

GONZALO L. PITA

B.C.E., M.Sc., Ph.D.

Dept. of Civil and Systems Engineering
Johns Hopkins University

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Areas of Expertise

Natural disaster risk modeling/management, building vulnerability simulation, wind and seismic engineering, public policy analysis, infrastructure resilience, design of asset management systems, probabilistic natural hazard modeling, remote sensing.

Academic Background

Postdoctoral Fellow	Johns Hopkins University	2012-2014
Doctor of Philosophy	Florida Institute of Technology	2012
Visiting Research Asst.	Johns Hopkins University	2009-2012
Master of Sciences	Univ. Nacional de Córdoba	2006
Civil Engineer	Univ. Tecnológica Nacional	2003

Employment

Lecturer	Johns Hopkins University (Civil and Systems Eng. Dept.)	2015-present
Senior consultant	The World Bank (Urban Disaster Risk Mgmt, Resilience & Land GP)	2013...present
Adj. Associate Scientist	Johns Hopkins University (Civil and Systems Eng. Dept.)	2014-present
Lecturer	Johns Hopkins University (EP Program, EHE Dept.)	2018-present
Visiting Professor	University of Salamanca (Master Global & Int'l Studies)	2020-present
Consultant	Risk Science and Engineering	2017-present
Risk Modeler	Florida Public Hurricane Loss Model	2007-2012

Publications

Journal Papers

1. **Pita, G.**, Albornoz, B., Zaracho, J. Derivation of Flood Depth-Damage and Fragility Functions with Structured Expert Judgment. *Submitted*

2. **Pita, G.**, The Historical Development of Catastrophe Modeling. *Submitted*
3. A. Silva, **Pita, G.**, Siqueira, G., Vieira, L. (2021) Damage assessment of RC Buildings subjected to Induced Seismicity in Brazil. *Engineering Structures*. <https://doi.org/10.1016/j.engstruct.2021.111904>
4. A. Silva, **Pita, G.**, J. Inaudi, L. Vieira (2020) Probabilistic Loss Assessment of Induced Seismicity in Manaus, Brazil. *Earthquake Spectra*, doi.org/10.1177/8755293020944178
5. **Pita, G.**, Pinelli, J.-P., Gurley, K., Weekes, J., Cocke, S. (2016). Hurricane Vulnerability Model for Mid/High-Rise Residential Buildings, *Wind & Structures*, vol. 23, No. 5, 449-464
6. **Pita, G.**, M.L.A. de Schwarzkopf (2016). Urban Downburst Vulnerability and Damage Assessment from a Case Study in Argentina, *Natural Hazards*. 83(1), 445-463.
7. **Pita, G.**, J.-P. Pinelli, K. Gurley, J. Mitrani-Reiser (2015) State of the Art of Hurricane Vulnerability Estimation Methods: A Review. *Natural Hazards Review* 16(2), 04014022.
8. **Pita, G.**, J.-P. Pinelli, K. Gurley (2013). Hurricane Vulnerability Modeling: Development and Future Trends. *J. of Wind Eng. & Ind. Aerodynamics*, (114), 96-105.
9. **Pita, G.**, J.-P. Pinelli, S. Cocke, K. Gurley, J. Mitrani-Reiser, J. Weekes (2011). Assessment of Hurricane Induced Internal Damage to Low-rise buildings in the Florida Public Hurricane Loss Model. *J. of Wind Eng. & Ind. Aerodynamics*. 104-106, 76-87.
10. J.-P. Pinelli, **Pita, G.**, K. Gurley, B. Torkian, C. Subramanian (2010). Damage Characterization: Application to Florida Public Hurricane Loss Model. *Natural Hazards Review* 12(4), 190-195.
11. J.-P. Pinelli, K.R. Gurley, C.S. Subramanian, S.S. Hamid, **Pita, G.**, (2008). Validation of a probabilistic model for hurricane insurance loss projections in Florida, *Reliability Engineering & System Safety*, 93(13), 1896-1905.

Working Papers

1. **Pita, G.**, et al, Evaluation of a Structured-Expert Judgment methodology for deriving Depth-Damage and Fragility Functions for Residential Dwellings.

