

Philippe GUEGUEN FULL CURRICULUM VITAE

Institut des Sciences de la terre – ISTerre (UMR 5559)
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APPOINTMENTS

Senior Researcher - Directeur de recherche – Université Gustave Eiffel – ISTerre	2011-present
Junior Researcher – Chargé de recherche – LCPC – LGIT	2001-2010
Junior Engineer - Geoconcept – Chambéry -	2000-2001
Scientific National service (cooperant) - ORSTOM – Quito	1996-1997

EDUCATION

Habilitation to supervise research (HDR), Université Joseph Fourier, Grenoble, France	2009
PhD Geophysics, Université Joseph Fourier, Grenoble, France	2000
Msc (DEA) Geophysics, Université Joseph Fourier, Grenoble, France	1995
Ing. Dipl Geotechnics, Université Joseph Fourier, Grenoble, France	1994

AWARDS AND GRANTS

AFPS Award (French Association for Earthquake Engineering)	2010
SNO-RAP Award (French Accelerometric Network – National Observation Service)	2020
URBASIS-Grenoble - Patrimoine urbain et risque sismique à Grenoble : rénover, renforcer, planifier (PI)	2026-2029
<u>REINFORCE</u> - Deep reservoir for georesource - PEPR Sous-sol - WP leader	2026-2030
<u>CityDAS</u> - Optical fiber for urban monitoring - Programme Universitaire Innovation (PI)	2025-2026
<u>Build'Health</u> – Developing research projet – Sixense fund (PI)	2021-2024
<u>SubRisk</u> – Joint Research Initiative (JRI) AXA Research Fund (PI)	2020-2024
<u>URBASIS-EU</u> – European ITN_MSCA H2020 (PI)	2018-2023
<u>URBASIS-Décision</u> – MAIF Fund (PI)	2017-2021
<u>SISM@lp-Swarm</u> – Programme Interrégional du Massif des Alpes POIA-FEDER (PI)	2018-2021
<u>URBASIS-Vulnérabilité</u> – MAIF Fund (PI)	2012-2015
<u>URBASIS</u> – Projet ANR-RISK NAT (PI)	2009-2013
<u>Earth-AID</u> - Horizon Europe 1.3 (HORIZON-INFRA-2025-01 – TECH-03) - WP leader	2026-2030
<u>RISE-EU</u> - European H2020 No.821115 – Project scientist	2019-2023
<u>SERA</u> - European H2020 - INFRAIA-01-2016 - Project scientist WP28 : Real-time earthquake shaking	2017-2020
<u>ENVRIplus</u> - European H2020 No 194947 – Task Leader 1.3.1 Improving measurement networks	2015-2019
<u>EPOS</u> - European Plate Obs. Syst. - H2020 No 654182 – Project Scientist <u>WP8</u> : Service and data	2015-2019
<u>STREST</u> – European FP7-2007-2013 No 603389 – Project Scientist WP3 – Low prob.-high cons.	2013-2016
<u>NERA</u> – European FP7 No 262330 – Project scientist <u>Activity NA3</u> SM networks and SM data users	2010-2012
<u>ISIBAT</u> – RiskNat European Project (Interreg) - Project scientist <u>B.6-C.6 - Risque sismique</u>	2009-2014
<u>NERIES</u> – European FP6 No 026130 – Task leader <u>Activity NA5</u> SM data dissemination	2006-2010
<u>SISMOVALP</u> – Alpine Space European Project (Interreg III B Espace Alpin) – Project scientist	2003-2007
<u>E-City</u> – ANR project No ANR-21-CE22-0020 – Work Package Leader	2021-2025
<u>RESIF-CORE</u> - EQUIPEX – Project scientist and Leader (2010-2015) RESIF data Center	2010-2020
<u>REMAKE</u> – ANR project No ANR-15-CE04-0004 – Project scientist	2015-2019
<u>ARVISE</u> – ANR project No ANR-06-RGCU-0007 – Task leader	2007-2010
<u>BELLEPLAINE</u> – ANR project No ANR-06-CATT-003 – Task leader	2007-2010
<u>VULNERALP</u> – Regional Council (Rhône-Alpes) – PI	2003-2005

PROFESSIONAL SERVICE

Director ISTerre	2025-present
Deputy director Geotechnique, Environment, Seismic Risk (GERS) department University Gustave Eiffel	2019-2023
Member Grenoble Observatory of Earth (OSUG) (representative GERS/UGE)	2019-present
Lead of the Seismic Risk group Université Gustave Eiffel	2018-2023

Nominated member Scientific Committee 3SR Lab (University Grenoble Alpes)	2021-2023
President Alpine Consortium for Natural Hazard and Risk management (PARN)	2018-2023
Elected member Executive committee ORFEUS (European Consortium for Seismology)	2018-2022
Member Executive Committee European Seismological Commission (ESC)	2018-2021
Nominated member council Physics, Astrophysics, Geosciences, Environment PAGE (U.Grenoble Alpes)	2016-2019
Chair French Accelerometric Network (RAP-RESIF)	2004-2011/2014-2017
Elected member national Council for Astronomers and Physicists CNAP Solid Earth	2015-2020
Elected member ISTerre Council	2015-2020
In charge of the ISTerre laboratory development projects - Assignment to support the University of Grenoble's contracting authority in monitoring the ISTerre laboratory's infrastructure projects (construction of an amphitheater, development of an experimental hall, etc.) – Budget for operations: €1.5M	2015-2019
Deputy director (Observatory system) ISTerre (250 peoples)	2011-2014
Nominated member Observatory commission OSUG Univ. Grenoble Alpes	2011-2015
Elected member Scientific Committee of French Association of Earthquake Engineering	2008-2011
Nominated member Seismology committee INSU/CNRS	2008-2010

FULLY FUNDED OR SELF-FUNDED INVITED TALK

ESC Conference - Data-Driven Structural Health Monitoring ... Sept 6-11, 2026 Istanbul (self)	2026
ESC Conference - At the Epicenter of Practice - Bringing Together the Seismic Risk Community: A liability perspective. Sept 6-11, 2026 Istanbul (self)	2026
Joint IAEA-University of Paris-Saclay Workshop on the Safe Analysis of Heritage Objects and Materials Using Novel Accelerator-based Analytical Techniques 13-17 November <i>Risk management approaches: an illustration from seismic risk</i> - Paris 13-17 Nov. (fully)	2023
3rd Eur. Conf. Earthq. Engng. and Seism. – <i>Urban seismology</i> - Bucharest 4-9 Sept. (self)	2022
CARGESE's summer school Passive Imaging in wave physics – <i>SHM</i> - Sept. 6-20 (France) (fully)	2019, 2017 2015, 2013
2nd Int. Conf. Seismic Des. and Analysis of Structures and Foundations - June 24-25, London (self)	2019
IWGoRS 5th Int. Work. Group on Rotational Seism., Sept. 22-26, Sun Moon Lake, Taiwan (fully)	2019
Cooperative Research by Liaison between Hub Institutes - <i>Urban Seismology</i> - March 27-28, Kyoto (fully)	2015
Center for Seismology in French West Indies (CDSA) – <i>SM network</i> - Sept. 27-28, Guadeloupe (fully)	2015
New Zealand Soc. for Earthq. Engng. (NZSEE) - <i>Urban seismology</i> – Apr. 10-12 Rotorua, NZ (fully)	2015
Int. Workshop on SM and Acceleration Data – <i>French networks</i> – May 12-13, Ankara, Turkey (fully)	2014
NERA Conf. on prospective for Horizon@2020 , Sept. 02-03, Zell am See (Austria) (self)	2013
RiskNat project (European) workshop – <i>Seismic risk</i> – June 9-10, Sion, (Suisse) (fully)	2010
2nd Euro-Med. Acc. Data Exchange and Archiving Workshop – <i>SM network</i> - Nov. 10-12, Ankara (fully)	2009
1st Eur. Conf. Earthq. Engng. and Seism. – <i>Building monitoring</i> – Sept. 3-8 Geneva, Switzerland (self)	2006

SEISMIC NETWORK/EXPERIMENT MANAGEMENT

PI DAS-City experiment: Using Dark-Fiber for city monitoring Planning field development, research strategy, data analysis and products	2024, 2026
PI HautBois Network: instrumentation of the Hautbois Timber High-Rise building Planning field development, research strategy, data analysis and products 10.15778/RESIF.8N2021	2021-2024
PI Tour Perret experiment: instrumentation of the cultural heritage RC high-rise tower Tour Perret Planning field development, research strategy, data analysis and products 10.15778/RESIF.X12021	2021-2023
Co-PI COURMAYEUR Monitoring swarms in the Mont-Blanc and Vallorcine area Planning field deployments, research strategy 10.15778/RESIF.8C2019	2019
PI METACity-Quito experiment : A semi-dense urban seismic network Planning field deployments, research strategy, data analysis and products, proposal writing 10.15778/RESIF.ZE2018	2019
PI Maurienne Swarm: A temporary network during 2-years long seismic swarm sequence Planning field deployments, research strategy, data analysis and products, proposal writing 10.15778/RESIF.YW2017	2017-2020
PI/Chief Scientist French Accelerometric Network (RAP-RESIF) Leading long-term research strategy, data analysis and products, proposal writing, planning field deployments, research guidance, leading scientific committee, chairman of national accelerometric workshop (70 attendees)	2004-2011/2014-2017

10.15778/RESIF.RA

PI/Chief Scientist RESIF National Data center for seismology 2010-2015
Launching national data center for seismology (hosted at Univ. Grenoble Alpes), data analysis and products, proposal writing, planning IT deployment, leading scientific committee, IT staff management (4 peoples)

Scientific PI National Building Array 2004-2017
Launching programme for building instrumentation, leading long-term research strategy, data analysis and products, proposal writing, planning field deployments, leading scientific committee
10.15778/RESIF.RA Station code: OGHx, PYTO, NCAD, CGBP

Post-Earthquake experiment Maule (Chile) 2010 earthquake 2010
Field deployments, data management (metadata and RESIF-NDC transfer) – 40 BB and SM stations
10.15778/RESIF.XS2010

PI/Chief Scientist Belleplaine borehole instrumentation (Guadeloupe) 2009
Planning field deployments, design of instrumentation, data analysis and products, proposal writing
10.15778/RESIF.RA Station code: LIQF

Post-Earthquake experiment Boumerdes (Algeria) 2003 earthquake 2003
Planning field deployments for building damage assessment, data analysis and products

PI/Chief Scientist ARVISE building testing using Ambient Vibration (Guadeloupe) 2009
Planning field experiment, building testing, data analysis and products, proposal writing – 70 building tested

PATENT/ADDED-VALUE

Patents

Chatelain J.-L., P. **Guéguen**, B. Guillier, F. Bondoux. **1999**. Cityshark, marque déposée pour l'IRD le 27/07/1999, n° 99 804 559, Classe 9, Extension Europe, Etats-Unis, Japon.
Chatelain J.-L., P. **Guéguen**, B. Guillier, F. Bondoux. **1999**. Cityshark : Une station d'enregistrement du bruit de fond, Brevet d'invention n° 99 14943, Bulletin de la propriété industrielle n° 02/07 du 15.02.02 (n° de publication 2 801 683).
Chatelain J.-L., P. **Guéguen**, B. Guillier, F. Bondoux. **2005**, Cityshark: Digital data recorder exempt of a site background noise, PatentNumber : 6,876,927, United States Patent and Trademark Office (PTO), délivrée le 04 mai 2005.
Chatelain J.-L., P. **Guéguen**, B. Guillier, F. Bondoux. **2006**. Enregistreur de données numériques autonome du bruit de fond d'un site, Brevet européen n°1 236 056, Office européen des brevets, délivré le 11 janvier 2006.

