

Prof. Dr. Céline M. Hadziioannou

CONTACT INFORMATION	Institute of Geophysics University of Hamburg Bundesstrasse 55 20146 Hamburg Germany	Phone: +49 (0)40 42838 2980 ORCID.ORG/0000-0002-5312-2226 celine.hadziioannou@uni-hamburg.de http://celine.hadzii.com
CITIZENSHIP	French and Greek	
DATE OF BIRTH	April 29, 1983	
RESEARCH INTERESTS	Ambient seismic noise and its sources; Ocean–Solid-Earth interaction, Seismic interferometry; Scattered wavefields; Coda waves; Monitoring time-dependent material changes; Emerging seismic sensing technology	
ACADEMIC APPOINTMENTS	University of Hamburg <i>Professor in Seismology</i> (Parental leave: full time 03.2020 – 10.2020; part time 10.2020 – 04.2021)	Hamburg, Germany 2017 – present
	Ludwig-Maximilians University Munich (LMU) <i>Leader of the Emmy Noether Research Group</i> “The origin of Love waves in the ocean generated noise wave field”	Munich, Germany 2013 – 2017
	Ludwig-Maximilians University Munich (LMU) <i>Postdoctoral Researcher</i> Marie Curie QUEST ITN Postdoctoral fellow Research: “Rotational motions, ambient noise and diffuse wavefields”	Munich, Germany 2011 – 2013
EDUCATION	Institut des Sciences de la Terre (ISTerre) <i>PhD, Seismology</i> Research: “Seismic waves in complex media: measuring temporal velocity variations” Advisors: Prof. Dr. Michel Campillo and Dr. Eric Larose	Grenoble, France 2007 – 2011
	Universiteit van Utrecht (UU) <i>Master of Science, Geophysics</i>	Utrecht, the Netherlands 2005 – 2007
	Rijksuniversiteit Groningen (RuG) <i>Bachelor of Science, Astrophysics</i>	Groningen, the Netherlands 2001 – 2005
PROFESSIONAL SERVICE	Coordinator & PI of EU Horizon 2020 MCSA-ITN project “ SPIN - Monitoring a Restless Earth ”	2020 – 2025
	Co-Coordinator (with Prof. Oliver Gerberding) of the WAVE initiative establishing a seismo-acoustic sensor network on the DESY campus	2020 – present
	Co-Lead (with Prof. Frank Krüger) of the AnalogSeis project aims at the preservation of German legacy seismogram archives	2023 – 2026
	External Review and Advisory Board + Ethics Advisor of EU Horizon Europe research infrastructure project “ Geo-INQUIRE ”	2022 – present
	External advisory board for the “ SeismoStorm ” project, which aims to make Belgian analog seismograms publicly available	2021 – present
	Representative of LMU and the University of Hamburg as associate partner in EU Horizon 2020 ITN “ WAVES ” (coordinated by Dr. Lapo Bosci, UPMC Paris)	2015 – 2018
	Work package leader in EU Horizon 2020 COST action “ TIDES ” (coordinated by Dr. Andrea Morelli, INGV Bologna)	2014 – 2017
	Project partner in the ERC project “ ROMY ” (PI: Prof. Dr. Heiner Igel, LMU)	2014 – 2019

Member of **Faculty council** for the **Faculty** of Mathematics, Informatics and Natural Sciences, University of Hamburg 2023 – present

Member of **Department council** for the Department of Earth System Sciences, University of Hamburg 2022 – present

Examination board of Geophysics Bachelor and Master programme 2020 – present

Member of the committee for **Hamburg State Graduate Funding Program scholarships** 2019 – present

Member of the **DEPAS pool** steering committee (German instrument pool for amphibian seismology) 2018 – present

Member of LMU **University Research Board** 2014 – 2019

Member of the German Geophysical Society (DGG) **Equal opportunity committee** 2018 – present

Mentor in the DGG+AGU **Mentoring365** programme 2020 – present

SCIENTIFIC
COMMUNITY
SERVICE

Invited Session Convener & Chair of "Seismic Noise and Coda Waves" session at the 84th yearly meeting of the German Geophysical Society (DGG) 2024

