

Pedro Val
pval@ufop.edu.br

Office: +55-31-3559-1879
Mobile: +55-31-97182-3006
#58, Department of Geology
Federal University of Ouro Preto

EDUCATION

- Syracuse University 2012 - 2016
Ph.D. in Earth Sciences (focus area: **Tectonic Geomorphology**)
Fellowship (4 years). Sponsor: CAPES – Science without Borders (Brazilian Government)
- Amazon Federal University 2006 - 2012
B.S. in Geology (Manaus, Amazonas, Brasil)
- Washington & Lee University 2009
Superior Education Consortia Program: Academic Exchange program
Sponsor: CAPES/FIPSE Brazil-USA

PROFESSIONAL EXPERIENCE

- Federal University of Ouro Preto (UFOP) 08/2018 – present
Assistant Professor (tenure-track)
Teaching: Geochemistry; Environmental Geochemistry. Research: Landscape evolution
- Scripps Institution of Oceanography (UCSD) 09/2016 – 07/2018
Postdoctoral Scholar in Geomorphology and Landscape Evolution
(supervisor: Jane K. Willenbring)
- Syracuse University 2016
Guest Lecturer (The Earth System EAR 203)
Introductory lectures on Geomorphology, Plate Tectonics, Paleomagnetism, Isotopes, etc. (supervisor: Greg Hoke)
- Syracuse University 2015 - 2016
Academic Consultant at Student Support Services
Provide individual and group tutoring for under-represented and academically-at-risk students
(supervisor: Chris Weiss)
- PETROBRAS 2011
Internship: Sedimentology & Stratigraphy
Provide support to the sedimentology and stratigraphy sector. Describe drill-cores, build stratigraphic sections, provide field support in oil/gas-producing fields in the Amazon rainforest.
- Amazon Federal University
Tutorial Education Program 2007 – 2011
Teaching Assistant 2009 Introduction to Physical Earth Sciences
(supervisor: Clauzionor L. Silva)
- Washington & Lee University 2009
Research Assistant
Apply GIS to study the distribution of log woody debris and trout habitat – Chesapeake Bay Program
(supervisor: David Harbor and Robert Humston)

RESEARCH

Published in peer-reviewed journals:

- Albert, J; **Val, P**; Hoorn, C. 2018 The changing course of the Amazon River in the Neogene: center stage for Neotropical diversification. *Neotropical Ichthyology*. 16, n.3, doi: 10.1590/1982-0224-20180033
- Ruetenik, G; Moucha, R; Hoke, G; **Val, P**. 2018 Regional landscape response to thrust belt dynamics: The Iglesia basin, Argentina. *Basin Research*. 30, 6, 1141-1154

- Val, P;** Venerdini AL; Ouimet W; Alvarado P; Hoke GD. 2018 Tectonic control of erosion rates in the southern Central Andes, *Earth Planet. Sci. Lett.* 482, 160-170, doi: 10.1016/j.epsl.2017.11.0004
- Leitão, CS; Santos, CH; Souza, EM; **Val, P;** Vilarinho, G; Silva, MN; Val, AL; Almeida-Val, VMF; 2017 Development and characterization of microsatellite loci in Amazonian dwarf cichlids *Apistogramma* spp. (Peciformes: Cichlidae): uncovering geological influence on Amazonian fish population. *Journal of Applied Ichthyology* 33, 6, 1196-1199, doi: 10.1111/jai.13490
- Val, P.;** Hoke, GD. 2016 A practical tool for examining paleo-erosion rates from sedimentary deposits using cosmogenic radionuclides: examples from hypothetical scenarios and data. *Geochemistry, Geophysics, Geosystems* 17, 1-11, doi: 10.1002/2016GC006608
- Val, P.;** Hoke, GD; Fosdick, JC; Wittmann H. 2016 Reconciling tectonic shortening, sedimentation and spatial patterns of erosion from ¹⁰Be paleo-erosion rates in the Argentine Precordillera. *Earth Planet. Sci. Lett.* 450, 173–185 doi: 10.1016/j.epsl.2016.06.015
- Val, P.;** Silva, CL; Harbor, DJ; Morales, N; Maia, TFA; Amaral, FR. 2014 Erosion of an active fault scarp leads to drainage capture in the Amazon region, Brazil. *Earth Surface Processes and Landforms*, Vol. 39, p. 1062-1074, doi: 10.1002/esp.3507
- Val, P.;** Silva, CL; Santos, JM; Morales, N; Harbor, DJ. 2013. Distribuição de *knickpoints* em bacias de drenagem na região de Manaus (AM) e seu potencial para o estudo neotectônico da paisagem na Amazônia. *Contribuições à Geologia da Amazônia*. Vol. 8

