Anthony LAMUR

Academic advisor
Nationality: French
Languages: French, English, Spanish, German (learning).

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80333, Munich
Germany
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Employment

December 2023 – Current

Academic advisor
Ludwig-Maximillians-Universität, Germany

March 2022 – Current

Post-doctoral research assistant
Ludwig-Maximillians-Universität, Germany

February 2021 – February 2022

Post-doctoral research assistant
University of Liverpool, United Kingdom

September 2020 – February 2021

Research associate
University of Liverpool, United Kingdom

July 2018 – July 2020

University teacher in geophysics
University of Liverpool, United Kingdom

March 2018 – July 2018

Post-doctoral research assistant
University of Liverpool, United Kingdom

Education

July 2014 – March 2018

PhD in Environmental Sciences (Volcanology)
Development, impact and longevity of factures in magmatic, volcanic and geothermal systems
University of Liverpool, United Kingdom

September 2011 – July 2013

Master's degree in magma genesis, transport and eruptive characteristics
Eruption dynamics at Fuego volcano, Guatemala: A comparative study of seismic, acoustic and thermal signals
Michigan Technological University, Houghton, MI, USA/ Université Blaise Pascal, Clermont-Ferrand, France

September 2008 – July 2011

Bachelor's degree in Geology
Université Blaise Pascal, Clermont-Ferrand, France

Publications

First author

Lamur, A., Kendrick, J. E., (in review), Experimental validation of the harmonic mean permeability approach for layered geological systems: *Transport in porous media*

Lamur, A., Kendrick, J. E., Schaefer, L., Lavallée, Y., Kennedy, B. M., (2023), Damage accumulation during repetitive seismic waves in mechanically loaded rocks: *Scientific reports*, v. 13, no. 1, p.1271.

Lamur, A., Kendrick, J. E., Wadsworth, F. B., Lavallée, Y., 2019, Timescales of fracture healing and strength recovery in magmatic liquids: *Geology*

Lamur, A., Lavallée, Y., Iddon, F. E., Hornby, A. J., Kendrick, J. E., Aulock, F. W., and Wadsworth, F. B., 2018, Disclosing the temperature of columnar jointing in lavas: *Nature communications*, v. 9, no. 1, p. 1432.

Publications (continued)

Lamur, A., (2018), Development, impact and longevity of fractures in magmatic, volcanic and geothermal systems: University of Liverpool.

Lamur, A., Kendrick, J. E., Eggertsson, G., Wall, R., Ashworth, J., and Lavallée, Y., (2017), The permeability of fractured rocks in pressurised volcanic and geothermal systems: *Scientific Reports*, v. 7, no. 1, p. 6173.

Co-author

Schunke, J., Wadsworth, F. B., Kendrick, J. E., **Lamur, A.**, Birnbaum, J., Lavallée, Y., (in review), Grain size distribution controls sintering of hydrous pyroclasts, *Journal of Volcanology and Geothermal Research.*

Birnbaum, J., Schauroth, J., Weaver, J., Kendrick, J. E., **Lamur, A.**, Lavallée, Y., (in review), Shear-enhanced permeability development of magma vesiculating in cylindrical conduits, *Earth and Planetary Science Letters.*

Zorn, E. U., Kendrick, J, E., **Lamur, A.**, Birnbaum, J., Kueppers, U., Da Silva, M. M., Lavallée, Y., (2024), Experimental investigation of volcaniclastic compaction during burial, *Volcanica*, v. 7, no. 2, p. 765-783.