Conference Papers

1. Silva, A., **Pita, G.**, Inaudi, J., Vieira, L. (2019), A risk assessment framework for induced seismicity in Manaus, Brazil. *2nd International Conference on Natural Hazards & Infrastructure, 23 – 26 June 2019*, Chania, Greece.
2. Silva, A. **Pita, G.**, Flórez-Lopez, J., Siqueira, G. Santos, T., Coelho, K. Picón, R. Vieira, L. (2018) Study of Reinforced Concrete Structures Subjected to Induced Seismicity using Lumped Damage Mechanics Modeling. *CILAMCE 2018*
3. Albornoz, B., **Pita, G.**, Natalini, B. (2017) Flood Risk Analysis in an Underserved area of Chaco, Argentina and Identification of Mitigation Strategies. *Disaster Risk Reduction Summit, GFP/Hydro-Met sessions*. Buenos Aires. NASA-CoNAE.
4. Kappes, M., Joseph, M., Martinez, J., **Pita, G.**, (2015) Information-Based Prioritization of Vulnerability Reduction Investments for Hurricane Shelters in the Commonwealth of Dominica. *9th Caribbean Conference on Comprehensive Disaster Management*. Bahamas.
5. **Pita, G.**, R. Gunasekera, O. Ishizawa (2015), Windstorm Hazard Model for Disaster Risk Assessment in Central America. *Proc. of the 14th International Conference on Wind Engineering*. Porto Alegre, Brazil.
6. Ishizawa, O., Gunasekera, R., **Pita, G.**, (2015) Development of Country Disaster Risk Profiles for Central America: Towards a General Methodology to Assess Disaster Risk at the National Level. *Proc. of the SECED 2015 Conference*. Cambridge University, UK.
7. **Pita, G.**, J. Inaudi, R. Gunasekera, O. Ishizawa (2015), Probabilistic Seismic Vulnerability Development Tool for Common Building Typologies in Central America. *Proc. of the SECED 2015 Conference*. Cambridge University, UK.
8. R. Gunasekera, O. Ishizawa, C. Aubrecht, **Pita, G.**, A. Pomonis, K. Fane, S. Murray, B. Blankespoor, I. Scott (2014) Developing an Adaptive Exposure Model to Support the Generation of Country Disaster Risk Profiles. Vol. 16, EGU2014-16168. *European Geosciences Union General Assembly 2014*. Vienna. Austria.
9. J.-P. Pinelli, T. Johnson, A. Chowdhury, T. Baheru, K. Gurley, J. Weekes, **G.L.Pita** (2014) Predicción del Daño Interior Causado por Lluvia en Edificios de Vivienda durante Huracanes. XXXVI Jornadas Sudamericanas de Ingeniería Estructural. Montevideo, Uruguay.
10. **Pita, G.**, J. Mitrani-Reiser (2013), Modeling Hurricane-Induced Building Downtime. *Proc. 12th Americas Conference on Wind Engineering (12ACWE)*
11. **Pita, G.**, J.-P. Pinelli (2013), Analytical Model for Low-Rise Buildings' Vulnerability Curves. *Proc. 12th Americas Conference on Wind Engineering (12ACWE)*.

