Pedro Val

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Office: +1-718-997-3324
School of Earth and Environmental Sciences
Queens College, City University of New York

RESEARCH INTERESTS

Landscape evolution in multiple spatial and temporal scales. Cosmogenic nuclides and numerical models of landscape evolution. Interactions between rock type, tectonic, geodynamic, climatic, and surface processes and their contributions to the evolution of landscapes and biodiversity from mountains to lowlands. Some questions I currently seek to answer are: 1) Why are landscapes in continent interiors so geomorphically active? 2) Why are the same geomorphically active (but tectonically inactive) landscapes so biodiverse? 3) What are the mechanistic links between landscape evolution and biodiversity? 4) How are tectonic, lithologic, and climatic influences partitioned in shaping landscapes such as mountain range heights and mass balances?

EDUCATION

Syracuse University 2012 - 2016

Ph.D. in Earth Sciences (focus area: Tectonic and Process Geomorphology)

Fellowship (4 years) by 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

Scholarship by CAPES/FIPSE Brazil-USA

PROFESSIONAL EXPERIENCE

Queens College, City University of New York – 08/2022 – Present

Assistant Professor

Primary Teaching Responsibility: Earth internal processes; Geology in the field

Federal University of Ouro Preto (UFOP) 08/2018 – 08/2022

Assistant Professor (tenured in July 2021)

Primary Teaching Responsibility: Geochemistry; Advanced Geomorphology

Hydrobiology Pty Ltd – 05/2022 - 08/2022

Consultant in Environmental Science

Hydrobiology Pty Ltd – 08/2017 - 2018

Subconsultant in Environmental Science

Scripps Institution of Oceanography (UCSD) – 09/2016 – 07/2018

Postdoctoral Scholar in Geomorphology and Landscape Evolution

(supervisor: Jane K. Willenbring)

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.

INTERNATIONAL PANELS

Science Panel for the Amazon (*United Nations Sustainable Development Solutions Network*) Coordinating Author of Chapter 1 – Geological history and geodiversity of Amazonia.

PUBLICATIONS

** denotes student author*

Submitted, In Review, In Preparation

Crelier, C*; Zumba, A*; Peifer, D; **Val, P**. *in review: Scientific Reports,* Mobility of South America's transcontinental drainage divide and shrinkage of the Paraná River Basin linked to lithologic and geodynamic controls

Val, P; Peifer, D. *in preparation for Nature*, Hard rocks keep tectonically dead landscapes geomorphically alive.

Panta, G; Correa, ACB; Val, P. *in preparation*, Knickpoint migration and transient landscapes on the continental margin of northeastern Brazil.

Peer-reviewed publications (denotes book chapter°)

Albert, J, Carnaval, AC, Flantua, SGA, Lohmann, LG, Ribas, CC, Riff, D, Carillo, JD, Fan, Y, Figueiredo, JJP, Guayasamin, JM, Hoorn, C, Melo, GH, Nascimento, N, Quesada, CA, Ulloa Ulloa, C, **Val, P**, Arieira, J, Encalada, AC, Nobre, CA, *2023* Human impacts outpace natural processes in the Amazon. *Science, doi: 10.1126/science.abo5003*

Ruetenik, GA; Jansen, JD; **Val, P**; Ylä-Mella, L. 2023 Optimising global landscape evolution models with ^{10}Be. *Earth Surface Dynamics, doi: 10.5194/esurf-11-865-2023*

dos Santos, JM; Salamuni, E; **Val, P**; Silva, CL; Morales, N; Souza, IAS; Sanches, E, *2023* Cenozoic tectonic reactivation and its implications for landscape transience in southeastern Brazil. *Earth Surface Processes and Landform*, *doi: 10.1002/esp.5670*

Val, P.; Willenbring, JK, *2022*. Across-strike asymmetry of the Andes orogen linked to the age and geometry of the Nazca plate. *Geology*, *doi:* 10.1130/G50545.1

Fadul, CM*; Oliveira, P*; **Val, P**, *2022*. Ongoing landscape transience in the Eastern Amazon Craton consistent with lithologic control of base level. *Earth Surface Processes and Landforms*, *doi: 10.1002/esp.5447*

Schaefer, JM; Codilean, AT; Willenbring, JK; Lu, Z-T; Keisling, B; Fülöp, R-H; **Val, P**, *2022* Cosmogenic Nuclide Techniques, *Nature Reviews Methods Primers, doi: 10.1038/s43586-022-00096-9 - INVITED*