Kendrick, J. E., **Lamur A.**, Mouli-Castillo J., Lightbody A., Fraser-Harris, A., Edlmann K., McDermott C., Shitpon, Z., (2024), Validating the application of cyclic hydraulic pressure pulses to reduce breakdown pressure in granite: *iSciences, v. 27, no. 10.*

Kendrick, J. E., **Lamur A.**, Mouli-Castillo J., Fraser-Harris, A., Lightbody A., Edlmann K., McDermott C., Shitpon, Z., (2023), Rate-dependence of the compressive and tensile strength of granites: *Advances in Geosciences.*

Weaver, J., **Lamur, A.**, Lea, T. D., Wadsworth, F. B., Kendrick, J. E., Schauroth, J., Lavallée, Y., (2023), Sintering of vesiculating pyroclasts: *Earth and Planetary Science Letters.*

Schaefer, L. N., Kendrick, J. E., Lavallée, Y., Schauroth, J., Lamb, O. D., **Lamur, A.**, Miwa, T. Kennedy, B. M., (2023), Laboratory simulation of earthquake induced damage in lava dome rocks: *Tectonika*.

Lavallée, Y., Miwa, T., Ashworth, J. D., Wallace, P. A., Kendrick, J. E., Coats, R., **Lamur, A**., Hornby, A., Hess, K.-U., and Matsushima, T., (2022), Transient conduit permeability controlled by a shift between compactant shear and dilatant rupture at Unzen volcano (Japan): *Solid Earth*, p. 1-39.

Weaver, J., Lavallée, Y., Ashraf, M., Kendrick, J. E., **Lamur, A.**, Schauroth, J., Wadsworth, F. B., (2022), Vesiculation and densification of pyroclasts: A clast-size dependent competition between bubble growth and diffusive outgassing: *Journal of Volcanology and Geothermal Research*.

Seropian, G., Kennedy, B. M., Kendrick, J. E., Lavallée, Y., Nichols, A. R. L., Von Aulock, F. W., Dingwell, D. B., Hess, K-U., **Lamur, A.**, Schauroth, J., Vasseur, J., Wadsworth, F. B., (2022), Vesiculation of rhyolitic melt under oscillatory pressure: *Frontiers in Earth Science*.

Kendrick, J. E., Schaefer, L. N., Schauroth J., Bell, A. F., Lamb, O. D., **Lamur, A.**, Miwa, T., Coats, R., Lavallée, Y., Kennedy, B. M., (2021), Physical and mechanical rock properties of a heterogeneous volcano; the case of Mount Unzen, Japan: *Solid Earth*.

Bain, A., Kendrick, J. E., **Lamur, A.**, Lavallée, Y., Calder, E. S., Cortés, J. A., Torres, R. A., (2021), Micro-textural controls on magma rheology and Vulcanian explosion cyclicity: *Frontiers in Earth Science*, v. 8, 703.

Díaz-Moreno, A., Roca, A., **Lamur, A.**, Munkli, B. H., Ilanko, T., Pering, T. D., De Angelis, S., (2020), Characterization of acoustic infrasound signals at Volcan de Fuego, Guatemala: a baseline for volcano monitoring: *Frontiers in Earth Science*, v. 8, p. 469.

Weaver, J., Eggertsson, G., Utley, J. E., Wallace, P. A., **Lamur, A.**, Kendrick, J. E., Tuffen, H., Markússon, S., Lavallée, Y., (2019), Thermal liability of hyaloclastite in the Krafla geothermal reservoir, Iceland: the impact of phyllosilicates on permeability and rock strength: *Geofluids*.

Publications (continued)

Wallace, P. A., Lamb, O. D., De Angelis, S., Kendrick, J. E., Hornby, A. J., Díaz-Moreno, A., Von-Aulock, F. W., **Lamur, A.**, Utley, J. E., Rietbrock, A., Chigna, G., Lavallée, Y., (2019), Integrated constraints on explosive eruption intensification at Santiaguito dome complex: *Earth and Planetary Science Letters*.

Bain, A. A., **Lamur, A.**, Kendrick, J. E., Lavallée, Y., Calder, E. S., Cortés, J. A., Butler, I. B., and Cortés, G. P., (2019), Constraints on the porosity, permeability and porous micro-structure of highly-crystalline andesitic magma during plug formation: *Journal of Volcanology and Geothermal Research*, v. 379, p. 72-89.