Lead Organizer of the **SPIN fourth Workshop**, Switzerland 2024

Lead Organizer of the **SPIN fourth Short Course**, Switzerland 2024

Scientific Committee of the workshop "Passive imaging and monitoring in wave physics", Cargese, France 2024

Lead Organizer of the **SPIN third Workshop**, Pitlochry, UK 2023

Lead Organizer of the **SPIN third Short Course**, Pitlochry, UK 2023

Scientific Committee 6th **IWGoRS Workshop** on Rotational Seismology in Paris, France 2022

Lead Organizer of the **SPIN second Workshop**, Carcans, France 2022

Lead Organizer of the **SPIN second Short Course**, Carcans, France 2022

Lead Organizer of the **SPIN first Workshop**, Tutzing, Germany (Online due to Covid) 2021

Organization Committee **COST-TIDES** 4th Training school in Prague, Czech Republic 2018

Organization Committee **AMÜSE** PhD Conference in Hinterriss, Austria 2016

Organization Committee 4th **IWGoRS Workshop** on Rotational Seismology in Tutzing, Germany 2016

Lead Organizer of **Workshop "The Earth's Hum"** in Munich 2014

Organization Committee for the 4th **QUEST-ITN workshop** 2013

Organization Committee Workshop "**Noise and Diffuse Wavefields**" in Neustadt an der Weinstrasse, Germany 2012

Session Convener & Chair of the yearly Ambient Seismic Noise session at **EGU** General Assembly, Vienna, Austria 2012–2021

Session Convener of Rotational Seismology session at **EGU** General Assembly, Vienna, Austria 2018–2019; 2022

Invited Session Convener & Chair of "Seismic Noise" session at the 76th yearly meeting of the German Geophysical Society (DGG) 2016

Session Convener & Chair, **AGU** Fall Meeting, San Fransisco, USA 2015

Peer Reviewer for Research grants (French National Research Agency (ANR), Helmholtz Association, ETH Research commission, LMU Research Board) and for Scientific journals (GRL, GJI, JGR, J. Appl. Geophysics, J. of Seism., Nature Communications, Earth, Planets and Space, ...)

HONOURS &
AWARDS

Emmy Noether research fellowship (DFG) 2013
 Member of the LMU **Center for Advanced Studies (CAS LMU)** 2014 – 2017
 Nominated by the DFG as member of **AcademiaNet** 2014
 ([profiles](#) of leading women scientists)