Val, P°; Willenbring, JK, *2022* Subduction Zone Dynamics and the Topography of Cordilleran Orogens. *In: Shroder, J.J.F. (Ed.), Treatise on Geomorphology, vol. 2. Elsevier, Academic Press*, pp. 68–86. https://dx.doi.org/10.1016/B978-0-12-818234-5.00090-0. - *INVITED*

Hoorn, C; Boschman, LM; Kukla, T; Sciumbata, M; **Val, P**, *2022* The Miocene wetland of western Amazonia and its role in biogeography, *Perspective Article*, Botanical Journal of the Linnean Society, doi: 10.1093/botlinnean/boab098

Hoorn, C; Kukla, T; Bogotá-Angel, G.; van Soelen, E; González-Arango, C; Wesselingh, FP; Vonhof, H; **Val, P.;** Morcote-Rios, G; Roddaz, M; Dantas, EL; Santos, RV; Damsté, JSS; Kim J-H; Morley, RJ, *2022* Cyclic sediment deposition by orbital forcing in the Miocene wetland of western Amazonia? New insights from a multidisciplinary approach. Global and Planetary Change, 210, doi: 10.1016/j.gloplacha.2021.103717

Val, P.; Lyons, N; Gasparini, N; Willenbring, J; Albert, J *2022* Landscape evolution as a diversification driver in freshwater fishes, Frontiers in Ecology and Evolution, 9, doi: 10.3389/fevo.2021.788328

Peifer, D; Cremon, ÉH; **Val, P;** Fernandes, NF *2022*. Bases teóricas do modelo stream-power de incisão fluvial. *Revista Brasileira de Geomorfologia*, *23*(2), 1512-1523.

Fernandes, NF; Peifer, D; **Val, P** *2022* Capítulo 35: Modelos numéricos de evolução do relevo (LEMS) e sua importância para estudos de evolução da paisagem. *In: Júnior, ABC; Gomes, MCV; Guimarães, RF; Gomes, RAT. Revisões da Literatura da Geomorfologia Brasileira*

Sá Leitão, CS; Souza, É; Santos, CH; **Val, P.;** Val, AL; Almeida-Val, VMF. *2021* River reorganization affects populations of dwarf cichlid species (Apistogramma genus) in the lower Negro River, Brazil. Frontiers in Ecology and Evolution, 9, doi: 10.3389/fevo.2021.760287

Val, P°; Figueiredo, J; Melo, G; Flantua, SGA; Quesada CA; Fan, Y; Albert, JA; Guayasamin, JM; Hoorn, C, *2021* Chapter 1: Geology and geodiversity of the Amazon: Three billion years of history, *In: Nobre C, Encalada A,… (Eds). Amazon Assessment Report 2021. United Nations Sustainable Development Solutions Network, New York, USA. Available from theamazonwewant.org/spa-reports/. doi: 10.55161/POFE6241 - INVITED*

Lyons, N; **Val, P.;** Albert, J; Willenbring, J; Gasparini, N. *2020* Topographic controls on divide migration, stream capture, and diversification in riverine life. *Earth Surf. Dynam. Discuss.*, *doi: 10.5194/esurf-8-893-2020*

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*

Sá-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 ^{10}Be 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, D *2013* Distribuição de knickpoints em bacias de drenagem na região de Manaus (AM) e seu potencial para o estudo neotectônico e evolução da paisagem na Amazônia. *Contribuições à Geologia da Amazônia, 8, 7-24*

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*

GRANTS AND AWARDS

2024 TRAVEL – National Science Foundation, Geomorphology and Land-Use Dynamics (U$15,000)
2024 **CAREER –** National Science Foundation, Geomorphology and Land-Use Dynamics (U$750,499)
2024 Graduate Research Technology Initiative (Internal) – Queens College (U$41,000)
2024 DELTA H 2024 – Serrapilheira Institute (R$55,500)
2023 DELTA H 2023 – Serrapilheira Institute (R$55,500)
2023 PSC CUNY (Internal) – Queens College (U$6,000)
2023 Research Enhancement Award (Internal) – Queens College (U$15,000)
2019 **Grant: AMazon Evolution driven by RIver CApture eventS –** Serrapilheira Institute (R$99,274)
2019 Research Incentive, Federal University of Ouro Preto (R$3,500)
2018 **Grant: Detrital zircon provenance in the Guiana Shield.** 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 Travel 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 University.