Softwares

Davoine, PA., Gensel, J., **Guéguen**, P., Poulenard, L. **2014**. Isibat : A Web and Wireless Application for Collecting Urban Data about Seismic Risk. In : Pfoser, D., Li, K.J. (eds) Web and Wireless Geographical Information Systems. W2GIS 2014. Lecture Notes in Computer Science, vol 8470. Springer, Berlin, Heidelberg.
10.1007/978-3-642-55334-9_9 - No more available

Licence

Guéguen P., Astorga A. Build'Health – Structural health monitoring through vibrational analysis
S344 **THBUILD** - 16/01/2024 - IDDN.FR.001.030004.000.S.P.2024.000.30500
S345 **GDBUILD** - 16/01/2024 - IDDN.FR.001.030005.000.S.P.2024.000.30500
S347 **BUILDHEALTH** - 19/03/2024 - IDDN.FR.001.120018.000.S.P.2024.000.30500

Databases

Janex, G. Langlais M., **Guéguen** P. **2024**. SISMalp-1987-2023: The catalogue of 1987-2023 earthquakes in the western (French) Alps and Rhône valley north of 43.5°N - DOI: 10.57932/bba3b3a3-e92e-4d90-92db-9b045684ed5d
Dollet C, **Guéguen** P. **2022**. LEQ445 - The flat file for human and economic losses due to earthquakes (1967-2018) considering exposed GDP and population. <Data access>
Astorga A.L., **Guéguen** P., Ghimire S., Kashima T. **2019**. NDE1.0 – A new database of earthquake data recordings from buildings for engineering applications. Data access
Guéguen, P. **2002-2017**. SM database from the French national Accelerometer network 1995-2017 - DOI: 10.15778/resif.ra
Douglas, J., P. **Guéguen**, E. Chaljub, F. Cotton, P. Suhadolc, G. Costa, D. Faeh, E. Spühle, A. Gosar, E. Priolo, C. Barnaba, R. Paolucci, C. Cauzzi, C. Eva. **2006**. Alpine Accelerometer Database. CD-ROM, Projet Interreg 3B, Sismoalp - More information and data access
Lacave, C., F. Lemeille, P. **Guéguen**, E. Priolo, C. Barnaba, A. Vuan, G. Costa, A. Gosar, P. Suhadolc, D. Fäh, D. Roten, P. Tissières, S. Tadenuma, P.-Y. Bard, F. Cotton, C. Eva, V. Giraud, R. Paolucci, F. Bonilla, P. Forray, J. Jerram. **2006**. Generic Alpine Valley characterization. CD-ROM, Projet Interreg 3B, Sismoalp - More information and data access

CONFERENCES (CHAIRMAN)

Euro. Seismo. Conf. ORFEUS/EPOS Oct. 7 -10 , Grenoble – 110 attendees – Chairman 2019
La biennale du RAP – SM national conference (/2 years) – about 80 attendees – Chairman 2002 – 2017

First Euro-Med. meeting on Acc. Data Exchange and Archiving - March 10-11, Grenoble – Chairman	2008
3rd Int. Symp on Surface ground motion ESG 2006, Aug.30-Sept 1, Grenoble – Co-chairman	2006
https://hal.archives-ouvertes.fr/hal-00451722	
SSA Annual Meeting - Belmont, Washington, Apr. 19-23. Co-chairman session: Earthquakes in the Urban Environment	2022
ESC Conference– Corfu (Greece), Sept.19-24. Co-chairman session : New challenges for urban Engineering seismology.	2021
ESC Conference - Trieste (Italy)	2016
SSA Annual Meeting - Anchorage (USA) 2014 - Co-chair session	2014

PRESS INTERACTIONS

In-person or telephone occasional interviews with journalist covering topics in seismology and earthquake engineering

Interview Le Parisien - Collapse pont en Chine - In French - Link	2025
Interview Ici Isère - Séisme dans la vallée du Grésivaudan - In French - Link	2025
Podcast : La science du risque sismique en zones urbaines - In French - Link	2024
Service FakeNews –Turkish/Syria earthquake and Gazoduc – France24 – Link	2023
Service FakeNews – Turkish/Syria earthquake – Libération Link	2023
Interview Turkish/Syria earthquake – DN Alsace - Link	2023
Seismic risk in Grenoble – Place GRE'NET – Link	2022
Briançon (France) earthquake – France3 PACA – Link	2019
Seismic swarm crisis in Maurienne (French Alps) – Live TV Mont-Blanc - Link	2018
Seismic swarm crisis in Maurienne (French Alps) – TV reportage France 3 Rhône-Alpes - Link	2017
Seismic metamaterial and earthquake engineering – TV reportage Xenius (ARTE) Link	2017
Forest as seismic metamaterial – TV reportage France 3 Aquitaine - Link	2016
Interview le Progrès de Lyon – Link	2016
Seismic damage assessment Interview – Echosciences Grenoble – Link	2014
Seismic risk in Nice – TV reportage France3 PACA - Link	2014

Large audience papers (in French)

A New Vision for Seismic Risk, towards Better Risk Management, <i>In New Tech for NatCat: Unlocking the Power of Remote Sensing & Artificial Intelligence to Anticipate and Mitigate Natural Disaster</i> - AXA fund publication - Link	2025
Séismes urbains : penser des villes plus résilientes ? CNRS-INFO - Link	2023
20 idées reçues sur le risque sismique. Projet SISM@LP-Swarm - Link	2021
Le risque sismique au temps du COVID-19. Documentation Fondation MAIF - Link	2020
Et la Maurienne s'est mise à trembler. Institut des Risques Majeurs - Link	2018
Vulnérabilité sismique dans un pays à sismicité modérée. Institut des Risques Majeurs - Link	2011
Le génie Parasismique. Encyclopédie Universalis - Link	2011
Risque sismique. Rhône-Alpes et l'environnement : 100 questions pour la recherche - Link	2011
Séisme dans la ville. Pour la Science - Link	2003

Movies (in French)

Projet URBASIS – Vidéo d'information (in english) - Link	2022
Risque Sismique à Grenoble – Link	2022
Les essais sismiques – Link	2021
Et la Maurienne s'est mise à trembler ! – Les matinales de l'IRMA – Link	2018
Savoie : la terre tremble – Franceinfo – Link	2017
Séisme : analyse de la vulnérabilité du bâti existant – Fondation Maif Video - Link	2015

PEER REVIEWER

Proposals

Since 2010

Agence national de la Recherche (ANR Flash Japan, ANR Thematic, ...)
CIFRE fellowships programs
National Science Foundation (NSF - 2 projects); Canadian Research Council (2 projects); National Science Foundation Poland (1 project), Fondecyt (1 projet), ERC 2025/2026 Grant calls

Journals

Since 2003

About 100 papers reviewed since 2003 (date of first review, i.e. about 5/year, only for referenced journals): *Bulletin of Earthquake Engineering*, *Bulletin of the Seismological Society of America*, *Journal of Earthquake Engineering and Engineering Vibration*, *Journal of Structural Control and Health Monitoring*, *Journal of Soil Dynamic and Earthquake Engineering*, *Journal of Natural Hazard*, *Geophysical Journal International*...

PhD/HDR (Habilitation to supervise research) Committees

R. Yanez-Chura - Ecole normale supérieure - PSL - PhD reviewer	2025
S. Sangaraju - Politecnico Milano Italie – PhD Reviewer	2025
J. Lin - ETH Zurich - PhD Reviewer	2024
P. Janusz - ETH Zurich – PhD Reviewer < lien pdf >	2024
Y. Rossi - ETH Zurich – PhD Reviewer < lien pdf >	2023
R. D. Dolatabadi Esfahani - University of Potsdam – PhD Reviewer < lien pdf >	2022
L. G. Alvarez-Sanchez – Uni. Gustave Eiffel/UISS Pavia - President of the PhD committee . < lien pdf >	2022
L. Joshi – Indian Institute of Technology Roorkee (India) - PhD Reviewer	2021
Y. Maalouf - University Grenoble Alpes - President of the PhD committee < tel-03917521>	2021
D. Sivori - University of Genoa – PhD Reviewer < link >	2021
R. Zaccherini - ETH Zurich – PhD Reviewer < lien pdf >	2021
C. Beauval - Université Grenoble Alpes – President of the HDR committee	2020
G. Pianese - Politecnico Milano Italie – PhD Reviewer < lien pdf >	2018
C. Aristizabal - Université Grenoble Alpes - President of the PhD committee <tel-01825052>	2018
Y.S.G. Reuland - EPFL Suisse – PhD Reviewer < lien pdf >	2017
T. Heitz - Université Paris Saclay - PhD Reviewer <tel-01684727>	2017
J.V. Pina Valdes - Université Grenoble Alpes - President of the PhD committee <tel-01693080>	2017
B. Derras - Université Grenoble Alpes - President of the PhD committee <tel-01652115>	2017
E. Oral - Université Paris-Est - PhD Reviewer <tel-01562279>	2016
G. W. Fernandez Lorenzo - Université Côte d'Azur - PhD Reviewer <tel-01627564>	2016
C. Limoge – Université Paris Saclay – PhD Examinateur <tel-01314443>	2016
F. Nasser - Université Grenoble Alpes - President of the PhD committee <tel-01218050>	2015
H.A. Yepes Arostegui - Université Grenoble Alpes - President of the PhD committee <tel-01330748>	2015
L. Thien-Phu - Université Clermont Auvergne – HDR Reviewer	2015
M. Brun - INSA Lyon – HDR Reviewer	2014
P.-A. Davoine - Université de Grenoble – HDR Reviewer	2014
Z. Li - Université de Grenoble - President of the PhD committee <tel-00848347v2>	2014
J. Régner - Université Paris-Est - PhD Reviewer <tel-00906072>	2013
L. Honoré-Foundotos - Université Nice Sophia Antipolis - PhD Reviewer <tel-00920208>	2013
M. Brax – Uni. Grenoble - President of the PhD committee https://www.theses.fr/2013GRENU050	2013
P. Taforel - Université de Montpellier - President of the PhD committee <tel-00801814>	2012
M. B. Rojo - Université de Grenoble - President of the PhD committee < tel-01229852>	2011
C. Lesueur - Université de Strasbourg – PhD Reviewer < lien pdf >	2011
A. Gandomzadeh - Université Paris-Est - PhD Reviewer <tel-00648179>	2011
F. Courboulès - Université Nice Sophia Antipolis – HDR Reviewer	2010
M. Tapia Jimenez - Université de Barcelone – PhD Reviewer	2006

REVIEW PANEL MEMBER

HCERES Committee (President) Observatoire EOST - Université de Strasbourg	2017
HCERES Committee (Member) GeoAzur Lab - Université de Nice	2017
HCERES Committee (Member) Observatoire des Sciences de l'Univers de Nantes	2016

TEACHING EXPERIENCE

Ecole et Observatoire des Sciences de la Terre (EOST) - Strasbourg - Engineering seismology and Risk – Master (Msc)&Engineer 5A – 2010-present – 6 hours	
Université Grenoble Alpes - Structural monitoring and Condition based maintenance – Master (Msc) Civil Engineering – 2012-present – 20 hours	
Université Grenoble Alpes - Advanced methods - Structural Health Monitoring - Master (Msc) Modelling and Instrumentation for mechanics - 2012-present – 8 hours	
Université Grenoble Alpes - Structural dynamics and Risk – Master (Msc) Engineering Seismology – 2019-present – 6 hours	
Université Grenoble Alpes - Experimental methods in Structural Dynamics – Polytech Grenoble Engineering School - 2021-present – 6 hours	

Université Grenoble Alpes - Experimental testing and building monitoring - <i>European Master of Earthquake Engineering and Seismology (MEEES)</i> - 2008-2019 – 6 hours	
Université Grenoble Alpes – Engineering Seismology and earthquake Engineering - Polytech Grenoble Engineering School - 2010-2013 – 25 hours	
Université Grenoble Alpes – Site effects and Seismic vulnerability - <i>Master (Msc) Geophysics Environment and Risk</i> - 2010-2014 – 10 hours	

2023 - URBASIS Spring School - Urban seismology and risk analysis , Porquerolles (France) 15-20 May 2023 – 52 participants – PI and Chairman - web	
2022 - URBASIS Spring School - Earthquake Engineering and Engineering Seismology , Autrans (France) 16-21 may 2022 – 45 participants - PI and Chairman - web	
2020 - Introduction to Nonlinear Dynamics : Application to soils and structures – <i>URBASIS-EU lecture</i> – 2020 – 4 hours. < link >	
2014 - Processus et variables aléatoires appliqués dans l'ingénierie des structures – Université Technologique de Bucarest, faculté d'ingénierie en langues étrangères – <i>In French</i> – 12 heures.	

