

Email: [uieda@liverpool.ac.uk](mailto:uieda@liverpool.ac.uk)  
ORCID: [0000-0001-6123-9515](https://orcid.org/0000-0001-6123-9515)

Website: [www.leouieda.com](http://www.leouieda.com)  
Research Group: [www.compgeolab.org](http://www.compgeolab.org)

## Professional Appointments

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2019–on **Lecturer**, University of Liverpool, UK  
2017–2022 **Visiting/Affiliate Researcher**, University of Hawai'i at Mānoa, USA  
2014–2018 **Assistant Professor**, Universidade do Estado do Rio de Janeiro, Brazil

## Education

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2011–2016 **PhD in Geophysics**, Observatório Nacional, Brazil. doi:[10.6084/m9.figshare.16883689](https://doi.org/10.6084/m9.figshare.16883689)  
2010–2011 **MSc in Geophysics**, Observatório Nacional, Brazil. doi:[10.6084/m9.figshare.16882300](https://doi.org/10.6084/m9.figshare.16882300)  
2004–2009 **BSc in Geophysics**, Universidade de São Paulo, Brazil. doi:[10.6084/m9.figshare.963547](https://doi.org/10.6084/m9.figshare.963547)

## Community Service

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2022–on **Advisory Committee Member**, pyOpenSci, [www.pyopensci.org](http://www.pyopensci.org)  
2022–on **Board Member**, Software Underground, [softwareunderground.org](http://softwareunderground.org)  
2019–2022 **Topic Editor**, Journal of Open Source Software, [joss.theoj.org](http://joss.theoj.org)  
2019–2022 **Advisory Council Member**, EarthArXiv, [eartharxiv.org](http://eartharxiv.org)





## Open Research Software

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2010–on **Fatiando a Terra** | [www.fatiando.org](http://www.fatiando.org)  
*Python tools for geophysical data processing, forward modeling, and inversion*  
Role: Project founder, core developer, Steering Council Member  
2017–on **PyGMT** | [www.pygmt.org](http://www.pygmt.org)  
*A Python interface for the Generic Mapping Tools*  
Role: Project founder, developer, advisor  
2017–on **The Generic Mapping Tools (GMT)** | [www.generic-mapping-tools.org](http://www.generic-mapping-tools.org)  
*A data processing and mapping toolbox for the Earth, Ocean, and Planetary Science*  
Role: Community stewardship advisor, set up the website + forum + GitHub workflow  
2022–on **xlandsat** | [compgeolab.org/xlandsat](http://compgeolab.org/xlandsat)  
*Load Landsat remote sensing scenes in Python and xarray*  
Role: Creator and sole developer  
2009–2016 **Tesseroids** | [tesseroids.leouieda.com](http://tesseroids.leouieda.com)  
*Forward modeling of gravitational fields in spherical coordinates*  
Role: Creator and sole developer

## Open Educational Resources

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2021–on **A Quick Introduction to Machine Learning.**  GitHub: [leouieda/ml-intro](https://github.com/leouieda/ml-intro)  
2020–on **Remote Sensing with Python.**  GitHub: [leouieda/remote-sensing](https://github.com/leouieda/remote-sensing)  
2020–on **Lithosphere Dynamics with Python.**  GitHub: [leouieda/lithosphere](https://github.com/leouieda/lithosphere)  
2020–on **Terrestrial Gravimetry with Python.**  GitHub: [leouieda/gravity-processing](https://github.com/leouieda/gravity-processing)  
Resources for older courses and short workshops are available from: [leouieda.com/teaching](http://leouieda.com/teaching)

## Grants and Fellowships

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- 2022–2024 “Towards individual-grain paleomagnetism: Translating regional-scale geophysics to the nascent field of magnetic microscopy”. **Royal Society**. **Uieda, L** (PI), Trindade, RIF (co-PI). Award: IES\R3\213141
- 2020 Fellowship from the **Software Sustainability Institute**. Award: [software.ac.uk/about/fellows](https://software.ac.uk/about/fellows)
- 2020–2023 “A Sustainable Plan for the Future of the Generic Mapping Tools”. **NSF-EAR**. Wessel, P (PI), **Uieda, L** (co-PI). Award: [1948602](#).
- 2018–2020 “The EarthScope/GMT Analysis and Visualization Toolbox”. **NSF-EAR**. Wessel, P (PI), **Uieda, L** (co-PI), Smith-Konter, B (co-PI). Award: [1829371](#).

## Recent Invited Presentations

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- 2021 **Uieda, L**, Li, L, Soler, SR, Pesce, A. Design useful tools that do one thing well and work together: rediscovering the UNIX philosophy while building the Fatiando a Terra project. *AGU 2021*.  
🔗 GitHub: [fatiando/agu2021](#)
- 2021 **Uieda, L**, Soler, SR. Python-based workflows for small-to-medium sized data: what works, what doesn't, and what can be improved. *AGU 2021*. 🔗 GitHub: [compgeolab/agu2021](#)
- 2021 **Uieda, L**, Soler, SR, Pesce, A. Open-science for gravimetry: tools, challenges, and opportunities. *GFZ Helmholtz Centre Potsdam*. 🔗 GitHub: [leouieda/2021-06-22-gfz](#)
- 2021 **Uieda, L**, Soler, SR, Pesce, A. Fatiando a Terra: Open-source tools for geophysics. *Geophysical Society of Houston*. 🔗 GitHub: [fatiando/2021-gsh](#)
- 2020 **Uieda, L**. Geophysical research powered by open-source. *Christian Albrechts Universität zu Kiel*.  
🔗 GitHub: [leouieda/2020-07-01-kiel](#)

## Publication Highlights

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- 2021 Gradient-boosted equivalent sources. Soler, SR, **Uieda, L**. doi:[10.1093/gji/ggab297](#).  
📄 EarthArXiv: [10.31223/X58G7C](#) | 🔗 GitHub: [compgeolab/eql-gradient-boosted](#)
- 2020 @ Pooch: A friend to fetch your data files. **Uieda, L**, Soler, SR, Rampin, R, van Kemenade, H, Turk, M, Shapero, D, Banihirwe, A, Leeman, J. doi:[10.21105/joss.01943](#). 🔗 GitHub: [fatiando/pooch](#)
- 2019 @ The Generic Mapping Tools, Version 6. Wessel, P, Luis, J, **Uieda, L**, Scharroo, R, Wobbe, F, Smith, WHF, Tian, D. doi:[10.1029/2019GC008515](#).
- 2018 @ Verde: Processing and gridding spatial data using Green's functions. **Uieda, L**.  
doi:[10.21105/joss.00957](#). 🔗 GitHub: [fatiando/verde](#)
- 2017 Fast non-linear gravity inversion in spherical coordinates with application to the South American Moho. **Uieda, L**, Barbosa, VCF. doi:[10.1093/gji/ggw390](#). 📄 EarthArXiv: [10.31223/osf.io/9ba4m](#)  
🔗 GitHub: [pinga-lab/paper-moho-inversion-tesseroids](#)
- 2016 Tesseroids: forward modeling gravitational fields in spherical coordinates. **Uieda, L**, Barbosa, VCF, Braitenberg, C. doi:[10.1190/geo2015-0204.1](#). 🔗 GitHub: [pinga-lab/paper-tesseroids](#)
- 2012 Robust 3D gravity gradient inversion by planting anomalous densities. **Uieda, L**, Barbosa, VCF. doi:[10.1190/geo2011-0388.1](#). 🔗 GitHub: [pinga-lab/paper-planting-densities](#)