Harnett, C. E., Kendrick, J. E., **Lamur, A.**, Thomas, M. E., Stinton, A., Wallace, P. A., Utley, J. E., Murphy, W., Neuberg, J., and Lavallée, Y., (2019), Evolution of Mechanical Properties of Lava Dome Rocks Across the 1995–2010 Eruption of Soufrière Hills Volcano, Montserrat: *Frontiers in Earth Science*, v. 7.

Hornby, A. J., Lavallée, Y., Kendrick, J. E., De Angelis, S., **Lamur, A.**, Lamb, O. D., Rietbrock, A., and Chigna, G., (2019), Brittle-ductile deformation and tensile rupture of dome lava during inflation at Santiaguito, Guatemala: Journal of Geophysical Research: *Solid Earth*.

Lamb, O. D., **Lamur, A.**, Dıaz-Moreno, A., De Angelis, S., Von Aulock, F. W., Kendrick, J. E., Wallace, P. A., Rietbrock, A., and Alvarez, I., (2018), Explosive disruption of long-term eruptive activity at Santiaguito, Guatemala: *Frontiers in Earth Sciences*.

Lamb, O. D., De Angelis, S., Wall, R. J., **Lamur, A.,** Varley, N. R., Reyes-Dávila, G., Arámbula-Mendoza, R., Hornby, A. J., Kendrick, J. E., and Lavallée, Y., (2017), Seismic and experimental insights into eruption precursors at Volcán de Colima: *Geophysical Research Letters*, v. 44, no. 12, p. 6092-6100.

De Angelis, S., Lamb, O. D., **Lamur, A.**, Hornby, A. J., Von Aulock, F. W., Chigna, G., Lavallée, Y., and Rietbrock, A., (2016), Characterization of moderate ash-and-gas explosions at Santiaguito volcano, Guatemala, from infrasound waveform inversion and thermal infrared measurements: *Geophysical Research Letters*.

Polacci, M., de' Michieli Vitturi, M., Arzilli, F., Burton, M., Caricchi, L., Carr, B., Cerminara, M., Cimarelli, C., Clarke, A., Colucci, S., Costa, A., Degruyter, W., Druitt, T., Engwell, S., Esposti Ongaro, T., Giordano, D., Gurioli, L., Haddadi, B., Kendrick, J., Kueppers, U., **Lamur, A.,** Lavallée, Y., LLewellin, E., Mader, H., Metrich, N., Montagna, C., Neri, A., Rivalta, E., Saccorotti, G., Sigmundsson, F., Spina, L., and Taddeucci, J., (2017a), From magma ascent to ash generation: investigating volcanic conduit processes by integrating experiments, numerical modeling, and observations: *Annals of Geophysics*, v. 60, no. 6.

Eggertsson, G., Tripodis, N. A., Utley, J. E. P., Wallevik, S. Ó., Alexandersson, K. F., Worden, R., Kendrick, J. E., Přikryl, J., Karlsdóttir, S. N., **Lamur, A.**, Von Aulock, F.W, Lavallée, Y., Coats, R., (in review), Thermo-mechanical degradation of hardened well cement casing due to geothermal activity: a case of the Icelandic Deep Drilling Project (IDDP): *Geothermics*.

Field experience

2023

Long Valley caldera, California, USA: Study of the Mono/Inyo domes.

2018

- Fuego volcano, Guatemala: Part of the EU response team to the June 2018 volcanic crisis; Deployment of a real-time, permanent seismo-acoustic station
- Fuego volcano, Guatemala: Deployment of an acoustic array

2017

Long Valley caldera, California, USA: Study of the Mono/Inyo domes.

2016

Santiaguito volcano, Guatemala: Thermal imaging of the active vent.

Field experience (continued)

2015

- Ceboruco volcano, Mexico: Mapping the permeability structure of a lava dome.
- Lemptégy volcano, France: Mapping the permeability structure of a vulcanian plug.