SUPERVISING/MENTORING

Early-stage researcher (PhD)

Laurens J.N. Oostwegel	Dynamic exposure model for natural hazards Funding GFZ Potsdam. Funding: GFZ - Supervising 50%	2027
Dorian Janot	SHM of High-Rise wooden building Funding IDEX UGA. Supervising 20%	2025
Ashta Poudel	Evaluation of the systemic vulnerability and risk of interconnected systems at urban scale - Funding : H2020 (ITN-MSCA URBASIS-EU) Supervising : 50% - Now: Post-Doc Univ. Lisboa Portugal	2023
Ricardo Minetto	Seismic swarms : comparing natural and induced earthquakes - Funding : H2020 (ITN-MSCA URBASIS-EU) – 2 peer-review papers. Supervising : 100% - Now Post-Doc EOST Strasbourg	2023
Andrès Hernandes	Time dependency of seismic hazard and risk in urban areas, including seismicity variations and building degradation in time - Funding : H2020 (ITN-MSCA URBASIS-EU) – 3 peer-review papers (submitted). Supervising : 60% - Now: Disaster Risk Consultant – Jacobs Colombia	2023
Subash Ghimire	Data-driven-based models for seismic damage assessment of buildings : using machine learning at a regional scale and in-situ structural monitoring at building scale - Funding : H2020 (ITN-MSCA URBASIS-EU) – 4 peer-review papers – Supervising : 80% - Now Post Doc ASNR Paris	2023
Hussein Shible	Development of a new approach to define reference ground motions applicable to existing strong-motion databases. Université Grenoble Alpes (HAL Id : tel-03467074v1) – Funding : CEA – 3 peer-review papers – Supervising : 20% - Now : Ingénieur Sismique – Seister	2021
Cyrielle Dollet	URBASIS-Décision - Modélisation des conséquences socio-économiques et juridiques d'un séisme à l'échelle urbaine. Université Grenoble Alpes (HAL Id : tel-03191612) - Funding : Fondation MAIF – 2 peer-review papers – Supervising 100% - Now : Ingénieure d'études - Gestion des risques inondations - Artelia	2021
Adrien Pothon	Seismic loss modelling in insurance industry : towards a new model for better claims management - Université Grenoble Alpes (HAL Id : tel-02862122) - Funding : AXA – 2 peer-review papers – Supervising 80% - Now : Risk Manager – AXA	2020
Ariana Astorga	Seismic monitoring of structures : characterization of building response by analyzing nonlinear elasticity and slow dynamics (HAL Id : tel-02443212) – 5 peer-review papers – Funding : IFSTTAR – Supervising 100% - Now : self-employed Italy	2019
Marc Antoine Brossault	Suivi temporel de la dynamique des structures : apports du théorème fluctuation-dissipation et de la dynamique lente pour l'évaluation de l'intégrité des structures de génie civil. Université Grenoble Alpes (HAL Id : tel-01701948) - 2 peer-review papers - Funding : Région Rhône-Alpes – Supervising 50% - Now : CDI SITES · Division du Développement Technique	2017
Levent Isbilibiroglu	Strategy for Selecting Input Ground Motion for Structural Seismic Demand Analysis - Université Grenoble Alpes (HAL Id : tel-01809010) – 1 peer-review paper - Funding : IRSN – Supervising 20% - Now : Civil Structural Engineer - Consultant EDF	2018
Ismael Riedel	Seismic vulnerability analysis of existent buildings. Loss estimation and uncertainty analysis for deterministic earthquake scenarios. Université Grenoble Alpes, 2015. English. (HAL Id : tel-01281424) - Université Grenoble Alpes - Funding : Fondation MAIF – 3 peer-review papers – Supervising 100% - Now : SCOR CATNAT expert	2015
Hilal Oksuz	Comparison of probabilistic seismic hazard estimations with observations (accelerations and intensities). Université de Grenoble. HAL Id : tel-01549070 – Funding EDF - 2 peer-review papers – Supervising 20% - Now : CDI NECS.	2014
Johanes Chandra	Nonlinear seismic response of the soil-structure system : experimental analyses - Université Grenoble Alpes (HAL Id : tel-01282658) - Funding : IFSTTAR – 3 peer-review papers – Supervising 100% - Now : Génie Civil nucléaire EGIS	2014
Alaa Hamze	Changes detection and localization in civil engineering structures : numerical and laboratory approaches - Université Grenoble Alpes (HAL Id : tel-00934435) - Funding Région Rhône-Alpes – 1 peer-review paper – Supervising 50% - Now assistant université du Liban	2013
Matthieu Perrault	Seismic vulnerability assessment using in-situ measurements - Université Grenoble Alpes (HAL Id : tel-00934454) - Funding : ressources propres – 2 peer-review papers – Supervising 100% - Now : CDI Sercell-SHM	2013
Ali Mikael	Experimental Modal parameters assessment of Civil Engineering structures – Damping, Frequency and mode shape - Université Joseph Fourier Grenoble (HAL Id : tel-00597269) - Funding : Syrie et ANR – 1 peer-review paper – Supervising 50% - Now : Canadian Wood Council Ottawa, Ontario, Canada	2010
Clotaire Michel	Seismic vulnerability assessment using ambient vibrations - Université Joseph Fourier Grenoble (HAL Id : tel-00191024) - Funding : Ministère – 4 peer-review papers – Supervising 80% - Now : Assistant Zurich University of Applied Sciences	2007

Post-Doc

Luc Moutote	CityDAS-Grenoble - IT Engineer Topic: Dark fiber for city monitoring and Geopsy Supervising 70%	2026
Remi Louage	DAS-City project – <i>IT Engineer Topic</i> : Dark fiber for city monitoring – Supervising 100%	2025
Malcon Celorio	ANR E-City project – <i>Post-Doc Topic</i> : Seismic attenuation in City – Supervising 50%	2024-2025
Yara Rossi	E-City project – <i>Post-Doc Topic</i> : Rotation for SHM – Supervising 100%	2023
Ariana Astorga	European project RISE+Sixense Joint project – <i>Post-Doc Topic</i> : SHM – Supervising 100%	2022-2024
Subash Ghimire	AXA Fund SubRisk project – <i>Post-Doc Topic</i> : Risk assessment – Supervising 100%	2023-2024
Martin Lott	ANR Project E-City – <i>Post-Doc Topic</i> : Site-City interaction – Supervising : 100%	2022-2023
Cyrielle Dollet	FEDER Project SISMALP-Swarm– <i>Post-Doc Topic</i> : Losses – Supervising : 100%	2021-2022
Gael Janex	FEDER Project SISMALP-Swarm – <i>Engineer Seismology Topic</i> : suivi de la sismicité des Alpes – Supervising 50%	2020-2021
Gersande Lemarchand	FEDER Project SISMALP-Swarm –Communication Expert Supervising 100%	2020-2021
Judith Marinière	FEDER Project SISMALP-Swarm – <i>Post-Doc Topic</i> : Ground motion prediction – Supervising 80%	2021-2021-6 mo.
Konstantinos Trevelopoulos	European project STREST – <i>Post-doc Topic</i> : Seismic vulnerability time-dependency – Supervising 100%	2014-2015
Jakub Schinkmann	ANR project URBASIS – IT Engineer Topic : SHM with RDT – Supervising 100%	2011-2013
+ ~ 2 Msc dissertation supervising/year (Geophysics, Seismology, Engineering Seismology...)		Since 2000

DECISION MAKING SUPPORT

Industry Collaborations

- SIXENSE Industrial** – Build'Health – Structural health monitoring through vibrational analysis – Scientific Coordinator – [Link] – **2022-2025**
- EDF Expertise** – Feasibility study on the aging monitoring of seismic supports using ambient vibrational noise on a nuclear island – *Co-Scientific Coordinator* – **2006–2008**
- Since 2001** – Various consulting assignments for private-sector clients on the use of ambient noise for the characterization of civil engineering structures (BV Veritas, SIXENSE, EDF, etc.) – *0.5 to 1 mission per year, each lasting less than 2 days*

Support for Public Policy

- EU-ALPEX-2027** - Cross-perspectives on Seismic and Glacial Risks: *Risque Sismique dans Alpes occidentales*, Workshop June 30, 2026 - Chamonix, withfor Italian, Swiss and French Civil Protection **June 2026**
- Scientific coordinator** of a partnership agreement between the City of Grenoble and Univ Grenoble Alpes on Urban Heritage and Seismic Risk in Grenoble: Renovation, Structural Strengthening, and Planning – Contract number: 038-213801855-20211108-D2021108_15-DE **2021–2024**
- UGE / DGPR (General Directorate for Risk Prevention)** – Agreement on seismic risk mitigation **Since 2018**
- DGPR** – *Co-author of the Seismic Risk Roadmap*, led by **Epos-France** and **BRGM** – **2023–2025**
- City of Grenoble / ISTERre** Support to the Civil Protection Directorate of the City of Grenoble **2020-Now**
to improve its resilience to earthquakes – *Technical assistance and guidance on the seismic retrofitting of municipal buildings.* <[Link]1 – page 38 | [Link]2 – Public Research/Action 2024>
- Conference Seismic Risk in Grenoble** – Co-chair with Civil Protection of the Grenoble City – Lien **2023**
- Conference for Civil Protection** of the Grenoble City: Seismic risk management **Nov. 2019**
- Large audience Conference** - Maurienne Seismic swarm information (Argentina) **Dec. 2017**
With local and national authorities **Dec. 2017**
- Seismic risk in Grenoble**, Club risque de la région Rhône-Alpes, DIREN **Dec. 2006**

President Alpine Consortium for Natural Hazard and Risk management (PARN)

2018-2023

NGO helping to define and monitor regional strategies for managing natural hazards and adapting to climate change in the Alps (SUD and Auvergne Rhône-Alpes AuRA). Support for national and regional initiatives: Contribution to the EU Macro-regional Strategy for the Alpine Region (SUERA), Contribution to the elaboration of an Action Plan for the Prevention of Risks of Glacial and Periglacial Origin (PAPROG), Support to Grenoble-Alpes-Métropole for the elaboration of its metropolitan resilience strategy, Regional coordination on Integrated Management of Natural Hazards in the Alps (TAGIRN) and Scientific networking (SDA), etc.