REFEREED
JOURNAL
PUBLICATIONS

- Citations \approx 2000; h-index 18; Source: Google Scholar [WvhdbrgAAAAJ](#)
- Students under my supervision are indicated with a red star*, postdocs with two black stars **
 - R. Maass*, S. Schippkus**, C. Hadziioannou, B. Schwarz, P. Jousset, C. Krawczyk, Stacking of distributed dynamic strain reveals link between seismic velocity changes and the 2020 unrest in Reykjanes, submitted to *J. of Geophys. Res.: Solid Earth*
 - 35. S. Schippkus**, M. Safarkhani*, C. Hadziioannou, Continuous isolated noise sources induce repeating waves in the coda of ambient noise correlations, *Seismica*, 2(2) 2023
 - 34. C. Bruland*, C. Hadziioannou, Gliding tremors associated with the 26 second microseism in the Gulf of Guinea, *Nature Communications Earth & Environment* 4, 176 2023
 - 33. J. Pelaez Quiñones*, D. Becker**, C. Hadziioannou, Beamforming of Rayleigh and Love waves in the course of Atlantic cyclones, *J. Geophys. Res. Solid Earth* 128.2 e2022JB025050, preprint [here](#) 2023
 - 32. S. Schippkus**, R. Snieder, C. Hadziioannou, Seismic interferometry in the presence of an isolated noise source, *Seismica* 1(1) (community-driven diamond open-access journal), preprint [here](#) 2022
 - 31. C-M Liao, K. Hicke, F. Bernauer, H. Igel, C. Hadziioannou, E. Niederleithinger, Multi-Sensor measurements on a large-scale bridge model, conference abstract at [5. Brückenkolloquium 2022](#) 2022
 - 30. S. Schippkus**, C. Hadziioannou, Matched field processing accounting for complex Earth structure: method and review, *Geophys. J. Int.*, 231(2) preprint [here](#) 2022
 - 29. D. Essing*, V. Schlindwein, M. C. Schmidt-Aursch, C. Hadziioannou, Simon Stähler Characteristics of current-induced harmonic tremor signals in ocean bottom seismometer records, *Seismol. Res. Lett.* 92(5) 2021
 - 28. R. Steinmann*, E. Larose, C. Hadziioannou Effect of centimetric freezing of the near subsurface on Rayleigh and Love wave velocity in ambient seismic noise correlations *Geophys. J. Int.* 224.1 2021
 - 27. H. Igel, K. U. Schreiber, A. Gebauer, F. Bernauer, S. Egdorf, A. Simonelli, C-J. Lin, J. Wassermann, S. Donner, C. Hadziioannou, S. Yuan, A. Brotzer, J. Kodet, T. Tanimoto, U. Hugentobler, and J. P. R. Wells ROMY: A Multi-Component Ring Laser for Geodesy and Geophysics, *Geophys. J. Int.* 225.1 2020
 - 26. D. Becker**, L. Cristiano, J. Peikert, T. Kruse, F. Dethof*, C. Hadziioannou, and T. Meier, Temporal modulation of the local microseism in the North Sea, *J. Geophys. Res. Solid Earth*, 125 (10) 2020
 - 25. C. Hadziioannou, J. Salvermoser*, R. Steinmann*, L. Marten*, E. Niederleithinger Structural health monitoring meets ambient noise seismology *Solicited extended abstract for EAGE "1st Conference on Geophysics for Infrastructure Planning Monitoring and BIM, 2019" (peer reviewed)* 2019
 - 24. M. van Driel, S. Ceylan, J. F. Clinton, D. Giardini, R. Weber, P. Lognonné, B. Banerdt, M. Drilleau, N. Murdoch, M. Panning, R. Garcia, D. Mimoun, M. Golombek, J. Tromp, M. Böse, I. Daubar, B. Kenda, A. Khan, L. Perrin, A. Spiga, M. S. Boxberg, M. Parath, M. Ditz, A. Lamert, T. Möller, S. Zhang, D. Ambrois, J. Chêze, F. Peix, H. Alemany, D. Mercerat, J. Balestra, A. Deschamp, C. Twardzik, L. Rolland, S. Mader*, L. Marten*, C. Schröer*, D. Becker**, T. Casademont*, F. Dethof*, D. Essing*, K. Grunert*, C. Hadziioannou, I. Hochfeld*, T. Kilchling*, F. Mehrkens*, P. Neumann*, R. Neurath*, R. Steinmann*, N. Trumpik*, P. Werdenbach-Jarklowski*, H. Hu, J. Li, Y. Zheng, E. Stutzmann, M. Schimmel, C. Hammer, B. Knapmeyer-Endrun, S. C. Stähler, N. Brinkman, S. Kedar, F. Euchner, B.