Currently in preparation for submission in 2019:

- Val, P;** Albert, J; Lyons, N; Gasparini, N; Fan, Y; Willenbring, J. How does landscape evolution affect the diversification of freshwater fishes?
- Lyons, N; **Val, P;** Gasparini, N; Willenbring, J; Albert, J; Integrated landscape-species evolution model of river capture: the SEAMLESS 2D platform for Landlab
- Val, P.;** Hoke GD; Wittmann H; Silva CL; Morales N. Formation of the Amazon River by the late Miocene (*resubmission*)
- Leitão, CS; Santos, CH; **Val, P;** Souza, EM; Ribas, CC; Val, AL; Almeida-Val, VMF; Stream capture in the Late Miocene-Early Pliocene blocks gene flow in two species of Amazon dwarf cichlids of the genus *Apistogramma*

Doctoral dissertation

- Val, P.** 2016 The pace and timing of changing landscapes as viewed through cosmogenic radionuclides: synthetic and real examples from the Central Andes and Amazonia. *Syracuse University*

Published in conferences - Selected:

- Lyons, N.; Gasparini, N.; Albert, J.; **Val, P.;** Willenbring, J. K. 2018. Isolating the conditions of drainage reorganizations and its impacts on species evolution using numerical models. American Geophysical Union – Fall Meeting, Washington, D.C.
- Willenbring, J.; **Val, P.** 2018 Not feeling the buzz: tectonic-not climate-sets mountain heights (Invited Presentation). In: GSA Meeting, 2018, Indianapolis. GSA Annual Meeting in Indianapolis, Indiana, USA – 2018
- Lyons, N. ; **Val, P. ;** Albert, J. ; Gasparini, N. ; Willenbring, J. K. . Stream captures: Dynamics and impacts on biodiversity. In: European Geosciences Union General Assembly 2018, 2017, Vienna. European Geosciences Union General Assembly 2018.
- Val, P.;** Venerdini AL; Ouimet W; Alvarado P; Hoke, GD. 2016 Surface uplift governs millennial and decennial erosion rates in the southern Central Andes. Poster presentation, paper #T31A-2890. American Geophysical Union – Fall Meeting, San Francisco, CA.

- Val, P.;** Hoke, GD; Fosdick, JC; Wittmann, H. 2015 Dynamics of erosion in a compressional mountain range revealed by ^{10}Be paleoerosion rates. Oral presentation, paper #T12B-04. American Geophysical Union – Fall Meeting, San Francisco, CA
- Val, P.;** Hoke, G. D. 2015 Surface uplift of the Frontal Cordillera at 30.5° - 31°S constrained through river profile analysis of the Castaño and Calingasta catchments, south-central Argentina. Poster #311-2 Geological Society of America 2015 – *Baltimore, MD Meeting*.
- Val, P.;** Hoke, G. D. 2014. Transient fluvial incision and spatial distribution of active rock uplift in the Uspallata-Calingasta-Iglesia Valley, Central Argentina. Poster EP21B-3538. AGU Fall Meeting
- Val, P.;** Silva, CL; Harbor, DJ; Morales, N; Maia, TFA; Amaral, FR. 2013 Erosion of an active fault scarp leads to drainage capture in the Amazon region, Brazil. Poster No. 39-31, Geological Society of America Annual Meeting, Denver, CO.
- Val, P.;** Silva, C.L. 2011. Utilização de knickpoints como indicadores de atividade neotectônica na Amazônia. XIII Simpósio Nacional de Estudos Tectônicos / VII International Symposium on Tectonics – Campinas, SP. (Oral Presentation) (*Use of knickpoints as indicators of neotectonic activity in the Amazon.*)