OUTREACH ACTIVITIES

In schools (in French)

Le risque sismique en France et la réglementation, Accueil de classes de collège et de lycée à ISTerre	Since 2016
Le risque sismique – Classe préparatoire Lycée du Parc	Dec 2023
Le risque sismique dans les Alpes et la vallée de l'Ubaye – Intervention dans les écoles et collèges de la vallée de l'Ubaye – 10 interventions. Dans le cadre de la restitution du projet SISM@LP-Swarm.	June 2022
Risque sismique dans les Alpes - Intervention au collège de Saint-Michel de Maurienne (73)	Nov. 2017
Les séismes. Intervention à l'école primaire de Beaucroissant (Isère) CM1/CM2.	Juin 2016.
Le risque sismique à Grenoble. Intervention au collège Le Chamandier (Gières - 38) et atelier sur la construction parasismique - Partenariat avec les professeurs de SVT.	2010 - 2019.
Participation au forum des métiers lycée du Grésivaudan Meylan (38) - Présentation des métiers des sciences de la terre.	2015-2016-2018
Sismologie, Classe SVT 1ère - Lycée du Mont-Blanc Passy (74)	2013
Public conferences for population (in French)	
Le risque sismique en Ubaye Organisée par le <u>centre SEOLANE de Barcelonnette</u> - Lien	2021
Les essaims de séismes dans les Alpes du Nord, <u>Organisée par l'Association des Réserves Naturelles des Aiguilles Rouges</u> .	June 2020
Risque sismique à Grenoble, Conférence des <u>Amis des Sciences de l'UIAD</u>	Oct. 2019
Les séismes dans les Alpes. <u>Géofestival 2018</u> , Albertville	Mai 2018.
Séismes, tsunamis, volcans : que risquons nous ? <u>Connaissance et vie d'Aujourd'hui</u> , Lyon,	Jan. 2018.
Les essaims sismiques dans les Alpes - <u>Les matinales de l'IRMA</u> - Argentine (73) -	2018
Information sur la crise sismique de Maurienne - <u>Réunion publique à la mairie de La Chapelle</u> (73)	Oct. 2017
La vulnérabilité et le risque sismique en France - <u>Fédération Française des Sociétés d'Assurance</u> , Paris.	April. 2016
Le risque sismique à Grenoble - <u>Apéro Citoyen à la bibliothèque des Béalières</u> Meylan (38) -	2014
Le risque sismique en France et la réglementation, <u>Université Populaire Eymoutiers</u> (87)	2014
Vulnérabilité sismique du bâti existant, <u>Intervention au Salon des Maires de France</u> , Paris	Nov. 2012
Risque sismique à Grenoble. Lecture et échange avec Dany Laferrière, autour de son livre "Tout bouge autour de moi" (Edition Grasset), <u>10e Printemps du Livre de Grenoble</u>	March. 2012.
Le comportement sismique du bâti existant, Conférence-débat - MAIF, Poitiers,	April 2011
Génie Parasismique et dynamique des structures, <u>Vème rencontre Géographes-Assureurs</u> , Poitier	April 2011
Méthodes d'évaluation de la vulnérabilité sismique du bâti existant, <u>Atelier RiskNat, Sion (Suisse)</u>	June 2010
Construire parasismique en Rhône-Alpes, <u>formation continue Univ. Grenoble</u>	2008
Aléa et vulnérabilité à Grenoble - <u>Services techniques de la ville de Grenoble</u> , Projet Sismo-DT	April 2006
Vulnérabilité sismique à Grenoble, <u>Atelier PRINAT, Foire internationale de Martiny (Suisse)</u>	Oct 2006
Le risque sismique à Grenoble, <u>Schéma directeur de la région Grenobloise</u> , Grenoble	Oct 2006
Le risque sismique à Grenoble, Formation <u>Instituteurs de l'Isère</u>	Feb. 2005

PUBLICATIONS

Web of Science/Publons : Number: 130 – Citations: 3,835 – H-index : 33 – ResearcherID : [A-3852-2012](https://publons.com/researcher/2761751/philippe-gueguen/) - <https://publons.com/researcher/2761751/philippe-gueguen/>

GoogleScholar : Citations 7106 – h-index : 44 – <https://www.isterre.fr/annuaire/pages-web-du-personnel/philippe-gueguen/>

In red, students (Msc, PhD, Post-Doc)

NB : Poster or Oral conference presentations: about 3/years since 1997

SPECIAL ISSUE IN PEER-REVIEWED JOURNAL

- 2023.** Special Issue "Structural Health Monitoring of Masonry Buildings: Current Practice and Future Challenges", Buildings, Cattari S., **Guéguen P.**, Venzani Ilaria Eds.
- 2022.** Barani, S., Akinci, A., Sesetyan, K., Albarello, D., **Guéguen, P.**, Parolai, S., Paolucci, R., Pitilakis, D., eds. (2022). New Challenges for Seismic Risk Mitigation in Urban Areas. Lausanne: Frontiers Media SA. doi: 10.3389/978-2-83250-790-2
- 2021.** Kalkanmanos, J., Cabas, A., Parolai, S., & **Guéguen, P.** Eds. Special Issue on Advances in Site Response Estimation. Bulletin of the Seismological Society of America, doi : [10.1785/0120210152](https://doi.org/10.1785/0120210152)

PEER-REVIEWED JOURNAL ARTICLES

- Celorio, M., **Guéguen, P.**, Roux P., Touma R. **2026**. Experimental characterization of urban-like scattering and attenuation from a dense nodal array: implications for seismic ground motion, *Geophysical Journal International*, 246 (1), ggag165. doi: [10.1093/gji/ggag165](https://doi.org/10.1093/gji/ggag165).
- Rossi, Y., **Guéguen, P.**, Bernauer, F., Chen, K. H., Lin, C. J., Ku, C. S., & Chen, Y. **2026**. On the use of 6C seismic station for bending-to-shear and torsional building response assessment at TAIPEI101. *Engineering Structures*, 361, 122782. doi: [10.1016/j.engstruct.2026.122782](https://doi.org/10.1016/j.engstruct.2026.122782)
- Flores-Allende, R., Seydoux L., Beaucé E., Bonilla L.F., **Guéguen P.**, Satriano C. **2026**. Fine-Scale Segmentation and Spatiotemporal Variability of the 2010 Mw 8.8 Maule Aftershock Sequence Revealed by a Deep-Learning-Based Earthquake Catalog. *JGR Solid Earth*. 131 (4), e2026JB034262. doi: [10.1029/2026JB034262](https://doi.org/10.1029/2026JB034262)
- **Guéguen, P** & Dollet C. **2026**. A predictive model to assess liability in earthquake disasters. *Nature Sustainability*, 1 (1), 39. doi: [10.1038/s44458-025-00028-0](https://doi.org/10.1038/s44458-025-00028-0)
- Celorio, M., **Guéguen, P.**, Aochi, H., De Martin, F., & Bonilla, L. F. **2026**. Urban Attenuation Lengths in City-Like Environments: Insights from 3D Numerical Simulations of Site–City Interaction. *Bulletin of the Seismological Society of America*, 116 (1), 515-531 doi: [10.1785/0120250139](https://doi.org/10.1785/0120250139)

2025

- Oostwegel, L. J., Schorlemmer, D., & **Guéguen, P.** **2025**. From Footprints to Functions: A Comprehensive Global and Semantic Building Footprint Dataset. *Scientific Data*, 12(1):1699. doi: [10.1038/s41597-025-06132-z](https://doi.org/10.1038/s41597-025-06132-z)
- Astorga, A., **Guéguen, P.**, Beth, M., & Bessoule, N. **2025**. Exploring the effective implementation of population-based SHM in existing buildings. Part I: Structural condition assessment. *Engineering Structures*, 322, 119047. doi: [10.1016/j.engstruct.2024.119047](https://doi.org/10.1016/j.engstruct.2024.119047)
- Janot, D., Vieux-Champagne F., **Guéguen P.**, Boudeau C. **2025**. Eight Storey CLT Building Dynamical Properties Analysis and Monitoring from Construction to Operating Phase, *Mater Struct* **58**, 13. doi: [10.1617/s11527-024-02540-6](https://doi.org/10.1617/s11527-024-02540-6)
- Rodet, J., Tauzin, B., Panah M.P., **Guéguen, P.**, Nziengui Bâ, D., Coutant O., Brûlé, S. **2025** Urban dark fiber distributed acoustic sensing for bridge monitoring, *Struct. Health Mon.*, doi:[10.1177/14759217241231995](https://doi.org/10.1177/14759217241231995)
- Rossi, Y., **Guéguen, P.**, Bernauer, F., Chen, K. H., Lin, C. J., Ku, C. S., Chen, Y. **2025**. On the Use of 6C Seismic Station for Bending-to-Shear and Torsional Building Response Assessment. *Available at SSRN 5220001*. doi: [10.2139/ssrn.5220001](https://doi.org/10.2139/ssrn.5220001)

2024

- Langlais, M., Janex, G., **Guéguen, P.**, Helmstetter A., Paul A., Virieux J., Maufroy E., Bouvier J.N. **2024**. The catalogue of 1987–2023 earthquakes in the western (French) Alps north of 43.5°N. *Sci Data* **11**, 1290 (2024). doi: [10.1038/s41597-024-04133-y](https://doi.org/10.1038/s41597-024-04133-y)
- **Guéguen P.**, Astorga A. **2024**. Using In-Building observations of small-to-large earthquakes to predict the seismic response of structures, *Bull. Seismol. Soc. Am.* 114 (6): 3063–3077, doi: [10.1785/0120240036](https://doi.org/10.1785/0120240036)
- Astorga A., **Guéguen P.**, Beth M., Bessoule N. **2024**. Exploring the effective implementation of population-based SHM in existing buildings. Part II: Damage-feature classification for decision-making. *Engineering Structures*, 314, 118368. doi:[10.1016/j.engstruct.2024.118368](https://doi.org/10.1016/j.engstruct.2024.118368)
- Ghimire S., **Guéguen P.** **2024**. Capacity curves for monitored existing buildings and within- and between-building variability of secant stiffness, *Bulletin Earthquake Engineering* 22, 4003–4021, doi:[10.1007/s10518-024-01902-3](https://doi.org/10.1007/s10518-024-01902-3).
- Guillemot A., Audin L., Larose E., Baillet L., **Guéguen P.**, Jaillet S., Delannoy J.-J. **2024**. The Abraham's dance and the pillar threatening the World Heritage Chauvet Cave, *Earth and Space Science*, 11, e2023EA003329. doi:[10.1029/2023EA003329](https://doi.org/10.1029/2023EA003329)
- Mistry H.K., Hernandez A., **Guéguen P.**, Lombardi D. **2024**. Effect of earthquake sequences on risk-based catastrophe bond pricing, *Risk Analysis* 44(9),2270-2285, doi : [10.1111/risa.14288](https://doi.org/10.1111/risa.14288).
- Pilz M., Roux P., Mohammed S A, Bernauer F., Garcia R., **Guéguen P.**, Ohrnberger M., Steinmann R. Cotton F. **2024**. Wind turbines as a metamaterial-like urban layer : an experimental investigation by a dense seismic array and complementary sensing technologies. *Front. Earth Sci., Sec. Geohazards and Georisks* (12). doi : [10.3389/feart.2024.1352027](https://doi.org/10.3389/feart.2024.1352027)
- Ghimire S., **Guéguen P.** **2024**. Host-to-target region testing of machine learning models for seismic damage prediction in buildings. *Natural Hazards* 120, 4563–4579. doi :[10.1007/S11069-023-06394-Z](https://doi.org/10.1007/S11069-023-06394-Z)
- Virieux J., Paul A., Langlais M., Janex G., **Guéguen P.**, Helmstetter A., Stehly L. **2024**. Assessing the reliability of local earthquake tomography for crustal imaging : 30 years of records in the Western Alps as a case study, *Geophysical Journal International*, 236(1):99–118. doi :[10.1093/gji/ggad378](https://doi.org/10.1093/gji/ggad378)
- Minetto R., Helmstetter A., Edwards B., **Guéguen P.** **2024**. How injection history can affect hydraulic fracturing-induced seismicity : insights from downhole monitoring at Preston New Road, UK. *Bulletin of seismological Society of America*, doi : [10.1785/0120230147](https://doi.org/10.1785/0120230147)