2014

Santiaguito volcano, Guatemala: Thermal imaging of the active vent and deployment of a seismo-acoustic array.

2013

Fuego volcano, Guatemala: Thermal, acoustic and seismic monitoring of vulcanian activity.

Societal activities

2025

- Manuscript review: Scientific reports
- Manuscript review: International Journal for Numerical and Analytical Methods in Geomechanics
- Manuscript review: Geomechanics and Geophysics

2024

- Session convener: Silicate melts workshop
- Manuscript review: Journal of Volcanology and Geothermal Research
- Manuscript review: Bulletin of Volcanology

2023

- Manuscript review: Journal of Volcanology and Geothermal Research
- Manuscript review: Nature Communications
- Manuscript review: Bulletin of Volcanology
- Manuscript review: Journal of Volcanology and Geothermal Research
- Manuscript review: Bulletin of Volcanology

2020

Manuscript review: Journal of Volcanology and Geothermal Research

2019

- Manuscript review: Bulletin of Volcanology
- Manuscript review: Geosciences

2018

Manuscript review: Solid Earth

2017

- Session convener: Rock physics and geomechanical characterisation of rocks from micro to macro scale: the role of anisotropy and hydro-mechanical coupling (EGU)
- Session convener: Heterogeneity in the Earth: From micro to macro scale (Joint Assembly Liverpool)
- Organising Committee: Joint Assembly Liverpool (VMSG-TSG-BGA)

Teaching

2025 – 2026

- Lecturer: Applied rock mechanics
- Lecturer: Geosciences I, Geomaterials II
- Lecturer: Physics and chemistry of silicate melts
- Lecturer: Theory of Thermodynamical Phase Equilibria
- Module coordinator: Thermodynamics
- Lecturer: Data processing

Teaching (continued)

2024 – 2025

- Lecturer: Applied rock mechanics
- Lecturer: Field and laboratory techniques
- Lecturer: Geosciences I, Geomaterials II
- Lecturer: Theory of Thermodynamical Phase Equilibria
- Module coordinator: Thermodynamics
- Lecturer: Data processing

2023 – 2024

- Lecturer: Data processing
- Lecturer: Applied rock mechanics
- Lecturer: IMPROVE short course
- Demonstrator: Introduction to COMSOL

2022 – 2023

- Lecturer: Data Processing

2019 – 2020

- Module coordinator: Seismology and computing
- Module coordinator: Exploration geophysics and signal processing
- Module coordinator: Quantitative seismic interpretation of reservoirs
- Lecturer: Introduction to Earth Sciences (Geohazards)
- Lecturer: Environmental geophysics
- Lecturer: Volcanology and geohazards
- Lecturer: Geophysical exploration techniques (*Field class: Tenerife*)
- Lecturer: Fundamentals of applied earthquake and volcano-seismology
- Lecturer: Simulating environmental systems
- Lecturer: Volcanic processes (*Field class: Tenerife*)
- Lecturer: Research methods (Viscometry)
- Tutor: Study skills and GIS; including field class to Mam Tor

2018 – 2019

- Lecturer: Introduction to Earth Sciences (Geohazards)
- Lecturer: Seismology and computing
- Lecturer: Environmental geophysics
- Lecturer: Exploration geophysics and signal processing
- Lecturer: Geophysical exploration techniques (*Field class*)
- Lecturer: Fundamentals of applied earthquake and volcano-seismology
- Lecturer: Quantitative seismic interpretation of reservoirs
- Tutor: Study skills and GIS; including field class to Mam Tor
- Lecturer: CPD course for A-level teachers: Quantifying porosity and permeability in high schools

2017

- Lecturer: CPD course for A-level teachers: Quantifying porosity and permeability in high schools

Continuous

- Training PhD students on for uniaxial/ triaxial presses, permeameters, pycnometer, furnaces
- Teaching MatLab to PhD and post-doctoral fellows

Student supervision

2019 – 2022

Co-supervisor, *PhD*: The volcanic safety valve: controlling the release of volatiles for safe geothermal drilling into magma chambers.