ADVISORY AND EDITORIAL BOARDS

Steering Committee Member – CSDMS Community Surface Dynamics Modeling System (since June 2024)
Research and Education Advisory Committee – OpenTopography (since December 2023)
Creator, Lead Coordinator – DELTA H Meeting
Editorial Advisor (honorary) – Earth Surface Processes and Landforms (since 2022)
Review Editor – Frontiers in Earth Sciences (Sedimentology, Stratigraphy and Diagenesis Section) (since 2018)

PEER-REVIEW

Reviewer for: Serrapilheira Institute | National Science Foundation | GSA Bulletin | Tectonics | Journal of Geophysical Research: Earth Surface | Geology | Earth and Planetary Science Letters | Frontiers in Earth Science | Quaternary Science Reviews | Earth Surface Processes and Landforms | Geomorphology | Tectonophysics | Scientific Reports | Brazilian Journal of Geomorphology | Brazilian Journal of Geology | Journal of South American Earth Sciences | Hydrological Processes | Journal of Maps

INVITED TALKS AND KEYNOTES

2024 STEEPEST DESCENT, Vienna – AUS
Lithology in the driver's seat: making sense of widespread river reorganizations in tectonically dead regions (and why it matters for biodiversity)
DUKE UNIVERSITY, Durham – NC
Linking landscape evolution, biodiversity, and environmental change
RUTGERS UNIVERSITY, New Brunswick – NJ
Hard rocks keep tectonically dead landscapes geomorphically alive
QUEENS COLLEGE, CUNY
The Amazon Rainforest, from rocks to life

2023 CLIMATE PERSPECTIVES, SESC São Paulo, SP – Brazil

Impacts of climate change in the Amazon rainforest

DELTA H 2023, Corumbá, MS – Brazil

Tectonically dead but geomorphologically alive: lithology as first order regulator of landscape evolution

GundxChange - GUND INSTITUTE FOR ENVIRONMENT

Linking landscape evolution and aquatic biodiversity in continent interiors

CITY COLLEGE OF NEW YORK, CUNY

Tectonically dead by geomorphically alive!

QUEENS COLLEGE, CUNY

Tectonically dead by geomorphically alive!

2022 BROOKLYN COLLEGE, CUNY

It's just a lithologic effect: Widespread transience in intraplate settings

SYRACUSE UNIVERSITY - K. Doulgas Nelson Seminar Series

It's just a lithologic effect: Widespread transience in intraplate settings

QUANTITATIVE GEOLOGY CONFERENCE KEYNOTE (Sao Paulo, Brazil)

It's just a lithologic effect: Widespread transience in intraplate settings

LANDSCAPES LIVE SEMINAR SERIES

It's just a lithologic effect: Widespread transience in intraplate settings

2021 AMAZON COOPERATION TREATY ORGANIZATION (ACTO)

The Amazon Assessment Report Part 1

50° Brazilian Geology Congress Keynote

Climate's minimal impact in the evolution of Cordilleran Mountain ranges

QUEENS COLLEGE, CUNY

Climate's minimal impact in the evolution of Cordilleran Mountain ranges

UNIVERSIDADE DE SÃO PAULO, Geophysics Institute (IAG)

Tectonic control of elevation and asymmetry of Cordilleran Mountain Ranges

2020 GEAFS

Cosmogenic nuclide applications in surface processes

UNIÃO DE GEOMORFOLOGIA BRASILEIRA

Landscape evolution modeling in quantitative geomorphology

2019 UNIVERSIDADE FEDERAL DE MINAS GERAIS

Quantitative Geomorphology: theory and application

2018 QUEENS COLLEGE, CUNY

Dynamics of landscape change in space and time

2017 TULANE UNIVERSITY

Catching up with Topography: Dynamics of erosion during mountain building

UNIVERSITY OF CALIFORNIA, LOS ANGELES

Erosion during mountain building: insights from the southern Central Andes

INSTITUTO NACIONAL DE PESQUISAS DA AMAZÔNIA, ADAPTA (INPA, Manaus)

The AMERICAS Project: AMazon Evolution by RIver CApture eventS

2016 SCRIPPS INSTITUTION OF OCEANOGRAPHY

Erosion during mountain building: insights from the southern Central Andes

ADVISING AND ADVISORY COMMITTEES

Graduate level - Ongoing

2023 CUNY, Earth and Environmental Science PhD Program

Pedro S. Oliveira – PhD Advisor

Constraining the incision of the lower Amazon River system

Renato V.M.A. da Silva – PhD student – *City University of New York* (Advisor)

Lithologic controls of landscape evolution in tectonically dead settings

2023 UNIVERSIDADE FEDERAL DO RIO DE JANEIRO

Matheus Wanderley de Almeida – MSc Co-Advisor

Simulação da evolução do relevo no longo tempo: subsídio à recuperação de áreas degradadas pela mineração [Numerical modeling of long-term landscape evolution to inform the recovery of post-mining landscapes]

