

Agustina Pesce

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Personal Information

Pronouns: She/her

Birth date: January 2, 1986, Argentina

GitHub: [aguspesce](https://github.com/aguspesce)

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Education

2014 - 2019 **PhD in Geophysics**, [FCEFyN](#), Universidad Nacional de San Juan, Argentina
Thesis: Geophysical analysis of the Loncopué Trough, Neuquén
Advisor: Dr. Mario Gimenez ([IGSV](#))
Co-Advisor: Andres Folguera ([IDEAN](#))

2005 - 2014 **Licentiate in Physics**, [FCEIA](#), Universidad Nacional de Rosario

Awards and Scholarships

2019 - 2021 [CONICET](#) Postdoctoral Scholarship

2014 - 2019 [CONICET](#) PhD Scholarship

2015 Travel grants: SEG/ExxonMobil Student Education Program (SEP), New Orleans, EE.UU.

Research experience

2019 - 2021 **Postdoctoral project**, *Influence of a mantle plume in subduction zones by geodynamics numerical models*
Advisor: Dr. Victor Sacek ([IAG-USP](#))
Co-Advisor: Dr. Mario Gimenez ([IGSV](#))

Since 2019 **Mandyoc:** Mantle dynamics simulator code and **tapIOca:** Tools for transforming output files from Mandyoc code to dataset.
[Mandyoca](#)
[Tapioca](#)

Since 2016 **Fatiando a Terra:** Open source tools for geophysics
<https://www.fatiando.org/>
Member and contributor.

Since 2014

Researcher at **IGSV**, FCEFyN, Universidad Nacional de San Juan, Argentina

Teaching

2021

Tutorial: Processing gravity data with Harmonica, *Transform 2020, Software Underground*

<https://github.com/fatiando/transform21>

Instructor

Since 2019

Physics I and **Physics II**, *Departamento de Geología, FCEFyN, Universidad Nacional de San Juan*

Jefe de Trabajos Prácticos (assistant professor of practice).

2017

Introductory course to LaTeX: How to produce high quality documents, *Secretaría de Extensión, Facultad de Ciencias Exactas, Físicas y Naturales, Universidad Nacional de San Juan*

<https://santisoler.github.io/teaching/latex.html>

Publications

Peer-reviewed papers

2020

Oligocene to present shallow subduction beneath the southern Puna plateau, *Tectonophysics*

Gianni, G. M.; García, H.; Pesce, A.; Lupari, M.; González, M.; Giambiagi, L.

doi: [10.1016/j.tecto.2020.228402](https://doi.org/10.1016/j.tecto.2020.228402)

2019

The subduction of the Copiapó aseismic ridge, is the causing of the formation of metallic minerals deposits in north of Chile and Argentina?, *Geodesy and Geodynamics*

Gimenez, M.; Acosta, G.; Alvarez, O.; Pesce, A.; Lince Kinger, F.; Folguera A.

doi: [10.1016/j.geog.2019.04.007](https://doi.org/10.1016/j.geog.2019.04.007)

2019

Gravitational field calculation in spherical coordinates using variable densities in depth, *Geophysical Journal International*

Soler, S.; Pesce, A.; Gimenez, M.; Uieda, L.

doi: [10.1093/gji/ggz277](https://doi.org/10.1093/gji/ggz277)

2019

Magnetic characterization of a retroarc extensional basin: The Loncopué Trough, *Journal of South American Earth Sciences*

Pesce, A.; Gianni, G.; Giménez, M. E.; Folguera, A.

doi: [10.1016/j.jsames.2018.11.00](https://doi.org/10.1016/j.jsames.2018.11.00)

2019

Modelo preliminar 3-D de susceptibilidad magnética del volcán Tromen, *Revista de la Asociación Geológica Argentina*, 76(1), 687-692.

Pesce, A.; Lupari, M.; Gianni, G.; Nacif, S.; Gimenez, M.