- Cattari S., **Guéguen P.**, Venanzi Ilaria Eds. **2023**. Special Issue "Structural Health Monitoring of Masonry Buildings : Current Practice and Future Challenges", Buildings, [Web access](#)
- Ghimire S., **Guéguen P.**, Pothon A., Schorlemmer D. **2023**. Testing machine learning models for heuristic building damage assessment applied to the Italian Database of Observed Damage (DaDO), Natural Hazards and Earth System Sciences, 23(10):3199–3218. doi : [10.5194/nhess-2023-7](#)
- Montabert A., Giry C., Limoge Schraen C., Lépine J., Choueiri C., Mercerat E. D., **Guéguen P.** **2023**. An open database to evaluate the fundamental frequency of historical masonry towers through empirical and Physics-based formulations. Buildings, 13(9), 2168. doi : [10.3390/buildings13092168](#)
- **Guéguen P.**, Astorga A., Langlais L. **2023**. Amplitude–Frequency Noise Models for Seismic Building Monitoring in a Weak-to-Moderate Seismic Region, Seismological Research Letters, 94(5), 2231–2243. doi : [10.1785/0220230009](#).
- Dollet C., **Guéguen P.**, Hernandez, A **2023**. A comprehensive synthetic database of global seismic losses covering the period 1967–2018. Bull. Earthquake. Engng. doi : [10.1007/s10518-023-01695-x](#)
- Chen Y., **Guéguen P.**, Huihsuan Chen K., Lin C.-J., Ku C.-S., Huang W.-G. , Huang B.-S., Chen K.-C.. **2023**. Dynamic characteristics of TAIPEI 101 skyscraper from rotational and translation seismometers. Bulletin of the Seismological Society of America, 113 (2) : 690–709. doi : [10.1785/0120220147](#)

2022

- Minetto R., Helmstetter A., Schwartz S., Langlais M., Nomade J., **Guéguen P.** **2022**. Analysis of the spatio-temporal evolution of the Maurienne swarm (French Alps) based on earthquake clustering, Earth and Space Science, doi : [10.1029/2021EA002097](#)
- Ghimire S., **Guéguen P.**, Giffard-Roisin S., Schorlemmer D. **2022**. Testing machine learning models for seismic damage prediction at regional scale using building-damage dataset compiled after 2015 Gorkha Nepal earthquake. Earthquake Spectra, doi : [10.1177/87552930221106495](#).
- Shible U., Hollender F., Bindi D., Traversa P., Oth A., Edwards B., Klin P., Kawase H., Grendas I., Castro R.R., Theodulidis N., **Guéguen P.** **2022**. GITEC : A Generalized Inversion Technique Benchmark. Bulletin of the Seismological Society of America, 112(2), 850–877. doi : [10.1785/0120210242](#)
- Combey A., Mercerat E.D., **Guéguen P.**, Langlais M., Audin L. **2022**. Post-seismic survey of a historic masonry tower and monitoring of its dynamic behaviour in the aftermath of Le Teil earthquake (Ardèche, France). Bulletin of the Seismological Society of America. [10.1785/0120210258](#)
- Chen H., Yeh T-C, Chen Y, Johnson C W, Lin C-H, Lai Y-C, Shih, M-H, **Guéguen P.**, Huang W-G, Huang B-S, Chen K-C, Lin C-J, Ku C-S. **2022**. Characteristics and impact of environmental shaking in the Taipei metropolitan area, Scientific Reports, 12:743. doi : [10.1038/s41598-021-04528-6](#)
- Dollet C., **Guéguen P.** **2022**. Global occurrence models for human and economic losses due to earthquakes (1967–2018) considering exposed GDP and population. Natural Hazards, 110 (1), 349–372. doi : [10.1007/s11069-021-04950-z](#)

2021

- Kaklamanos J., Cabas A., Parolai S., **Guéguen P.** **2021**. Introduction to the Special Section on Advances in Site Response Estimation. Bulletin of the Seismological Society of America, 111 (4) : 1665–1676. doi : [10.1785/0120210152](#)
- **Guéguen P.**, Janex G., Nomade J., Langlais M., Helmstetter, A., Coutant O., Schwartz S., Dollet C., **2021**. Unprecedented seismic swarm in the Maurienne valley (2017–2019) observed by the SiSmalp Alpine seismic network : operational monitoring and management , CR Geoscience, 353 (S1), 517–534. doi [10.5802/crgeos.70](#)
- Iaccarino, A. G., **Guéguen P.**, Picozzi, M., Ghimire, S. **2021**. Earthquake Early Warning System for Structural Drift Prediction using Machine Learning Regressors. Front. Earth Sci., 9 : 545. doi : [10.3389/feart.2021.666444](#)
- Ghimire S., **Guéguen P.**, Astorga A. **2021**. Analysis of the efficiency of Intensity Measures from real earthquake data recorded in buildings, Soil Dynamics and Earthquake Engineering, 147, paper 106751. doi : [10.1016/j.soildyn.2021.106751](#).
- Skłodowska A.M., Holden C., **Guéguen P.**, Finnegan J., Sidwell G. **2021**. Structural change detection applying long-term seismic interferometry by deconvolution method to a modern civil engineering structure (New Zealand). Bull Earthquake Eng. 19 : 3551–3569. doi : [10.1007/s10518-021-01110-3](#)
- Péquignat C., ... Delouis B., **Guéguen P.**, Lambotte S., ... **2021**. RÉSIF-SI : A Distributed information system for French seismological data, Seismological Research Letters, 92 (3) : 1832–1853. doi : [10.1785/0220200392](#)
- **Guéguen P.**, Astorga A. **2021**. The torsional response of civil engineering structures during earthquake from an observational point of view. Sensors, 21(2), 342. doi : [10.3390/s21020342](#)
- **Guéguen P.**, Guattari F., Aubert C., Laudat T. **2021**. Comparing direct observation of torsion with array-derived rotation in civil engineering structures. Sensors, 21:142. doi : [10.3390/s21010142](#)

• Benjelloun J., de Sigoyer J., Dessales H., Baillet L., **Guéguen P.**, Sahin M. **2020**. Historical earthquake scenarios for the middle strand of the North Anatolian fault deduced from archeo-damage inventory and building deformation modeling. *Seismological Research Letters*, 92 (1) : 583–598. doi : [10.1785/0220200278](https://doi.org/10.1785/0220200278)

2020

- Chaimaa J., Bertrand D., Guillot T., Prudhomme E., Tardif N., Georgin J.-F., Delhomme F., Trunfio R., Chateur N., Bruyere E., Augéard E., Baillet L., **Guéguen P.**, Grange S. **2020**. Effect of early age drying shrinkage on the seismic response of RC structures, *Materials and Structures*, 53 : 153. doi : [10.1617/s11527-020-01552-2](https://doi.org/10.1617/s11527-020-01552-2)
- Astorga A., **Guéguen P.** **2020**. Influence of seismic strain rates on the co- and post-seismic response of civil engineering buildings. *Earthquake Engineering and Structural Dynamics*. doi : [10.1002/eqe.3328](https://doi.org/10.1002/eqe.3328)
- Astorga A., **Guéguen P.** **2020**. Structural health building response induced by earthquakes : material softening and recovery. *Engineering Reports*, ID : 16809632. doi : [10.1002/eng2.12228](https://doi.org/10.1002/eng2.12228)
- Traversa P., Maufroy E., Hollender F., Perron V., Bremaud V., Shible H., Drouet S., **Guéguen P.**, Langlais M., Wolyniec D., Péquegnat C., Douste-Bacque I. **2020**. RESIF RAP and RLBP Dataset of Earthquake Ground Motion in Mainland France. *Seismological Research Letters* doi : [10.1785/0220190367](https://doi.org/10.1785/0220190367)
- Perrault M., **Guéguen P.**, Parra G., Sarango J. **2020**. Modification of the data-driven period/height relationship for buildings located in seismic-prone regions such as Quito (Ecuador), *Bull Earthquake Engng.*, 18(8), 3545–3562. doi : [10.1007/s10518-020-00840-0](https://doi.org/10.1007/s10518-020-00840-0)
- Roumelioti Z., Hollender F., **Guéguen P.** **2020**. Rainfall-induced variation of seismic waves velocity in soil and implications for soil response : what the ARGONET (Cephalonia, Greece) vertical array data reveal. *Bulletin of the Seismological Society of America*, 110(2) : 441–451. doi : [10.1785/0120190183](https://doi.org/10.1785/0120190183)
- Trevelopoulos K., **Guéguen P.**, Helmstetter, Cotton F. **2020**. Earthquake risk in reinforced concrete buildings during aftershock sequences based on period elongation and operational earthquake forecasting, *Structural Safety*, 84, 101922. doi : [10.1016/j.strusafe.2020.101922](https://doi.org/10.1016/j.strusafe.2020.101922)
- Pothon A., **Guéguen P.**, Buisine S., Bard P.-Y. **2020**. Comparing probabilistic seismic hazard maps with ShakeMap footprints for Indonesia, *Seismol. Res. Lett.*, 91(2A) : 847–858. doi : [10.1785/0220190171](https://doi.org/10.1785/0220190171)
- Lott M., Roux P., Garambois S., **Guéguen P.**, Colombi A. **2020**. Evidence of metamaterial physics at the geophysics scale : the METAFORÉ experiment, *Geophysical Journal International*, 220(2) : 1330–1339, doi : [10.1093/gji/ggz528](https://doi.org/10.1093/gji/ggz528)
- **Guéguen P.**, Brossault M.-A., Roux P., Singaicho J.-C. **2020**. Slow dynamics process observed in civil engineering structures to detect structural heterogeneities, *Engineering Structures*, 202:109833. doi : [10.1016/j.engstruct.2019.109833](https://doi.org/10.1016/j.engstruct.2019.109833).
- Astorga A., **Guéguen P.**, Ghimire S., Kashima T. **2020**. NDE1.0 : a new database of earthquake data recordings from buildings for engineering applications, *Bull Earthquake Engng.*, 18:1321–1344. doi : [10.1007/s10518-019-00746-6](https://doi.org/10.1007/s10518-019-00746-6)
- Makhoul N., Navarro C., Lee J.S., **Guéguen P.** **2020**. A comparative study of buried pipeline fragilities using the seismic damage to the Byblos wastewater network, *International Journal of Disaster Risk Reduction*, 51, 101775. doi : [10.1016/j.ijdr.2020.101775](https://doi.org/10.1016/j.ijdr.2020.101775)

2019

- **Guéguen P.**, Mercerat E.D., Singaicho J.C., Aubert C., Barros J.G., Bonilla F., Crispstyani M., Douste-Bacqué I., Langlaude P., Mercier S., Pacheco D., Pernoud M., Perrault M., Pondaven I., Wolyniec D. **2019**. METACity-Quito : A semi-dense urban seismic network deployed to analyze the concept of meta-material for the future design of seismic-proof cities, *Seismological Research Letters* 90 (6) : 2318–2326. doi : [10.1785/0220190044](https://doi.org/10.1785/0220190044)
- **Guéguen P.**, Mercerat D.E., Alarcon F. **2019**. Parametric study on the interpretation of wave velocity obtained by seismic interferometry in beam-like buildings, *Bulletin of the Seismological Society of America*, 109 (5) : 1829–1842. doi : [10.1785/0120190054](https://doi.org/10.1785/0120190054)
- Pothon A., **Guéguen P.**, Buisine S., Bard, P.-Y. **2019**. California earthquake insurance unpopularity : the issue is the price, not the risk perception, *Nat. Hazards Earth Syst. Sci.*, 19, 1909–1924. doi : [10.5194/nhess-2019-29](https://doi.org/10.5194/nhess-2019-29).
- **Guéguen P.**, Bonilla L.B., Douglas J. **2019**. Comparison of soil nonlinearity (in situ stress–strain relation and G/Gmax reduction) observed in strong-motion databases and modeled in ground-motion prediction equations. *Bulletin of the Seismological Society of America*, 109 (1) : 178–186. doi : [10.1785/0120180169](https://doi.org/10.1785/0120180169)
- Astorga A.L., **Guéguen P.**, Rivière J., Kashima T. Johnson P.A. **2019**. Recovery of the resonance frequency of buildings following strong seismic deformation as a proxy for structural health. *Structural Health Monitoring*, doi : [10.1177/1475921718820770](https://doi.org/10.1177/1475921718820770)
- Bonilla L.F., **Guéguen P.**, Ben-Zion Y. **2019**. Monitoring co-seismic temporal changes of shallow material during strong ground motion with interferometry and autocorrelation. *Bulletin of the Seismological Society of America*, doi : [10.1785/0120180092](https://doi.org/10.1785/0120180092)
- Chandra J., **Guéguen P.** **2019**. Nonlinear response of soil-structure systems using dynamic centrifuge experiments, *Journal of Earthquake Engineering*, 23(10), 1719–1741. doi : [10.1080/13632469.2017.1398692](https://doi.org/10.1080/13632469.2017.1398692)

