

ANIBAL TAFUR

PhD Student in Civil Engineering at Rice University

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PROFILE

I am a Peruvian graduate student in Civil Engineering currently pursuing a PhD degree at Rice University under the supervision of Prof. Jamie Padgett, with expected graduation date at the end of August 2024. My main research focus is on resilience modeling of transportation infrastructure subjected to natural hazards. I obtained a BSc in Civil Engineering from the Pontifical Catholic University of Peru (PUCP) in 2006, and an MSc in Structural Engineering from the University of Manchester (UK) in 2016, graduating with honors. For this MSc studies, I was sponsored by the "President of the Nation" Scholarship, granted by the Peruvian Ministry of Education.

I have 5 years of work experience in the development of structural projects (designing reinforced concrete and steel structures, evaluating, and retrofitting existing structures) and 3 years of teaching experience at the undergraduate level. I am currently seeking industry positions in the areas of disaster risk modeling and management in infrastructure projects.

MAIN SKILLS

- Modeling physical response of infrastructure systems subjected to extreme events
- Uncertainty quantification and propagation in disaster risk modeling
- Risk assessment in terms of direct and indirect losses
- Coding skills in Python and Matlab
- Geodata processing skills in ArcGIS and QGIS

EDUCATION

2019 – 2024 (expected)	RICE UNIVERSITY PhD in Civil Engineering	Houston – USA
2015 – 2016	THE UNIVERSITY OF MANCHESTER MSc in Structural Engineering	Manchester – UK
2006 – 2011	PONTIFICAL CATHOLIC UNIVERSITY OF PERU (PUCP) BSc in Civil Engineering	Lima – Peru

DISTINCTIONS AND AWARDS

- Appointment as Honorary Lecturer by the National University of Amazonas (UNTRM), (February 2017).
- Nomination for the 'Faculty's Distinguished Achievement Award – PGT Student of the Year 2016'. Faculty of Science and Engineering. The University of Manchester, UK (December, 2016).
- Best Overall Average of the MSc Structural Engineering Program, Class of 2016. School of Mechanical, Aerospace and Civil Engineering. The University of Manchester, UK (December, 2016).
- 'President of the Nation' Postgraduate Scholarship – Peruvian Ministry of Education (May 2015).

WORK EXPERIENCE IN INDUSTRY POSITIONS

03/2015 – 07/2015	BUENAVENTURA INGENIEROS S.A. (BISA) Position: Consultant in Structural Engineering This firm provides consulting services for the mining industry. I worked as a consultant in the design of mining plants structures.	Lima – Peru
11/2014 – 03/2015	TUESTA CONSULTORES Y EJECUTORES E.I.R.L. Position: Consultant in Structural Engineering I served as a consultant, overseeing the review and revision of structural plans and specifications to ensure their precise implementation in the field.	Chachapoyas – Peru
09/2012 – 09/2014	HIGASHI INGENIEROS S.A.C. Position: Project Engineer I primarily focused on the analysis and design of structures, contributing to various projects ranging from residential buildings to hospitals and schools.	Lima – Peru

01/2010 – 04/2010 **FERROCARRIL CENTRAL ANDINO S.A. (FCCA)** **Lima – Peru**
 Position: Engineering Trainee
 I served as a trainee in the engineering division of this firm, contributing to the development of projects for the railway industry.

WORK EXPERIENCE IN ACADEMIC POSITIONS

08/2023 – 12/2023 **RICE UNIVERSITY** **Houston – USA**
 Teaching Assistant to Prof. Padgett in the CEVE Department
 Subject: Bridge Engineering and Extreme Events

07/2017 – 06/2019 **PONTIFICAL CATHOLIC UNIVERSITY OF PERU (PUCP)** **Lima – Peru**
 Researcher and Lecturer at the Faculty of Science and Engineering
 Subjects: Mechanics of Materials, Statics, and others.

02/2017 – 12/2017 **NATIONAL UNIVERSITY OF AMAZONAS (UNTRM)** **Chachapoyas – Peru**
 Honorary Lecturer
 Lecturer at the Graduate School, MSc Structural Engineering Program

03/2017 – 07/2017 **PERUVIAN UNIVERSITY OF APPLIED SCIENCES (UPC)** **Lima – Peru**
 Lecturer at the Faculty of Science and Engineering
 Subjects: Earthquake Engineering, Structural Analysis, and others.