<https://revista.geologica.org.ar/raga/article/view/129>

2018

Modelado gravimétrico 3D de la Corteza Superior de la subcuenca Palauco y alrededores, sur de Mendoza, Argentina, *Revista de la Asociación Geológica Argentina*, 75(4), 584-591.

Lupari, M.; Pesce, A.; Leiva, F.; Gonzales, M. A.; Nacif, S.; Alvarez, O.; Gimenez, M.; Lavecchia, J.; Folguera, A.

<https://ppct.caicyt.gov.ar/index.php/raga/article/view/13112>

2018

Transient plate contraction between two simultaneous slab windows: Insights from Paleogene tectonics of the Patagonian Andes, *Journal of Geodynamic*

- Gianni, G; Pesce, A; Soler, S. R
doi: [10.1016/j.jog.2018.07.008](https://doi.org/10.1016/j.jog.2018.07.008)
- 2018 **Intraplate seismicity recorded by a local network in the Neuquen Basin Argentina.** *Journal of South American Earth Sciences*
Correa-Otto, S; Nacif, S; Pesce, A; Nacif, A; Gianni, G; Furlani, R; Giménez,M; Ruiz,F
doi: [10.1016/j.jsames.2017.12.007](https://doi.org/10.1016/j.jsames.2017.12.007)
- 2018 **3-D crustal-scale gravity model of the San Rafael Block and Payenia volcanic province in Mendoza, Argentina,** *Geoscience Frontiers*
Richarte, D; Lupari, M; Pesce, A; Nacif, S; Gimenez, M
doi: [10.1016/j.gsf.2017.03.004](https://doi.org/10.1016/j.gsf.2017.03.004)
- 2017 **Plume overriding triggers shallow subduction and orogeny in the Southern Central Andes,** *Gondwana Research*
Gianni, G; García, H; Lupari, M; Pesce, A; Folguera, A
doi: [10.1016/j.gr.2017.06.011](https://doi.org/10.1016/j.gr.2017.06.011)
- 2017 **Analysis of the Illapel Mw=8.3 thrust earthquake rupture zone using GOCE derived gradients,** *Pure and Applied Geophysics*
Álvarez, O; Pesce, A; Gimenez, M; Folguera, A; Soler, S; Wenjin Chen
doi: [10.1007/s00024-016-1376-y](https://doi.org/10.1007/s00024-016-1376-y)

Books Chapters

- 2020 **Pliocene to Quaternary Retroarc Extension in the Neuquén Basin: Geophysical Characterization of the Loncopué Trough,** *Opening and closure of the Neuquén Basin in the Southern Andes, Springer*
Pesce, A; Gianni, G; Giménez, M. E; Folguera, A
doi: [10.1007/978-3-030-29680-3](https://doi.org/10.1007/978-3-030-29680-3)
- 2020 **Plume Subduction Beneath the Neuquén Basin and the Last Mountain Building Stage of the Southern Central Andes,** *Opening and Closure of the Neuquén Basin in the Southern Andes, Springer*
Gianni, G; Pesce, A; García, H. P. A; Lupari, M; Correa-Otto, S; Nacif, S; Folguera, A
doi: [10.1007/978-3-030-29680-3](https://doi.org/10.1007/978-3-030-29680-3)
- 2019 **Along-strike segmentation of the Farallon-Phoenix midocean ridge: Insights from the Paleogene tectonic evolution of the Patagonian Andes between 45° and 46° S,** *Andean Tectonics, Elsevier*
Gianni, G; Pesce, A; Garcia, H.P.A; Sánchez, M; Soler, S; Navarrete, C; Echaurren, A; Encinas, A; Folguera, A
doi: [10.1016/B978-0-12-816009-1.00023-X](https://doi.org/10.1016/B978-0-12-816009-1.00023-X)
- 2019 **Crustal structure in the southern Andes adjacent foreland and Atlantic passive margin delineated by satellite gravimetric models,** *Andean Tectonics, Elsevier*
Gimenez, M; Pesce, A; Pechuan, S; Areco,M. A; Soler, S. R; Correa Otto, S; Lince Klinger, F; Alvarez, O; Folguera, A
doi: [10.1016/B978-0-12-816009-1.00002-2](https://doi.org/10.1016/B978-0-12-816009-1.00002-2)