2018

-
- **Guéguen P., Tiganescu A. 2018.** Consideration of the effects of air temperature on Structural Health Monitoring through Traffic Light-based decision-making tools. *Shock and Vibration*, 2018:ID 9258675, 12 pages. doi : [0.1155/2018/9258675](https://doi.org/10.1155/2018/9258675).
 - Astorga A., **Guéguen P.**, Kashima T. **2018.** Nonlinear elasticity observed in buildings during a long sequence of earthquakes. *Bulletin of the Seismological Society of America*, 108 (3A) : 1185-1198. doi : [10.1785/0120170289](https://doi.org/10.1785/0120170289).
 - Brossault M.B., Roux P., **Guéguen P. 2018.** The fluctuation–dissipation theorem used as a proxy for damping variations in real engineering structures, *Engineering Structures*, 167:65-73. doi : [10.1016/j.engstruct.2018.04.012](https://doi.org/10.1016/j.engstruct.2018.04.012)
 - Michel C., **Guéguen P. 2018.** Interpretation of the velocity measured in buildings by seismic interferometry based on Timoshenko beam theory under weak and moderate motion. *Soil Dynamics and Earthquake Engineering*, 104, 131-142. [10.1016/j.soildyn.2017.09.031](https://doi.org/10.1016/j.soildyn.2017.09.031)
 - Riedel I., **Guéguen P. 2018.** Modelling of damage-related earthquake losses in a moderate seismic-prone country and cost-benefit evaluation of retrofit investments : application to France. *Natural Hazards*, 90(2):639-662. doi : [10.1007/s11069-017-3061-6](https://doi.org/10.1007/s11069-017-3061-6)
 - Roux P., Bindi D., Boxberger T., Colombi A., Cotton F., Douste-Bacque I., Garambois S., **Guéguen P.**, Hillers G., Hollis D., Lecocq T., Pon-daven I. **2018.** Toward Seismic Metamaterials : The METAFORÉ Project, *Seismological Research Letters*, 89(2A):582-593. doi : [10.1785/0220170196](https://doi.org/10.1785/0220170196)
-

2017

- Guettiche A., **Guéguen P.**, Mimoune M. **2017.** Economic and human loss empirical models for earthquakes in the Mediterranean region, with particular focus on Algeria. *International Journal of Disaster Risk Science*, 8(4), 415-434. doi : [10.1007/s13753-017-0153-6](https://doi.org/10.1007/s13753-017-0153-6)
 - Laurendeau A., Courboulès F., Bonilla L.F., Alvarado A., Naya V.A., Singaicho J.C., **Guéguen P.**, Mercerat D., Perrault M., Barros J.G., Ruiz M., Bertrand E. **2017.** Low Frequency Seismic Amplification in the Quito Basin (Ecuador) Revealed by Accelerometric Recordings of the RENAC Network, *Bulletin of the Seismological Society of America*, 107(6) : 2917-2926. doi : [10.1785/0120170134](https://doi.org/10.1785/0120170134)
 - Bonilla L.F., **Guéguen P.**, Lopez-Caballero F., Mercerat D.E., Gélis C. **2017.** Prediction of non-linear site response using downhole array data and numerical modeling : The Belleplaine (Guadeloupe) case study, *Physics and Chemistry of the Earth, Parts A/B/C*, 98 : 107-118. doi : [10.1016/j.pce.2017.02.017](https://doi.org/10.1016/j.pce.2017.02.017)
 - Guettiche A., **Guéguen P.**, Mimoune M. **2017** Seismic vulnerability assessment using Association Rule Learning - Application to the city of Constantine, Algeria. *Natural Hazard*, 86(3) : 1223–1245. doi : [10.1007/s11069-016-2739-5](https://doi.org/10.1007/s11069-016-2739-5)
 - **Guéguen P.**, Langlais M., Garambois S., Voisin C., Douste-Bacqué I. **2017.** How sensitive are site effects and building response to extreme cold temperature ? The case of the Grenoble's (France) City Hall building. *Bulletin of Earthquake Engineering*, 2017, 15(3):889–906. doi : [10.1007/s10518-016-9995-3](https://doi.org/10.1007/s10518-016-9995-3).
-

2016

- Colombi A., **Guéguen P. 2016** Urban seismology : Numerical results and real data observations on the clustering effect of buildings. *The Journal of the Acoustical Society of America* 2016 140:4, 2959-2959. doi : [10.1121/1.4969140](https://doi.org/10.1121/1.4969140)
- **Guéguen P.**, Colombi A. **2016.** Experimental and numerical evidence of the clustering effect of structure on their response during earthquake : a case study of three identical towers in the city of Grenoble (France), *Bulletin of Seismological Society of America*, 106(6) : 2855–2864. doi : [10.1785/0120160057](https://doi.org/10.1785/0120160057)
- Treloupoulos K., **Guéguen P. 2016.** Period elongation-based framework for operative assessment of the variation of seismic vulnerability of reinforced concrete buildings during aftershock sequences, *Soil Dynamics and Earthquake Engineering*, 84, 224-237. doi : [10.1016/j.soildyn.2016.02.009](https://doi.org/10.1016/j.soildyn.2016.02.009)
- **Guéguen P.**, Johnson P., Roux P. **2016.** Nonlinear dynamics induced in a structure by seismic and environmental loading, *Journal of the Acoustical Society of America*, 140(1):582-590. doi : [10.1121/1.4958990](https://doi.org/10.1121/1.4958990)
- Luzi L., Puglia R., Russo E., D'Amico M., Felicetta C., Pacor F., Lanzano G., Ceken U., Clinton J., Costa G., Duni L., Farzanegan E., **Guéguen P.**, Ionescu C., Kalogeras I., Özener H., Pesaresi D., Sleeman R., Strollo A., Zare M. **2016.** The engineering strong-motion database : A platform to access pan-European accelerometric data, *Seismological Research Letters* 87(4):987-997. doi : [10.1785/0220150278](https://doi.org/10.1785/0220150278)→<http://dx.doi.org/10.1785/0220150278>
- Gallipoli M.R., Stabile T. A., **Guéguen P.**, Mucciarelli M., Comelli P., Bertoni M. **2016.** Fundamental period elongation of a RC building during the Pollino seismic swarm sequence, *Case Studies in Structural Engineering*, 6:45-52. doi : [10.1016/j.csse.2016.05.005](https://doi.org/10.1016/j.csse.2016.05.005)
- Chandra J., **Guéguen P.**, Bonilla F. **2016.** On the use of the seismic interferometry technique for testing PGV/Vs as a proxy for predicting nonlinear soil response, *Soil Dyn. earthquake Engng.*, 85, 146-160. doi : [10.1016/j.soildyn.2016.03.020](https://doi.org/10.1016/j.soildyn.2016.03.020)
- Nasser F., Li Z., **Guéguen P.**, Martin N. **2016.** Frequency and damping ratio assessment of high-rise buildings using an Automatic Model-Based Approach applied to real-world ambient vibration recordings, *Mechanical Systems and Signal Processing*, 75, 196–208. doi : [10.1016/j.ymssp.2015.12.022](https://doi.org/10.1016/j.ymssp.2015.12.022)
- Colombi A., Roux P., Guenneau S., **Guéguen P.**, Craster R.V. **2016.** Forests as a natural seismic metamaterial : Rayleigh wave bandgaps induced by local resonances. *Scientific Reports*, 6:19238. doi : [10.1038/srep19238](https://doi.org/10.1038/srep19238)

- Nasser F., Li Z., Martin N., **Guéguen P. 2016**. An automatic approach towards modal parameter estimation for high-rise buildings of multicomponent signals under ambient excitations via filter-free Random Decrement Technique, *Mechanical Systems and Signal Processing*, 70–71, 821–831. doi : [10.1016/j.ymssp.2015.08.008](https://doi.org/10.1016/j.ymssp.2015.08.008)

2015

- **Guéguen P. 2015**. Predicting nonlinear site response using spectral acceleration vs. PGV/Vs30 : A case history using the Volvi-test site, *Pure and Applied Geophysics*, 173(6):2047-2063 - doi : [10.1007/s00024-015-1224-5](https://doi.org/10.1007/s00024-015-1224-5)
- Perrault M., **Guéguen P. 2015**. Correlation between ground motion and building response using Californian earthquake records. *Earthquake Spectra*, 31(4) : 2027-2046 - doi : [10.1193/062413EQS168M](https://doi.org/10.1193/062413EQS168M)
- Chandra J., **Guéguen P.**, Steidl J. H., Bonilla L. F. **2015**. In-situ assessment of the G-γ curve for characterizing the nonlinear response of soil : application to the Garner Valley Downhole Array(GVDA) and the Wildlife Liquefaction Array (WLA), *Bulletin of Seismological Society of America*, 105(2A), 993–1010. doi : [10.1785/0120140209](https://doi.org/10.1785/0120140209)
- Larose E., Carrière S., Voisin C., Bottelin P., Baillet L., **Guéguen P.**, Walter F., Jongmans D., Guillier B., Garambois S., Gimbert F., Massey C. **2015**. Environmental Seismology : what can we learn on Earth surface processes with ambient noise ? *Journal of Applied Geophysics*, 116:62–74, doi : [10.1016/j.jappgeo.2015.02.001](https://doi.org/10.1016/j.jappgeo.2015.02.001)
- Lancieri M., Renault M., Perrault M., Baumont D., **Guéguen P.**, Berge-Thierry C. **2015**. Naïve Bayesian classifier for the selection of input ground motions for inelastic structural response analysis, *Bulletin of Earthquake Engineering*, 13(9):2517-2546 doi : [10.1007/s10518-015-9728-z](https://doi.org/10.1007/s10518-015-9728-z)
- Valla, M., **Guéguen, P.**, Augère, B., Goular, D., and Perrault, M. **2015**. Remote Modal Study of Reinforced Concrete Buildings Using a Multipath Lidar Vibrometer. *J. Struct. Eng.*, 141, Special Issue : Field testing of Bridges and Buildings, D4014005. [10.1061/\(ASCE\)ST.1943-541X.0001087](https://doi.org/10.1061/(ASCE)ST.1943-541X.0001087)
- Riedel I., **Guéguen P.**, Dalla Mura M., Pathier E., Leduc T., Chanussot J., **2015**. Seismic Vulnerability Assessment of Urban Environments in Moderate-to-Low Seismic Hazard Regions Using Association Rule Learning and Support Vector Machine Methods, *Natural Hazards*, 76(2):1111-1141. doi : [10.1007/s11069-014-1538-0](https://doi.org/10.1007/s11069-014-1538-0)

2014

- Roux P., **Guéguen P.**, Baillet L., Hamze A. **2014**. Structural-change localization and monitoring through a perturbation-based inverse problem. *The Journal of the Acoustical Society of America*, 136(5), 2586-2597. doi : [10.1121/1.4897403](https://doi.org/10.1121/1.4897403)
- Tasan H., Beauval C., Helmstetter A., Sandikkaya A., **Guéguen P. 2014**. Testing probabilistic seismic hazard estimates against accelerometric data in two countries : France and Turkey. *Geophysical Journal International*, 198(3), 1554-1571 - doi : [10.1093/gji/ggu191](https://doi.org/10.1093/gji/ggu191)
- Riedel I., **Guéguen P.**, Dunand F., Cottaz S. **2014**. Macro-scale vulnerability assessment of cities using Association Rule Learning, *Seismological Research Letters*, 85(2) : 295-305. doi [10.1785/0220130148](https://doi.org/10.1785/0220130148)