PROJECTS IN DEVELOPMENT

- AMERICAS - *AMazon Evolution by RIver CApture eventS*
 - Detrital Zircon Provenance (funded by CNPq) - Institutions: UFOP; Scripps/UCSD; Tulane University; University of Louisiana, Lafayette; Rutgers University; National Institute for Amazonian Research (INPA)

PEER-REVIEW

Review Editor for: Frontiers in Earth Sciences

Reviewer for: NSF | Geology | Hydrological Processes | Scientific Reports | Brazilian Journal of Geomorphology | Brazilian Journal of Geology | Geomorphology | Tectonophysics | Journal of South American Earth Sciences

ADVISORY COMMITTEES

2018 *Universidade Federal de Ouro Preto: Undergraduates*

Pedro Dutra Drummond (Climatic influences on the morphology of coastal basins in Brazil)

Arthur Lima Eugênio (Topographic analysis and numerical modeling of river captures in SE Brazil)

Universidade Federal do Rio Grande do Sul: Doctoral student

Jéssica Miranda (Morphotectonics in the Paraná Basin) – Coadvisor.

HIGHER EDUCATION TRAINING

2017 Course Design Studio @ Center for Engaged Teaching (UCSD)

2017 Pathways to Scientific Teaching with Diane Ebert-May (UCSD)

2016-present EPIC Program - Educator Training Path

VOLUNTEER, OUTREACH, AND SERVICE

2017 Syracuse University Project Advance (SUPA) –*The Earth System for High School Teachers / Invited speaker*

Soil Kitchen: Free lead-screening for urban residents – *XRF operator and science educator*

Scripps Community Outreach Program for Education (SCOPE) – *SIO Pier/Geology tour guide*

Student-led Brazilian Students and Scholars' Conference (BRASCON) – *Editor*

2015 Central New York Earth Science Student Symposium – *Coordinator*

2013 Central New York Earth Science Student Symposium – *Sponsorship Agent*

2009 First Geology-Week of the Amazon Federal University (student-led) – *Program Chair*

2007 Spreading the knowledge of Earth Sciences at public schools in Manaus – *Speaker*

2006-2012

The Brazilian Science and Technology Week, Manaus – *Geology Presenter*

GRANTS, CERTIFICATES, AND AWARDS

- 2018** Conselho Nacional de Desenvolvimento Científico de Tecnológico - CNPq (R\$20,000 + R\$4,800 REU scholarship for an undergraduate student at UFOP) #438735/2018-8.
- 2015** Newton E Chute Award for Outstanding Graduate Scholarship, Service to the Department and Professional Promise. Dpt. of Earth Sciences (Syracuse U.)
- 2015** John J Prucha Research Fund (U\$3,000) - Dpt. of Earth Sciences (Syracuse U.)
- 2014** John J Prucha Research Fund (U\$3,000) - Dpt. of Earth Sciences (Syracuse U.)
- 2014** Graduate Student Research Grant (U\$900) - Geological Society of America (GSA)
- 2013** John J Prucha Research Fund (U\$3,000) - Dpt. of Earth Sciences (Syracuse U.)
- 2012** Full-time Ph.D. fellowship – CAPES – Science Without Borders (duration: 4 years)
- 2009** CAPES-FIPSE Superior Consortia Program –Environmental Studies at Washington & Lee U.

INVITED TALKS

- 2018** QUEENS COLLEGE *Dynamics of landscape change in space and time*
- 2017** TULANE *Catching up with Topography: Dynamics of erosion during mountain building*
UCLA *Erosion during mountain building: insights from the southern Central Andes*
ADAPTA (INPA – Brazil) *The AMERICAS Project: AMazon Evolution by RIver CApture events*
- 2016** SCRIPPS *Erosion during mountain building: insights from the southern Central Andes*

BACKGROUND AND TOOLS

Scientific Programming: **Matlab**

Geographic Information System and Remote Sensing: **ArcGIS**, Google Earth Engine

Laboratory experience: Mineral separation techniques; *In-situ* and meteoric cosmogenic nuclide extraction

IDIOMS

English – Fluent | Spanish – Regular | Portuguese – Native Language