- Fernando, M. Tsekhmistrenko, K. Hosseini, C. Haindl, H. Godwin, A. Szenicer, T. Garth, and A. Allam
Preparing for InSight: Evaluation of the Blind Test for Martian Seismicity
Seismol. Res. Lett. **2019**
- 23.** S. Stähler, M. Panning, **C. Hadziioannou**, R. Lorenz, S. Vance, K. Klingbeil, S. Kedar
Seismic signal from waves on Titan's seas
Earth and Planetary Science Letters 520, 250–259 **2019**
- 22.** B. Chow*, J. Wassermann, B. Schuberth, **C. Hadziioannou**, S. Donner and H. Igel
Love wave amplitude decay from rotational ground motions
Geophys. J. Int. 218(2) 1336–1347 **2019**
- 21.** L. Gualtieri, E. Stutzmann, C. Juretzek*, **C. Hadziioannou** and F. Arduin
Global scale analysis and modeling of primary microseisms,
Geophys. J. Int. 218(1) **2019**
- 20.** D. Ziane* and **C. Hadziioannou**
The contribution of multiple scattering to Love wave generation in the secondary microseism, *Geophys. J. Int.* 217 (2) **2019**
- 19.** L. Krischer, S. Donner, M. van Driel, **C. Hadziioannou**, M. Koymans, J. Leeman, F. Lindner, T. Megies, C. Nunn, A. Rijal, J. Salvermoser*, T. Taufiqurrahman, S. Wollherr, D. Vargas, J. Wassermann, F. Wöfl, C. Tape and H. Igel
Seismo-Live: An Educational Online Library of Jupyter Notebooks For Seismology,
Seismol. Res. Lett., 89 (6) **2018**
- 18.** S. Hable, K. Sigloch, G. Barruol, S. C. Stähler, **C. Hadziioannou**
Clock errors in land and ocean bottom seismograms: High-accuracy estimation using multiple component noise cross-correlations, *Geophys. J. Int.*, 214(3) **2018**
- 17.** F. Lindner, C. Weemstra, F. Walter, **C. Hadziioannou**
Towards Monitoring the englacial fracture state using virtual-reflector seismology,
Geophys. J. Int., 214(2) **2018**
- 16.** C. Juretzek*, **C. Hadziioannou**,
Linking source region and ocean wave parameters with the observed primary microseismic noise, *Geophys. J. Int.*, 211(3), p1640-1654, **2017**
- 15.** S. Donner, C.-J. Lin, **C. Hadziioannou**, A. Gebauer, F. Vernon, D. C. Agnew, H. Igel, U. Schreiber, J. Wassermann,
Comparing direct observation of strain, rotation, and translation with array estimates at Pinon Flat Observatory, California, *Seismol. Res. Letters* 88 (4) **2017**
- 14.** J. Salvermoser*, **C. Hadziioannou**, S. Hable*, L. Krischer, B. Chow, C. Ramos, J. Wassermann, U. Schreiber, A. Gebauer, H. Igel,
An event database for rotational seismology, *Seismol. Res. Letters* 88 (3), **2017**
- 13.** T. Tanimoto, C.-J. Lin, **C. Hadziioannou**, H. Igel, F. Vernon,
Estimate of Rayleigh-to-Love wave ratio in the secondary microseism by a small array at Piñon Flat Observatory, California, *Geophys. Res. Lett.*, 43, **2016**
- 12.** C. Juretzek*, **C. Hadziioannou**,
Where do ocean microseisms come from? A study of Love-to-Rayleigh wave ratios,
J. Geophys. Res. Solid Earth, 121, **2016**
- 11.** A. Obermann, T. Planès, **C. Hadziioannou**, M. Campillo,
Lapse-time dependent coda wave depth sensitivity to local velocity perturbations in 3-D heterogeneous elastic media, *Geophys. J. Int.*, 207 (1), 59-66 **2016**
- 10.** C. Wu, A. Delorey, F. Brenguier, **C. Hadziioannou**, E. Daub, P. Johnson,
Constraining depth range of S-wave velocity decrease after large earthquakes near Parkfield, California, *Geophys. Res. Lett.*, 43 **2016**
- 9.** J. Wassermann, A. Wietek*, **C. Hadziioannou**, H. Igel,
Toward a Single Station Approach for Microzonation: Using Vertical Rotation Rate to Estimate Love-Wave Dispersion Curves and Direction Finding, *BSSA*, 106 (3) **2016**
- 8.** T. Tanimoto, **C. Hadziioannou**, H. Igel, J. Wassermann, U. Schreiber, A. Gebauer, B. Chow,
Seasonal variations in the Rayleigh-to-Love wave ratio in the secondary microseism from co-located ring laser and seismograph, *J. Geophys. Res. Solid Earth*, 121, **2016**
- 7.** J. Salvermoser*, **C. Hadziioannou**, S. Stähler,
Structural monitoring of a highway bridge using passive noise recordings from street traffic, *J. of the Acoust. Soc. Am.*, **138**, 3864 **2015**