ACADEMIC PUBLICATIONS

Type: Journal Paper
 Title: 'Resilience of freight railway networks subjected to extreme floods'
 Authors: Anibal Tafur, Sotirios Argyroudis, Stergios Mitoulis and Jamie E. Padgett
 Publication: Sustainable Cities and Society
 Date: 2024 (in review)

Type: Journal Paper
 Title: 'Resilience modeling of diverse seaports and intermodal freight networks subjected to storm hazards'
 Authors: Anibal Tafur and Jamie E. Padgett
 Publication: Reliability Engineering and System Safety
 Date: 2024 (in review)

Type: Journal Paper
 Title: 'Case studies of multihazard damage: Investigation of the interaction of Hurricane Maria and the January 2020 earthquake sequence in Puerto Rico'
 Authors: Alexandra Hain, Arash E. Zaghi, Jamie E. Padgett and Anibal Tafur
 Publication: Frontiers in Built Environment
 Date: February 2023
 URL: <https://doi.org/10.3389/fbuil.2023.1128573>

Type: Conference Paper
 Title: 'Seismic Resilience of Intermodal Freight Transportation Networks with Ties to Economic Impact Modeling'
 Conference: Lifelines Conference, Los Angeles – USA
 Authors: Anibal Tafur, Jamie E. Padgett and Andres Gonzalez
 Date: November 2022
 URL: <https://doi.org/10.1061/9780784484449.033>

Type: Conference Paper
 Title: 'Effectiveness of Rubber Isolators for the Seismic Retrofitting of a Peruvian Highway Concrete Bridge'
 Authors: Anibal Tafur and Thomas Swailes
 Conference: Structural Engineers World Congress (SEWC 2017), Cancun – Mexico
 Date: November 2017
 URL: <https://doi.org/10.13140/RG.2.2.21397.42729>

Type: Masters Dissertation
 Title: 'Effectiveness of Rubber Isolators for the Seismic Retrofitting of a Peruvian Multi-Span Concrete Highway Bridge'
 Date: December 2016 – The University of Manchester, UK
 Supervisor: Thomas Swailes
 URL: [OneDrive File](#)

Type: Undergraduate Dissertation
 Title: 'Structural Design of a Housing Building, with a Basement and Six Stories, Located in the Magdalena District'
 Original Title: "DISEÑO ESTRUCTURAL DE UN EDIFICIO DE VIVIENDA, CON UN SÓTANO Y SEIS PISOS, UBICADO EN MAGDALENA"
 Date: December 2012 – Pontifical Catholic University of Peru (PUCP)
 Supervisor: Antonio Blanco
 URL: <https://tesis.pucp.edu.pe/repositorio/handle/123456789/1688>

SPEAKER IN CONFERENCES

Participation as speaker in the following conferences and/or congresses:

- ASCE INSPIRE Conference (Virginia – USA, November 2023)
- 37th International Conference on Coastal Engineering (Sydney – Australia, December 2022)
- INFORMS Annual Meeting 2022 (Indianapolis – USA, October 2022)
- ASCE Lifelines Conference, Understanding, Improving and Operationalizing Hazard Resilience for Lifelines (Los Angeles – USA, January 2022).
- 12th International Symposium on Disaster Risk Management (Lima – Peru, September 2018)
- 5th Civil Engineering National Students Congress 'Seismic and Geotechnical Engineering in Peruvian Buildings' organized by Cesar Vallejo University (Chimbote – Peru, June 2018)
- 6th Regional Symposium 'Structural Design and Disaster Mitigation' organized by the Peruvian Engineers Association (CIP) (Chimbote – Peru, May 2018).
- 20th Civil Engineering National Congress organized by the Peruvian Engineers Association (CIP) (Lima – Peru, April 2018).
- 6th Structural Engineers World Congress (SEWC 2017) (Cancun – Mexico, November 2017).
- Seismic Risk Conference organized by UPC (Peruvian University of Applied Sciences), (Lima – Peru, June 2017).
- 5th Annual Conference of the INNS (International Network for Social Sustainability) (North Carolina –USA, June 2017).

LANGUAGES

SPANISH: Native language **ENGLISH:** Advanced Level – TOEFL iBT Exam Score: 107 / 120 (September 2018)

VOLUNTEER WORK

- During the 2017 flood crisis in Peru, I actively volunteered my services with the Peruvian Engineers Association (CIP). In this capacity, I contributed to the creation of technical reports focused on damage assessment and proposed mitigation strategies.
- In November 2016, I volunteered as an English teacher at Slukat School in Bali, Indonesia. This non-profit organization offers free complementary education to low-income children from Gianyar town, including language courses, handcrafting, dance, and music.