Conference proceedings

- 2021 **Fatiando a Terra: Open-source tools for geophysics,** *Online talk given to the Geophysical Society of Houston (GSH)*
Uieda, Leonardo; Soler, Santiago R. and Pesce, Agustina

<https://github.com/fatiando/2021-gsh>

- 2021 **Harmonica and Boule: Modern Python tools for geophysical gravimetry**, *EGU2021 General Assembly*
Uieda, Leonardo; Soler, Santiago R.; Pesce, Agustina; Perozzi, Lorenzo and Wieczorek, Mark A.
doi:[10.5194/egusphere-egu21-8291](https://doi.org/10.5194/egusphere-egu21-8291)
- 2020 **Evaluation of the presence of a weak layer in the numerical simulation of lithospheric subduction**, *EGU2020 General Assembly*
Agustina Pesce and Victor Sacek
doi: [10.5194/egusphere-egu2020-734](https://doi.org/10.5194/egusphere-egu2020-734)
- 2018 **Análisis Isostático de los Andes Centrales Sur a Partir de la Ondulación del Geoide**, *XVII Reunión de Tectónica, La Rioja, Argentina*
Pesce, A. and Gimenez, M.
ISBN: 978-987-42-9619-1
- 2017 **Magnetic characterization of the Loncopué trough, Neuquén, Argentina**, *XX Congreso Geológico Argentino*
Pesce, A; Gimenez, M; Folguera, A; Gianni, G; Soler, S. R.
ISBN: 978-987-42-6666-8
- 2017 **Caracterización magnética de la fosa de Loncopué, Neuquén, Argentina**, *I Congreso Binacional de Investigación Científica (Argentina-Chile) y V Encuentro de Jovenes Investigadores, San Juan, Argentina*
Agustina Pesce
- 2016 **Estudio magnético, gravimétrico y magnetotelúrico de la fosa de Loncopué**, *Primer Simposio de Tectónica Sudamericana, Santiago de Chile, Chile*
Pesce, A; Gimenez, M; Folguera, A
- 2015 **Análisis geodésico y gravimétrico preliminares la franja de 38° a 40° S de la cordillera de los Andes**, *XVI Reunión de Tectónica, Río Negro, Argentina*
Pesce, A; Gimenez, M; Introcaso, A; Guspí, F
ISBN: 978-987-3667-17-6
- 2014 **Combinación de alturas del geoide y anomalías de aire libre para gran cantidad de observaciones**, *XXVII Reunión científica de la Asociación Argentina de Geofísicos y Geodestas, San Juan, Argentina*
Guspí, F; Pesce, A
ISBN: 978-987-33-5605-6
- 2014 **Distensión-compresión en los Andes del norte Argentino. Su explicación a partir de un modelo plástico actualizado**, *XXVII Reunión científica de la Asociación Argentina de Geofísicos y Geodestas, San Juan, Argentina*
Pesce, A; Novara, I; Introcaso, A
ISBN: 978-987-33-5605-6
- 2014 **Análisis isostático preliminar de la región norte de la Patagonia, a partir de las ondulaciones del geoide**, *XXVII Reunión científica de la Asociación Argentina de Geofísicos y Geodestas, San Juan, Argentina*
Pesce, A; Gimenez, M; Guspí, F
ISBN: 978-987-33-5605-6

Technical Skills

Programming	Python, bash, FORTRAN, C
Markup	Markdown, LaTeX, HTML
Style sheets and framework	CSS, Bootstrap, Milligram
Tools	GNU/Linux, git, bash tools, VS Code, Libre Office suite, Inkscape, GIMP, Krita, JupyterLab
Geophysics tools	Oasis Montaj, GMT, "Fateando a Terra"

Languages

Spanish	Native
English	Intermediate

Communities

Since 2020	Geolatinas
Since 2020	Software Underground

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