2023 UNIVERSIDADE FEDERAL DE PERNAMBUCO

Genisson Panta – PhD Co-Advisor

Landscape Evolution of NE Brazil

Graduate level - Finished

UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL

Jéssica Miranda – PhD Coadvisor

Geomorphic imprints of neotectonics in Southeast Brazil

UNIVERSIDADE FEDERAL DE OURO PRETO

Caio Crelier – MSc Advisor

Mobility of South America's Transcontinental Drainage Divide

Camila Fadul – MSc Advisor

Ongoing landscape transience in the Guiana Shield

Undegraduate level - Ongoing

2023 QUEENS COLLEGE

Adriana Zumba

Mobility of South America's Transcontinental Drainage Divide

Yaacov Strickon, Hector Cordova

Group reading participant and lab assistant

Undegraduate level - Finished

UNIVERSIDADE FEDERAL DE OURO PRETO

Pedro Silvestre de Oliveira

Landscape evolution modeling of the Precordillera thrust belt using Landlab

Caio Augusto Crelier Cubas

Brazil's continental divide migration

Mariana Pimenta Vilela

Landscape evolution modeling knickpoint distributions in chi-space using Landlab

Luane Ferreira

Detecting climatic imprints on the topography of the Peruvian Andes

Arthur Lima Eugênio

Topographic analysis and numerical modeling of river captures in SE Brazil

Matheus Parreiras

Using drones to quantify gully erosion

Pedro Dutra Drummond

Climatic influences on the morphology of coastal basins in Brazil

TEACHING

2022 – present

Courses @ Queens College, CUNY:

- Methods in Geosciences
- Earth Internal Processes (includes Structural Geology)
- Geology in the Field
- Geographic Information System (GIS)

Currently developing: Science for the Amazon (0-level course)

2018 – 2022

Grad courses @ UFOP:

- Quantitative Geomorphology
- Fold-and-thrust belts: from lithosphere to landscape

Undergrad courses @ UFOP:

- Geochemistry
- Advanced Quantitative Geomorphology: Theory and Practice
- Introduction to Geology
- Macroscopic Petrography
- Analytical techniques in environmental geochemistry
- Environmental Geochemistry

VOLUNTEER, OUTREACH, AND SERVICE

2024 DELTA H Meeting 2024

Coordinator

2023 DELTA H Meeting 2023

Coordinator

CUNY Graduate Center

Guiding Prompts for Applicant Personal Statements

Landscapes Live Seminar

Organizing Committee

American Museum of Natural History

Volunteer Trip Leader for Professional Learning in Central Park for NYC Teachers

2022 DELTA H Meeting 2022

Creator and Coordinator

2020 Science for those in need (Creator)

Free science presentations in exchange for donations to NGOs battling COVID-19

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

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*

SCIENCE COMMUNICATION

2023 Quando surgiram as cachoeiras da Amazônia? (*When did Amazon's waterfalls originate?*)

O clima global depende do futuro da Amazônia (*The global climate depends on Amazon's future*)

2022 Por que ainda existem montanhas no Brasil? (*Why are there mountains in Brazil still?*)

O relógio das paisagens cai do céu (The landscape's clock falls from the sky)

A queda do paredão em Capitólio era uma questão de tempo (*The rockfall in Capitólio was a matter of time*)

2021 Como a Terra construiu a Amazônia? (*How did Earth build the Amazon?*)

O chão que pisamos é uma janela para o passado (*The ground we step on is a window to the past*)

2020 A revisão por pares é um trabalho fundamental (*Peer review is a fundamental job*)

Poderia o clima acelerar os motores tectônicos da Terra? (*Could climate accelerate Earth's tectonic motors?*)

O silenciamento do submundo (*The silencing of the underworld*)

PRESS

2023 Reviews explore the drivers and impacts of Amazon deforestation and degradation *EurekAlert*

Reviews explore impacts of Amazon deforestation *BigNewsNetwork*

The Amazon is deteriorating too fast for species and the climate to adapt *Bloomberg*

Scientists raise alarms about the destruction of the Amazon. *CUNY Graduate Center*

Ação humana pode afetar Amazônia milhares de vezes mais rápido que processos naturais *Bori*
Translation (own): Human activities can affect the Amazon up to a thousand times faster than natural processes

Devastação da Amazônia está se tornando irreversível, alerta estudo *Jornal Nacional, Globo*
Translation (own): Amazon devastation is becoming irreversible, study alerts

2022 Como a Terra construiu a Amazônia? *Serrapilheira*(interview in Portuguese)

2020 From DNA to Geology *Serrapilheira* (interview in Portuguese)

2019 Pesquisador investiga mudanças em paisagens pelo DNA dos peixes *Minas faz ciência*
Translation (own): Researcher investigates landscape changes in fish DNA
http://minasfazciencia.com.br/2019/09/23/pesquisador-investiga-mudancas-em-paisagens-pelo-dna-dos-peixes/

