

# Agustina Pesce

March 2021

Instituto Geofísico y Sismológico Volponi, Universidad Nacional de San Juan  
CONICET, Argentina

[pesce.agustina@gmail.com](mailto:pesce.agustina@gmail.com) • <https://aguspesce.github.io> • ORCID: 0000-0002-5538-8845

## Personal Information

**Full name:** Agustina Pesce

**Birth date:** January 2, 1986, Argentina

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

Since 2014 **Researcher in** [IGSV](#) *FCEfYN, Universidad Nacional de San Juan, Argentina*

## Teaching

Since 2019 **Physics I** and **Physics II** *Departamento de Geología, Facultad de Ciencias Exactas, Físicas y Naturales, 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>
- 2016-2017 **Permanent Educational Transfer Program** *Facultad de Cs. Exactas, Físicas y*  
*Naturales, Universidad Nacional de San Juan, Argentina*

## 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 gravimetrico 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  
[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

[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

[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

[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**

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** / 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 38º a 40º 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, CSS, Bootstrap

Tools GNU/Linux, git, JupyterLab, Neovim, Inkscape, GIMP, office suite, maxima, bash tools.

Geophysics tools Oasis Montaj, GMT, "Fateando a Terra"

## Languages

Spanish Native

English Intermediate

---

[pesce.agustina@gmail.com](mailto:pesce.agustina@gmail.com) • <https://aguspesce.github.io> • ORCID: 0000-0002-5538-8845