6. T. Tanimoto, **C. Hadziioannou**, H. Igel, J. Wasserman, U. Schreiber, A. Gebauer, Estimate of Rayleigh-to-Love wave ratio in the secondary microseism by co-located ring laser and seismograph, *Geophys. Res. Lett.*, 42 **2015**
5. **C. Hadziioannou**, P. Gaebler, U. Schreiber, J. Wassermann, H. Igel, Examining ambient noise using co-located measurements of rotational and translational motion, *Journal of Seismology*, 16(4), 787–796, **2012**
4. **C. Hadziioannou**, E. Larose, A. Baig, P. Roux, M. Campillo, Improving Temporal Resolution in Ambient Noise Monitoring of Seismic Speed, *J. Geophys. Res.* 116: B0730, **2011**
3. R. Weaver, **C. Hadziioannou**, E. Larose, M. Campillo, On the precision of noise correlation interferometry, *Geophys. J. Int.* 185, 1384–92, **2011**
2. **C. Hadziioannou**, E. Larose, O. Coutant, P. Roux, M. Campillo, Stability of monitoring weak changes in multiply scattering media with ambient noise correlation: Laboratory experiments, *J. of the Acoust. Soc. Am.* 125, 3688–95, **2009**
1. F. Brenguier, M. Campillo, **C. Hadziioannou**, N. Shapiro, R. Nadeau, E. Larose, Postseismic relaxation along the San Andreas fault at Parkfield from continuous seismological observations, *Science* 321, 1478–81, **2008**
- EDITED BOOKS & BOOK CHAPTERS
- S. Donner, H. Igel, **C. Hadziioannou** and the ROMY Group
Retrieval of the seismic moment tensor from joint measurements of translational and rotational ground motions, In: “*Moment Tensor Solutions - A Useful Tool for Seismotectonics*” (Springer; Editor: Sebastiano D’Amico), **2018**
- A. Schmidt, C. Sens-Schönfelder, **C. Hadziioannou**, U. Wegler, E. Niederleitingner (Editors), Noise and Diffuse Wave Fields, Extended Abstracts of the Neustadt Workshop, *Mitteilungen Deutsche Geophysikalische Gesellschaft e. V.*, Sonderband IV/2012; **2012**
- OUTREACH
- SPIN Youtube channel**
University of Hamburg – Seismology group’s Youtube channel
- S. Donner, A. Devdariani*, **C. Hadziioannou**, K. Hannemann, R. Maaß*, **2022**
T. Martin, K. Schwalenberg
Weiblich oder männlich, das ist hier die Frage! Wirklich? – Geschlechtsbezogene Statistiken der DGG – *DGG-Mitteilungen (Rote Blätter)*
- A. Morelli, **C. Hadziioannou**, C. Bean. **2017**
Time Dependent Seismology. *Impact* 2017, no. 1 p74-76,
- FUNDING
- BMBF collaborative project **2023 – 2027**
“**3G-GWD II**: Third Generation Gravitational Wave Telescope” – second phase
co-PI; UHH approximately 571k€; my project ± 200k€
- BMBF collaborative project **2023 – 2026**
“**ErUM-WAVE**”: Anticipation of 3-dimensional wave fields
co-PI; UHH approximately 513 k€; my project ± 230 k€
- BGR**-Funded project “**AnalogSeis**”: **2023 – 2026**
Preserving and digitizing German legacy seismogram archives
co-PI; approximately 547 k€;
- Coordinator** of H2020-MSCA-ITN “**SPIN**” (European Commission): **2021 – 2025**
European Training Network with 15 PhD positions,
lead-PI; approximately 4 M€; my project ± 505k€
- BMBF collaborative project **2020 – 2023**
“**3G-GWD**: Third Generation Gravitational Wave Telescope”
co-PI; UHH approximately 515k€; my project ± 205k€
- BMBF Early detection of earthquakes and their consequences: **2020 – 2023**
“**GIOTTO** – Building vibrations: structure monitoring with innovative sensor concept”
co-PI; approximately 800k€; my project ± 204k€
- Participation in DFG-funded **Cluster of Excellence CliCCS** project C1 **2019 – 2025**
Sustainable Adaptation Scenarios for Urban Areas – Water from Four Sides
“Groundwater monitoring with ambient seismic noise”, approximately 63 k€
- University of Hamburg “Ideen- und Risikofonds” **2019**
“**Characterizing extreme weather events in the past using historical seismic records**”; PI; 14.8 k€