2013

- Causse M., Laurendeau A., Perrault M., Douglas J., Bonnilla L.F., **Guéguen P. 2013**. A set of Eurocode 8-compatible synthetic time-series as input to dynamic analysis, *Bulletin of Earthquake Engineering*. doi [10.1007/s10518-013-9544-2](https://doi.org/10.1007/s10518-013-9544-2)
- Perrault M., **Guéguen P.**, Aldea A., Demetriu S. **2013**. Reducing the uncertainties of the fragility curves using experimental testing in existing buildings : the case of the BRD Tower of Bucarest (Romania). *Earthquake Engineering and Engineering Vibration*, 12(4) : 643-658, doi [10.1007/s11803-013-0203-z](https://doi.org/10.1007/s11803-013-0203-z)
- Bottelin P., Levy C., Baillet L., Jongmans D., **Guéguen P. 2013**. Modal and thermal analysis of Les Arches unstable rock column (Vercors massif, French Alps), *Geophysical Journal International*, 194(2) : 849-858, doi [10.1093/gji/ggt046](https://doi.org/10.1093/gji/ggt046)
- Régnier J., Michel C., Bertrand E., **Guéguen P. 2013**. Contribution of ambient vibration recordings (free-field and buildings) for post-seismic analysis : the case of the Mw 7.3 Martinique (French lesser Antilles) earthquake, November 29, 2007. *Soil Dynamics and Earthquake Engineering*, 50, 162-167, doi [10.1016/j.soildyn.2013.03.007](https://doi.org/10.1016/j.soildyn.2013.03.007)
- Mikael A., **Guéguen P.**, Bard P.-Y., Roux P., Langlais M. **2013**. Long-term frequency and damping wandering in buildings analysed using the Random Decrement Technique (RDT), *Bull seism. Soc. Am.*, 103(1) : 236-246, doi [10.1785/0120120048](https://doi.org/10.1785/0120120048)

2012

- Beauval C., Tasan H., Laurendeau A., Delavaud E., Cotton F., **Guéguen P.**, Kuehn N. **2012**. On the Testing of Ground Motion Prediction Equations against Small Magnitude Data, *Bull seism. Soc. Am.*, *Bulletin of the Seismological Society of America*, 102(5) : 1994-2007, doi : [10.1785/0120110271](https://doi.org/10.1785/0120110271)
- **Guéguen P. 2012**. Experimental analysis of the seismic response of an isolating building according to different levels of shaking : example of the Martinique earthquake (2007/11/29) Mw 7.3. *Bull Earthq. Engng.*, 10(4) : 1285-1298, doi : [10.1007/s10518-012-9355-x](https://doi.org/10.1007/s10518-012-9355-x).
- Dunand F., **Guéguen P. 2012**. Comparison between seismic and domestic risk in moderate seismic hazard prone region : the Grenoble City (France) test site, *Nat. Hazards Earth Syst. Sci.*, 12, 511-526, doi:[10.5194/nhess-12-511-2012](https://doi.org/10.5194/nhess-12-511-2012)

- Michel C., **Guéguen P.**, Causse M. **2012**. Seismic vulnerability assessment to slight damage based on experimental modal parameters, *Earthquake Engineering and Structural Dynamics*, 41(1) : 81-98, DOI : [10.1002/eqe.1119](https://doi.org/10.1002/eqe.1119)

2011

- Souriau A., Chaljub E., Cornou C., Margerin L., Calvet M., Maury J., Wathelet M., Ponsolles C., Grimaud F., Péquegnat C., Langlais M., **Guéguen P.** **2011**. Multimethod characterization of the French Pyrenean valley of Bagnères-de-Bigorre for seismic hazard evaluation : observations and models, *Bull seism. Soc. Am.*, 101(4) : 1912–1937, doi : [10.1785/0120100293](https://doi.org/10.1785/0120100293)
- **Guéguen P.**, Langlais M., Foray P., Rousseau C., Maury J. **2011**. A Natural Seismic Isolating System : The Buried Mangrove Effects, *Bull seism. Soc. Am.*, 101(3) : 1073-1080. doi : [10.1785/0120100129](https://doi.org/10.1785/0120100129)

2010

- Michel C., **Guéguen P.**, Lestuzzi P., Bard P.-Y. **2010**. Comparison between seismic vulnerability models and experimental dynamic properties of existing buildings in France, *Bulletin of Earthquake Engineering*, 8(6) : 1295-1307, DOI : [10.1007/s10518-010-9185-7](https://doi.org/10.1007/s10518-010-9185-7)
- Drouet S., Cotton F., **Guéguen P.** **2010**. VS30, κ , regional attenuation and Mw from accelerograms : application to magnitude 3–5 French earthquakes, *Geophysical Journal International*, 182(2) : 880–898, DOI : [10.1111/j.1365-246X.2010.04626.x](https://doi.org/10.1111/j.1365-246X.2010.04626.x)
- **Guéguen P.**, Jolivet V., Michel C., Schweitzer A.-S. **2010**. Comparison of velocimeter and coherent lidar measurements for building frequency assessment, *Bulletin of Earthquake Engineering*, 8(2):327-338, doi : [10.1007/s10518-009-9137-2](https://doi.org/10.1007/s10518-009-9137-2).
- Michel C., **Guéguen P.** **2010**. Time–Frequency Analysis of Small Frequency Variations in Civil Engineering Structures Under Weak and Strong Motions Using a Reassignment Method, *Structural Health Monitoring*, 9(2) : 159–171, doi:10.1177/1475921709352146
- Michel C., **Guéguen P.**, El Arem S., Mazars J., Kotronis P. **2010**. Full Scale Dynamic response of a RC building under weak seismic motions using earthquake recordings, ambient vibrations and modelling, *Earthq. Engng and Struct. Dyn.*, 2010 ; 39:419–441, doi [10.1002/eqe.948](https://doi.org/10.1002/eqe.948).

2008

- Michel C., **Guéguen P.**, Bard P.-Y. **2008**. Dynamic parameters of structures extracted from ambient vibration measurements : An aid for the seismic vulnerability assessment of existing buildings in moderate seismic hazard regions, *Soil Dynamics and Earthquake Engineering*, 28 (8), 593-604. doi:10.1016/j.soildyn.2007.10.002
- Beauval C., Bard P.-Y., Hainzl S., **P. Guéguen.** **2008**. Can strong-motion observations be used to constrain probabilistic seismic-hazard estimates ?, *Bull. Seism. Soc. Am.*, 98 (2), 509-520. DOI : [10.1785/0120070006](https://doi.org/10.1785/0120070006).
- Péquegnat C., **Guéguen P.**, Hatzfeld D., Langlais M. **2008**. The French Accelerometric Network (RAP) and National Data Centre (RAP-NDC). *SRL*, 79(1), 79-89. DOI : [10.1785/gssrl.79.1.79](https://doi.org/10.1785/gssrl.79.1.79)

2007

- **Guéguen P.**, Michel C., LeCorre L. **2007**. A simplified approach for vulnerability assessment in moderate-to-low seismic hazard regions : application to Grenoble (France), *Bull Earthq. Engng.*, 4(3), 467-490. DOI : [10.1007/s10518-007-9036-3](https://doi.org/10.1007/s10518-007-9036-3)
- Méric O., Garambois S., Malet J.-P., Cadet H., **Guéguen P.**, Jongmans D. **2007**. Seismic noise-based methods for soft-rock landslide characterization, *Bulletin de la Société Géologique Française*, 178 (2), 137-148. DOI : [10.2113/gssgfbull.178.2.137](https://doi.org/10.2113/gssgfbull.178.2.137)
- Chatelain J.-L., Guillier B., Cara F., Duval A.-M., Atakan K., Bard P.-Y., Azzara R., Bonnefoy-Claudet S., Borges A., Bottger Sorensen M., Cultrera G., Di Giulio G., Dunand F., Fäh D., **Guéguen P.**, Ripperger J., Teves Costa P., Vassiliades J.-F., Vidal S., Wassner J. **2007**. Evaluation of the influence of experimental conditions on H/V results from ambient noise recordings, *Bull. Earthq. Engng.*, doi : [10.1007/s10518-007-9040-7](https://doi.org/10.1007/s10518-007-9040-7).
- **Guéguen P.**, Cornou C., Garambois S., Banton J. **2007**. On the limitation of the H/V spectral ratio using seismic noise as an exploration tool : Application to the Grenoble valley (France), a small apex ratio basin, *PAGEOPH*, 164(1), 115-134. DOI:10.1007/s00024-006-0151-x

2005

- **Guéguen P.**, Bard P.-Y. **2005**. Soil-structure and soil-structure-soil interaction : experimental evidence at the Volvi test site, *J. Earthq. Engng.*, 9 (5), 657-693. DOI:10.1142/S1363246905002092

2004

- Cornou C., **Guéguen P.**, Bard P.-Y., Haghsheenas E. **2004**. Ambient noise energy bursts observation and modeling : Trapping of harmonic structure-soil induced-waves in a topmost sedimentary layer, Journal of Seismology, 8, 507-524. DOI : [10.1007/s10950-004-1980-7](https://doi.org/10.1007/s10950-004-1980-7)

2002

- **Guéguen P.**, Bard P.-Y., Chavez-Garcia F.J. **2002**. Site-City Interaction in Mexico City-Like environments : An Analytical Study, Bull. Seism. Soc. Am., 92,2, 794-811. DOI : [10.1785/0120000306](https://doi.org/10.1785/0120000306)

2000

- Chatelain J.L., **Guéguen P.**, Guillier B., Fréchet J., Bondoux F., Sarraut J., Sulpice P., Neuville J.M. **2000**. CityShark : A user-friendly instrument dedicated to ambient noise (microtremor) recording for site and building response studies, Seismological Research Letters, 71(6), 698-703. DOI : [10.1785/gssrl.71.6.698](https://doi.org/10.1785/gssrl.71.6.698)
- **Guéguen P.**, Bard P.-Y., Oliveira C.S. **2000**. Near to distant motions from an isolated RC-building model : experimental and numerical approaches, Bull. Seism. Soc. Am., 90, 6, 1464-1479. DOI : [10.1785/0119990072](https://doi.org/10.1785/0119990072)
- **Guéguen P.**, Semblat J.F., Bard P.-Y. **2000**. Interaction sismique sol-structure-sol en milieu urbain : modélisation par éléments finis, Revue Française de Génie Civil, 4(1), 9-33. DOI: [10.1080/12795119.2000.9692272](https://doi.org/10.1080/12795119.2000.9692272)
- **Guéguen P.**, Chatelain J.-L., Guillier B., Yepes H. **2000**. An indication of the soil topmost layer response in Quito(Ecuador) using H/V spectral ratio, Soil Dynamics and Earthquake Engineering, 19, 127-133. doi:[10.1016/S0267-7261\(99\)00035-4](https://doi.org/10.1016/S0267-7261(99)00035-4)

1998

- **Guéguen P.**, Chatelain J.-L., Guillier B., Yepes H., Egred J. **1998**. Site effect and damage distribution in Pujili (Ecuador) after the 28 March 1996 earthquake, Soil Dynamics and Earthquake Engineering, 17, 329-334. doi:[10.1016/S0267-7261\(98\)00019-0](https://doi.org/10.1016/S0267-7261(98)00019-0)

1997

- Chatelain J.L., Guillier B., **Guéguen P.**, Bondoux F. **1997**. The Mw 7.7 Nasca (Peru) earthquake, November 12, 1996 : a repetition of the 1942 event ?, Seismological Research Letters, 68(6), 917-922. DOI : [10.1785/gssrl.68.6.917](https://doi.org/10.1785/gssrl.68.6.917)

