organization Rocadictos , Panelist in an Earth Science radio show hosted by U. de Chile Tatemblando , Co-creator in a Seismology podcast hosted by Spotify EGU Early Career Scientist, Seismology Division , co-representative Geociencias para Terrícolas , member Geociencias para Políticas Públicas , member Explora , Ministry of Science, Technology, Knowledge and Innovation, Chile RMSP. Scientific collaborator in FECI20, FECI21, FECI22 and Ciencia Abierta RMSP. Advisor in Project Earthquake and Nuclear Reactor. Ascensión Nicol school, Estación Central RMSP. Advisor in Project Zeolite and Water. Cristobal Colón school, Melipilla RMSO. Advisor in Project Seismology Science Academy. Nocedal school, La Pintana RMSO. Exhibition coordinator, Exposismos 1000C1000A. Dissemination talks in educational schools in Chile Explora VA! Camp. Workshop: Inquiry for the understanding of natural phenomena Monitor at Science Festivals , Santiago, Chile III Engineering and Sciences Festival (2016) Scientific-Citizen festival, International Day for Disaster Risk Reduction (2016) Technology Festival CONICYT FONDECYT 11130230 (2014)	2021 – Today 2021 – Today 2020 – Today 2020 – 2022 2019 – 2021 2016 – 2018 2016 – Today 2014 - 2016
LANGUAGES	English (Fluent) • French (Basic) • Spanish (Native)	
COMPUTER SKILLS	OS: Linux • Windows Languages: Python • MATLAB • C • Bash • L ^A T _E X Software: SAC • PYACS • SEISAN • Coseismic • GMT • FMNEAR • Office • Inkscape	
REFERENCES	<ul style="list-style-type: none"> ▪ Ph.D. Sergio Ruiz, Associate Professor, sruiz@uchile.cl Departamento de Geofísica, Universidad de Chile Blanco Encalada 2002, Santiago, Chile ▪ Ph.D. Jean-Mathieu Nocquet, Directeur de recherche IRD, nocquet@geazur.unice.fr Université Côte d'Azur, Geoazur & Institute de Physique du Globe de Paris 250 Rue Albert Einstein, 06560 Valbonne, France ▪ Ph.D. Aybige Akinci, Senior Researcher, aybige.akinci@ingv.it Istituto Nazionale di Vulcanologia e Sismologia Via di Vigna Murata, 605, 00143 Roma RM, Italia ▪ Ph.D. Fabian Bonilla, Directeur de recherche, fabian.bonilla@univ-eiffel.fr Université Gustave Eiffel & Institute de Physique du Globe de Paris 14-20 Boulevard Newton, Cité Descartes, Champs sur Marne, F-77447 Marne la Vallée Cedex 2 	

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