	University of Hamburg "Lehrlabor" project " JUNOSOL " for developing innovative course material PI; 1 year PhD position + 1 year student assistant; equivalent ± 37k€	2018 – 2019
	Seed funding for assistance writing & coordinating ITN proposal (10 k€)	2018
	Seed funding for assistance writing & coordinating ITN proposal (10 k€)	2017
	University of Hamburg investment fund CliSAP–CliCCS: 75 k€ + 1 year PhD position	2017
	Emmy Noether Fellowship (DFG): "The origin of Love waves in the ocean generated noise wave field" PI; approximately 860 k€	2013 – 2018
TEACHING	Supervision of 6 PhD students, 24 MSc projects, 8 BSc projects; Advising 3 Postdocs.	
	Earthquakes , BSc/MSc course at Universität Hamburg (2 SWS)	2021 – present
	Ambient Noise Seismology , MSc course at Universität Hamburg (3 SWS)	2021 – present
	Seminar Seismologie , MSc course at Universität Hamburg (2 SWS)	2017-2022
	Body & Surface wave Seismology , MSc course at Universität Hamburg, lectures and exercises (2+2 SWS)	2017 – present
	Seismologie , BSc course (6. Sem) at Universität Hamburg, lectures and exercises (2+2 SWS)	2017 – present
	Seismic noise spectra and polarisation , TIDES training school on seismic data, Bertinoro, Italy	2015
	Geophysikalische Datenanalyse , BSc course at LMU München, lectures and exercises (2+1 SWS)	2015
	Geophysical Data Acquisition and Analysis , MSc course at LMU München, lectures and exercises (2+2 SWS)	2013 – 2016
	Tutorial on Ambient noise correlations , QUEST Workshop	2013
	Introduction to Seismology; Signal Processing , Special course at ROSE school, Pavia, Italy	2012
	Applied Geophysics , Exercises for BSc course at LMU München (in German, 2 SWS)	2011 & 2012
TOOLS	Rotational Seismology Event Database Online access to more than 17,000 Earthquake waveforms and processed plots from signals recorded simultaneously by the Wettzell ring laser and a nearby seismometer. Seismo-Live (http://seismo-live.org/) Contribution of teaching notebooks, e.g. "Signal Processing", "Ambient Seismic Noise", "Rotational Seismology"	launched 2017

SELECTED INVITED PRESENTATIONS	Keynote Talk at the “Deutsche Physikerinnentagung” (German Conference of Women in Physics)	2022
	Invited Lecturer at URBASIS-EU ITN Winter School on “Urban Seismology” (<i>Cancelled due to COVID-19</i>)	
	Invited Lecturer at Cargese Summer School “Passive imaging and monitoring in wave physics: from seismology to ultrasound”	
	Keynote Talk at the yearly meeting of the German Geophysical Society (DGG)	2021
	Invited Talk at the EAGE Near Surface Geoscience Conference workshop ‘Seismic Interferometry: Imaging and monitoring from Near-Surface to Civil Engineering applications’ (<i>Cancelled due to COVID-19</i>)	
	Invited Talk & Panelist at the AGU Fall Meeting session “Observation of Rotation, Strain and Translation in Seismology: Applications, Instrumentation and Theory”	2020
	Invited Lecturer at Cargese Summer School “Ambient Noise Imaging and Monitoring”	2019
	Keynote at the EAGE “1st Conference on Geophysics for Infrastructure Planning Monitoring and BIM”	
	Invited Talk at the University of Edinburgh, UK	
	Invited Talk at University of Oxford, UK	
	Invited Talk at Christian-Albrechts-Universität Kiel, Germany	2018
	Invited Talk at Ruhr-Universität Bochum, Germany	
	Invited Lecturer at Cargese Summer School “Ambient Noise Imaging and Monitoring”	2017
	Invited Talk at the Universtiy of Hamburg, Institute of Soil Science	
	Trainer at the TIDES 2nd training school, Sesimbra, Portugal	2016
	Invited Talk at WAVES workshop “Advances in Imaging”, Delft, the Netherlands	
	Trainer at the TIDES 1st training school, Bertinoro, Italy	2015
	Invited Talk at the Swiss Seismological Service, ETH, Zurich, Switzerland	
	Invited Talk at Westfälische Wilhelms-Universität Münster, Germany	
	Invited Talk at Utrecht University, Utrecht, the Netherlands	2014
	Invited Talk at Géoazur, Sofia-Antipolis, France	2013
	Invited Talk at ETH Zurich, Switzerland	
	Invited Talk at Universität Leipzig, Germany	2011
Invited Talk at Quest workshop, Sardinia	2010	

LANGUAGES

Written & spoken fluently: English, Dutch, French
Conversational: German
Basic knowledge: Greek