Student supervision (continued)

2019 – 2020

- Supervisor, *BSc*: Acoustic characterisation of inelastic deformation during loading.
- Supervisor, *BSc*: Acoustic properties of rocks from a compacting aquifer, Tenerife.
- Supervisor, *BSc*: Characterising the physico-mechanical properties of an aquifer, Tenerife.
- Supervisor, *BSc*: Tracking wildfires using InSAR coherence.
- Co-supervisor, *MSc*: The permeability of clay-rich compacted powders.

2018 – 2019

Co-supervisor, *MSc*: Foaming and sintering mechanics of hydrous powders

2017 – 2018

Co-supervisor, *MSc*: Shear induced magma mixing

2016 – 2017

Co-supervisor, *MSc*: Permeability of the Barbarossa field

2015 – 2016

Co-supervisor, *MSc*: Thermal imaging of brittle failure

Demonstrating

2017 – 2018

- Minerals, magmas and volcanoes

2017 – 2018

- Geological mapping; including field class to Ingleton
- Magmatism and volcanic hazards

2016 – 2017

- Introduction to GIS
- Seismology and computing
- Geological mapping; including field class to Ingleton
- Magmatism and volcanic hazards
- Metamorphic and igneous petrology

2015 – 2016

Geological mapping; including field class to Ingleton

Invited talks

2022

VPG seminar, LMU Munich

2021

- Earth Sciences Research Group (ESRG), University of Liverpool
- Volcanology group, University of Leeds

2020

SciBar (general public).

Outreach

2019

- **Lamur, A.**, Kendrick, J.E., 2019, Determining the porosity and permeability of rocks: A benchtop method for A-Level classrooms: *Teaching Earth Sciences*, v. 44.
- Sedbergh school visit (A-Level pupils): Practical activities including building response to earthquake and conducting a seismic refraction survey.
- Liverpool school visit (year 3 pupils): Introduction to volcanoes.

Outreach (continued)

2016

- Royal Society Summer Science Exhibition, Museum of Science and Industry, Manchester (October): 4D Science exhibitor.
- Royal Society Summer Science Exhibition, Royal Society, London (July): 4D Science exhibitor.

Personal development

2023

- German language (A1-A2), Ludwig-Maximillians-Universität, Germany.
- COMSOL Multiphysics, Ludwig-Maximillians-Universität, Germany.
- DFG grant writing, Ludwig-Maximillians-Universität, Germany.

2022

QGIS, Online workshop (VMSG).

2020

Postgraduate Certificate Academic Practice (PGCAP) certification, University of Liverpool, United Kingdom.

2019

Writing Research Grant Applications (Parker Derrington Ltd).

2017

Seismic ambient noise tomography (MsNoise) workshop, University of Liverpool, United Kingdom.

2016

LA-ICPMS short course, Dublin University, Ireland.

2015

- MeMoVolc workshop, Pisa, Italy.
- Magmas, Melts and Glasses workshop, Ludwig Maximillian University, Germany.

2014

Magmas, Melts and Glasses workshop, Ludwig Maximillian University, Germany.

Conferences

17 first author presentations (5 oral presentations; 12 posters); Main contributor or presenter on an additional 12 posters

Grants

2019

Student internship bursary - £800: Earth Science Research Group (University of Liverpool).

2017

VMSG student travel grant - £300.

2016

EGU Early Career Scientist Travel Support - £150.

Computing Skills

Matlab	Office suite	Adobe suite	InkScape	Python	QGIS
●●●●●	●●●●●	●●●●●	●●●●●	●●○○○	●●●○○

Extra-curricular information

- Full driving license
- First aid training (16/01/19).
- Fire Warden training (07/10/21)