PEER-REVIEWED SCIENTIFIC PUBLICATIONS LEVEL B

- **Guéguen P.**, Yepes H., Riedel I. **2015**. On the value of earthquake scenario : the Kathmandu recent lesson. Front. Built Environ. doi : [10.3389/fbuil.2015.00026](https://doi.org/10.3389/fbuil.2015.00026)
- **Guéguen P.**, Hamze A., Baillet L., Roux P. **2014**. Numerical and experimental assessment of the performance of four nondestructive damage evaluation methods in situations comparable to post-earthquake damage analysis, International Journal of Earthquake Engineering, Special Issue "Structural Health Monitoring", December 01, 2014. pdf
- Davoine P.-A., Gensel J., **Guéguen P.**, Poulenard L. **2014** Isibat : a Web and Wireless Application for Collecting Urban Data about Seismic Risk, W2GIS 2014 - 13th International Symposium on Web and Wireless Geographical Information Systems, May 29 30, 2014, Seoul, South Korea
- Chatelain J.-L., Guillier B., **Guéguen P.**, Fréchet J., Sarraut J. **2012**. Ambient vibration recording for single-station, array and building studies made simple : CityShark II, International Journal of Geosciences, 03(6A) : 1168-1175. doi : [10.4236/ijg.2012.326118](https://doi.org/10.4236/ijg.2012.326118)
- Boudis M., Saillard Y., **Guéguen P.**, Davoine P.-A. **2010**. Modèle d'aide à la décision pour la prévention parasismique urbaine. Une approche multi-agent de la vulnérabilité du bâti, European Journal of GIS and Spatial Analysis, 20(3):279-302 - doi:10.3166/rig.20.279-302 - Author version : pdf
- Dunand F., Ait Meziane Y., **Guéguen P.**, Chatelain J.-L., Guillier B., Ben Salem R., Hadid M., Hellel M., Kiboua A., Laouami N., Machane D., Mezouer N., Nour A., Oubaiche E.H., Remas A. **2004**. Utilisation du bruit de fond pour l'analyse des dommages des bâtiments de Boumerdes suite au séisme du 21 mai 2003, Mém Serv. Géol. Alg., 12, 177-191. In french - En français
- Guillier B., Machane D., Oubaiche E.H., Chatelain J.-L., Ait Meziane Y., Ben Salem R., Dunand F., **Guéguen P.**, Hadid M., Hellel M., Kiboua A., Laouami N., Mezouer N., Nour A., Remas A. **2004**. Résultats préliminaires sur les fréquences fondamentales et les amplifications de sols obtenus par l'étude du bruit de fond sur la ville de Boumerdes - Algérie, Mém Serv. Géol. Alg., 12, 103-114.
- **Guéguen P.**, Bard P.-Y., Semblat J.-F. **2002**. L'interaction site-ville : un nouvel aspect de l'aléa sismique, Bulletin des Laboratoires des Ponts et Chaussées, 236, pp.17-36, 2002.

BOOKS AND CHAPTERS

- **Guéguen P.**, Roux P., Colombi A. **2022**. Urban Seismology : Experimental Approach to Soil–Structure Interaction Towards the Concept of Meta-city. In Deterministic Numerical Modeling of Soil–Structure Interaction (eds S. Grange and D. Salciarini). Wiley Eds. doi : [10.1002/9781119887690.ch5](https://doi.org/10.1002/9781119887690.ch5)

- Limongelli M.P., Dolce M., Spina D., **Guéguen P.**, Langlais M., Wolinieck D., Maufroy E., Karakostas C.V., Lekidis V.A., Morfidis K., Salonikios T., Rovithis E., Makra K., Masciotta M.G., Lourenço P.B. et al., **2019**. S2HM in Some European Countries. In : Limongelli M., Çelebi M. (eds) Seismic Structural Health Monitoring. Springer Tracts in Civil Engineering. Springer, Cham, doi : [10.1007/978-3-030-13976-6_13](https://doi.org/10.1007/978-3-030-13976-6_13)
- **Gueguen P. (Editor) 2013**. Vulnérabilité sismique des constructions. Hermes Science publication et Lavoisier Eds, 340 pages. ISBN 978-2-7462-3814-5.
- **Gueguen P. (Editor) 2013**. Seismic vulnerability of structures, Civil Engineering and geomechanics series, John Wiley and Son (Hoboken USA) and ISTE (London, UK) editor, 368 pages, ISBN-13 : 978-1848215245.
- Michel C., **Gueguen P. 2013**. Chapitre 4 : Méthodes expérimentales - utilisation des vibrations ambiantes pour réduire l'incertitude des courbes de vulnérabilité. In Gueguen P. (Ed) Vulnérabilité sismique des constructions, Hermes Science publication et Lavoisier Eds, 175-220, ISBN 978-2-7462-3814-5.
- Michel C., **Gueguen P. 2013**. Chapter 4 : experimental method : contribution of ambient vibrations recordings to vulnerability assessment. In Gueguen P. (Ed) Seismic vulnerability of structures, Civil Engineering and geomechanics series, John Wiley and Son (Hoboken USA) and ISTE (London, UK) editor, 161-212, ISBN-13 : 978-1848215245.
- Péquegnat C., Jacquot R., **Guéguen P.**, Godey S., Frobert L. **2011**. Distributed archive and single access system for accelerometric event data : a NERIES initiative. In Akkar S, Gülkan P, van Eck T (Eds.) Earthquake Data in Engineering Seismology. Geotechnical, Geological, and Earthquake Engineering 14(2) : 129-142, doi : [10.1007/978-94-007-0152-6_10](https://doi.org/10.1007/978-94-007-0152-6_10)
- Roca A., **Guéguen P.**, Godey S., Goula X., Susagna T., Péquegnat C., Oliveira C.S., Clinton J., Papaioanou C., Zulficar C. **2011**. The European-Mediterranean distributed accelerometric data-base. In Akkar S, Gülkan P, van Eck T (Eds.) Earthquake Data in Engineering Seismology. Geotechnical, Geological, and Earthquake Engineering 14(2):115-128, doi : [10.1007/978-94-007-0152-6_9](https://doi.org/10.1007/978-94-007-0152-6_9)
- **Guéguen P.**, Lutoff C., Davoine, P. A., Taliercio G., Cotton F., Cartier S. **2009**. Analyse de la vulnérabilité sismique dans un pays à sismicité modérée : le cas de Grenoble. Risques naturels et environnement. Becerra S., Peltier A. Editeur, Risques et environnement : recherches interdisciplinaires sur la vulnérabilité des sociétés, Paris : L'Harmattan, 575 pages, 285-301. Author version : [pdf](#)
- Bard P.-Y., Chazelas J.-L., **Guéguen P.**, Kham M., Semblat J.-F. **2006**. Site-City Interaction. Chapter 5 of the book "Assessing And Managing Earthquake Risk [Geo-Scientific And Engineering Knowledge For Earthquake Risk Mitigation : Developments, Tools And Techniques] ", C.S. Oliveira, A. Roca and X. Goula Editors, SPRINGER (new book series on Geotechnical, Geological and Earthquake Engineering). 530 p., Hardcover ISBN : 1-4020-3524-1, p.91-114. [google-books link](#)

PEER-REVIEWED SCIENTIFIC OR TECHNICAL REPORTS

- Nievas CI, Crowley H, Reuland Y, Weatherill G, Baltzopoulos G, Bayliss K, Chatzi E, Chioccarelli E, **Guéguen P.**, Iervolino I, Marzocchi W, Naylor M, Orlacchio M, Pejovic J, Popovic N, Serafini F and Serdar N **2023**, Integration of RISE Innovations in the Fields of OELF, RLA and SHM, RISE Project Deliverable 6.1. Available from : [here](#).
- **Guéguen P.**, Cotton F, Edwards B, Faeh D., Paolucci R, Pitilakis D, Parolai S, Drouet S. **2023**. URBASIS Final report, 80 pages
- Clinton J, Crawford W, Evangelidis C, Kaestli P, **Gueguen P.**, Pedersen H, Quinteros J, Saurel J.-M., Sleeman R, Strollo A. **2018**. Report on metadata challenges and proposed solutions, Deliverable D4.2, Activity 4, SERA H2020 European project 37 pages. [Lien](#)
- Riedel I, Cotton F., **Guéguen P. 2016**. Multi-hazard assessment of low-probability hazard and LP-HC events for six application areas, [Deliverable D3.7](#), Project STREST-EU Harmonized approach to stress tests for critical infrastructures against natural hazards, WP3 activity (Integrated low probability-high consequence hazard assessment for critical infrastructures), 24 pages
- **Guéguen P. 2015**. URBASIS : SISmologie URBAine : évaluation de la vulnérabilité et des dommages sismiques par méthodes innovantes, [Rapport final Projet ANR URBASIS 2010-2014 \(ANR-09-RISK-009\)](#), 20 pages. [Lien](#)
- **Guéguen P.**, Péquegnat C., Clinton J., Cauzzi C., Kästli P., Godey S., Frobert L. **2013**. Exchange protocol for (near) real time parametric data, [Delivrables D3.1](#), Activity NA3 : Networking accelerometric networks and SM data users, NERA FP7 European project (EC project number : 262330), 15 pages. [Lien](#)
- Baize S., Vanoudheusden E., **Guéguen P.**, Martin P.-O., Perrotin P., Chever L., Cuyeu P., Verdoux M. **2012**. La séquence sismique de Mai 2012 en Emilie-Romagne (région de Ferrara à Modena), [Rapport de mission AFPS](#), novembre 2012, 103 pages. [pdf](#)
- Goula X., Marsal A., Auledas D., T. Susagna, Chitos P., Oliveira C.S., Papaioannau C., Zulfikar C., Durukal E., Carvoisier S., **Guéguen P.**, Clinton J. **2008**. Implementation of accelerometric parameters computation and exchange : PART 2 : Parameter Data Exchange. [Delivrable D4](#) of Networking Activity 5, NERIES project (EC project number 026130), Sixth Framework Programme EC, 24 pages.
- **Guéguen P.**, Péquegnat C., Revilla J. **2007** Specifications of protocols and formats for waveforms access. [Delivrable D3 of the Networking Activity 5](#), NERIES project (EC project number 026130), Sixth Framework Programme EC, 38 pages.
- Péquegnat C., Jacquot R., **Guéguen P. 2009**. Development and implementation of unified waveform request. [Delivrable D5 of the Networking Activity 5](#), NERIES project (EC project number 026130), Sixth Framework Programme EC, 91 pages.
- **Guéguen P.**, P.A. Davoine, C. Lutoff, S. Hans et C. Boutin. **2007**. VULNERALP : Evaluation de la VULNérabilité Sismique à l'échelle d'une ville de Rhône-ALpes – Application à Grenoble, [Rapport de recherche final du projet Thématiques Prioritaires de la région Rhône-Alpes](#), 30 pages.
- Sismo-DT, **2006**. Représentation des enjeux d'un séisme : Vulnérabilités publiques de l'agglomération grenobloise. Programme Risque Décision Territoire du MEDD, 28 pages [Rédacteur du thème 3](#) : Evaluation de la vulnérabilité.
- Bard P.-Y., A.-M. Duval, E. Bertrand, J.-F. Vassiliadès, S. Vidal, C. Thibault, B. Guyet, J.-P. Mèneroud, **P. Guéguen**, P. Foin, F. Dunand, S. Bonnefoy-Claudet et G. Vettori, **2005**. Le risque Sismique à Nice : apport méthodologique, résultats et perspectives opérationnelles. [Rapport final GEMGEP](#), 52 pages.

- Combescure, D., **P. Guéguen** and B. Lebrun. **2005**. Vulnérabilité sismique du bâti existant : approche d'ensemble, Cahier technique AFPS, n°25, juillet 2005, 121 pages.