2016 Huge time-lag between erosion and mountain building. *Phys-org*

FIELD EXPERIENCE

2023 Dating the incision of the lower Amazon River using cosmogenic nuclides and numerical modeling of landscape evolution (Brazil)
Role: PI - ongoing research, responsible for the field trip

2019 Capturing River Network Dynamics in the Eastern Amazon Region (Brazil)
Role: PI - ongoing research, responsible for the field trip

2017 Quantifying landscape transience in Luquillo Critical Zone, Puerto Rico using cosmogenic nuclides (Puerto Rico)
Role: Postdoc at Scripps, field assistant

2017 Quantifying the climatic influence in the erosion of the New Zealand Southern Alps using cosmogenic nuclides
Role: Postdoctoral research project, co-responsible for the field trip

2014 • Quantifying along-strike erosion rates in the Southern Central Andes across a change in subduction angle and in a rain shadow (Argentina)

• Dating the river network reorganization using cosmogenic nuclide burial dating (Brazil)

Role: PhD student project, responsible for the field trips

2013 Capturing the erosional response to mountain building in a fold-and-thrust belt using cosmogenic nuclide paleo erosion rates (Argentina)

Role: PhD student project

2006-2012 Multiple field trips for training in field geology, geological mapping, and structural geology in the Amazon Region and the canyonlands in the Southwest United States

Role: Undergraduate student, Research Assistant

CONFERENCE PRESENTATIONS

*Talks and posters – Selected (*denotes student author):*

Val, P. 2024, River capture frequency and magnitudes are regulated by rock erodibility. European Geosciences Union General Assembly – *POSTER PRESENTATION*

Fadul, C*; Oliveira, P*; **Val, P** 2024, Rock type as a driver of drainage network reorganizations in the Amazon region. European Geosciences Union General Assembly – *ORAL PRESENTATION*

Val, P.; Peifer, D. 2023, Hard rocks as first-order regulators of long-term landscape evolution in continent interiors. American Geophysical Union – *ORAL PRESENTATION*

Oliveira, P.*; **Val, P.** 2023, Capturing the geomorphic signals of the incision of the Amazon River. American Geophysical Union – *POSTER PRESENTATION*

Ruetenik, G.R.; Jansen, J.; **Val, P.** 2022. Understanding landscape evolution parameters using global ^{10}Be erosion rates. EGU General Assembly

Val, P. *2021*. Elevação e simetria de orógenos Cordilheiranos: da zona de subducção ao feedback climático. 50° Congresso Brasileiro de Geologia ***- INVITED***

Willenbring, J. K.; **Val, P.** 2021. When do tectonic take the back seat? A macroscopic view of Earth's Surface (Invited). AGU Fall Meeting

Oliveira, P.; **Val, P.;** Hoke, D. 2020. Spatial distribution and quantification of surface uplift in the South-Central Andes and Precordillera. AGU Fall Meeting 2020.

Val, P.; Willenbring, J. K. 2020. Across-strike asymmetry of the Andes orogen linked to the age and geometry of the Nazca plate. AGU Fall Meeting

Fadul, C.M.*; **Val, P.** 2020. River capture and transient incision across lithologically controlled topographic barriers in Amazonia's eastern Guiana Shield. Geological Society of America. Annual Meeting

Val, P.; Willenbring, J. K. 2020. Building and moving mountains: Subduction zone imprints on the heights and asymmetries of cordilleran mountains. Geological Society of America. Annual Meeting

Val, P.; Willenbring, J. K. 2019. The tail doesn't wag the dog: Asymmetry of the Andes orogen driven by the geometry of the subducting Nazca slab. Regional Conference in Geomorphology, Athens 2019

Val, P.; Willenbring, J. K. 2019. Asymmetry of the Andes orogen, geometry of the subducting Nazca slab, and topographic trends across rain shadows. CLAST 2019 Penrose Conference, Juneau AK 2019 - *INVITED*

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*.

HIGHER EDUCATION TRAINING

2018-2022

Sala Aberta – Training for tenure-track professors (UFOP)

2016-2018

EPIC Program - Educator Training Path (UCSD)

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

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

BACKGROUND AND TOOLS

Scientific Programming: **Matlab, Python, Landlab**

Geographic Information System and Remote Sensing: **ArcGIS**, **QGIS**

Laboratory experience: *In-situ* and meteoric cosmogenic nuclide sample processing; Mineral separation

IDIOMS

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