12. J.-P. Pinelli, K. Gurley, J. Weekes, **Pita, G.**, , T. Johnson, S. Cocke, and S. Hamid (2013), Vulnerability Model for Mid/High-Rise Buildings Subjected to Hurricane Winds and Rain. *12th Americas Conference on Wind Engineering* (12ACWE).
13. J.-P. Pinelli, K. Gurley, **Pita, G.**, , T. Johnson, J. Weekes (2013), “Modeling the vulnerability of mid/high rise commercial residential buildings to wind and rain in tropical cyclones,” Proceedings, 11th International Conference on Structural Safety & Reliability (ICOSSAR13), June 16-20, 2013, Columbia University New York, NY.
14. **Pita, G.**, , J.-P. Pinelli, J. Mitrani-Reiser, S. Cocke, K. Gurley, (2012). Analysis of Hurricane Andrew Insurance Claim Data for Residential Buildings. *ATC-SEI Advances in Hurricane Engineering: Learning from Our Past*, Miami, FL. pp. 1047-1055.
15. J.-P. Pinelli, K. Gurley, **Pita, G.**, , T. Johnson, (2012). Life-cycle assessment of personal residential roof decking and cover under hurricane threat. *ATC-SEI Advances in Hurricane Engineering Conference*, Miami, FL.
16. **Pita, G.**, , J.-P. Pinelli, K. Gurley, S. Cocke, J. Weekes, S. Hamid, (2012). Probabilistic Hurricane Rain Model for the Evaluation of Mid/High-Rise Buildings Damage due to Water Penetration. *ESREL 2012*. Finland.
17. Z. Liu, J. Mitrani-Reiser, S. Guikema, R. Francis, **G. Pita**, J.-P. Pinelli (2011). Imputation Models for Use in Hurricane Building-Risk Analysis. *SRA Annual Meeting*, Salt Lake City, UT.
18. **Pita, G.**, , J.-P. Pinelli, S. Cocke, K. Gurley, J. Weekes, J. Mitrani-Reiser (2011). Assessment of hurricane induced internal damage to low-rise buildings in the Florida Public Hurricane Loss Model. *Proc. of the 13th Int’l Conf. on Wind Engineering (13ICWE)*. Amsterdam, Netherlands.
19. B. Torkian, T. Johnson, **Pita, G.**, , J.-P. Pinelli, (2011). Criteria for Selection of Wind Vulnerability Matrices for Single-Family Buildings. *Proc. of the 13th Int’l Conf. on Wind Engineering (13ICWE)*. Amsterdam, Netherlands.
20. J.-P. Pinelli, **Pita, G.**, , K. Gurley, S. Hamid, (2011). Management of Hurricane Risk in Florida. *Proc. ESREL 2011*. Troyez, France.
21. **Pita, G.**, , J.-P. Pinelli, (2011). Analytical Method for Low Rise Building Vulnerability Curves. *ESREL 2011*, Troyez, France.
22. **Pita, G.**, —R. Francis, Z. Liu, J. Mitrani-Reiser, S. Guikema, J.-P. Pinelli, (2011), Bayesian Belief Networks for Predicting Input Data of Risk Analysis Models, *Proc. International Congress on Vulnerability and Risk Analysis Management (ICVRAM’11)* 468-476. College Park, MD.
23. **Pita, G.**, , J.-P. Pinelli, (2011). Wind Vulnerability Curves Assessment in the Florida Public Hurricane Loss Model, *Proc. International Congress on Vulnerability and Risk Analysis Management (ICVRAM’11)* 618-625. College Park, MD
24. **Pita, G.**, , J.-P. Pinelli, K. Gurley, J. Weekes, T. Johnson, S. Hamid (2011). Challenges in Developing the Florida Public Hurricane Loss Model for Residential and Commercial-Residential structures, *ICASP11*.
25. J.-P. Pinelli, **Pita, G.**, , B.Torkian, T. Johnson, K.Gurley, S.Hamid (2011). Parameter Identification in a Catastrophe Model: the Case of the Florida Public Model, *2011 Structures Congress*.
26. J.-P. Pinelli, K. Gurley, **Pita, G.**, , (2010). Hurricane Risk Management in Florida, *Australasian Wind Engineering Society, (14’AWES)*. Canberra, Australia.
27. J.-P. Pinelli, K. Gurley, **Pita, G.**, , (2010). Hurricane Vulnerability Assessment: Latest Experience and Development in the Florida Public Hurricane Loss Model, *IDRiM’10*. Vienna. Austria
28. J.-P. Pinelli, **Pita, G.**, , K.Gurley, C. Subramanian, S.Hamid, (2010). Commercial-Residential Buildings’ Vulnerability Component of the Florida Public Hurricane Loss Model, *SC-NASCC Conference 2010*
29. J.-P. Pinelli , S. Hamid , K. Gurley , **Pita, G.**, , (2009). Florida Public Hurricane Loss Model: Vulnerability Modeling, Loss Prediction, and Certification Process, *2nd Int’l Conference on Asian Catastrophe Insurance*, Beijing, China December, 2009
30. **Pita, G.**, , J.-P. Pinelli, J. Mitrani-Reiser, K.Gurley, S.Hamid, N. Jones (2009). Risk analysis of Buildings with the Florida Public Hurricane Loss Model, *Society of Risk Analysis Annual Meeting*, Baltimore, December 2009.
31. **Pita, G.**, , J.-P. Pinelli, K.Gurley, J. Weekes, S.Hamid (2009). Vulnerability of mid-high rise commercial-residential buildings in the Florida Public Hurricane Loss Model, *ESREL 2009*. Prague. Czech Republic.
32. **Pita, G.**, , J.-P. Pinelli, K.Gurley, C. Subramanian, S.Hamid (2009). Vulnerability of low-rise commercial-residential buildings in the Florida Public Hurricane Loss Model, *11th American Conference of Wind Engineering*, Puerto Rico.
33. J. Weekes, A. Balderrama, K. Gurley, J.-P. Pinelli, **Pita, G.**, , S. Hamid (2009). Physical Damage Modeling of Commercial-Residential Structures in Hurricane Winds, *11th American Conference of Wind Engineering*, Puerto Rico.
34. **Pita, G.**, , J.-P. Pinelli, C.S. Subramanian, K. Gurley, S.Hamid, (2008). Hurricane Vulnerability of Multi-Story Residential Buildings in Florida, *ESREL 2008*, Valencia, Spain.
35. J.-P. Pinelli, S. Hamid, K. R. Gurley, **Pita, G.**, , C.S. Subramanian (2008). Impact of the 2004 Hurricane Season on the Florida Public Hurricane Loss Model, *2008 ASCE-IABSE-IStructE Structures Congress*, Vancouver, Canada.

36. **Pita, G.**, , A. Lainati, and J.R. Saravia, (2004). Design Topics for a Restricted Horizontal Force Arch Bridge, *Steelbridge 2004, Int'l Symposium on Steel Bridges*, Millau, France.

Posters and Other publications

1. Alborno, B., Pita, G., Natalini, B. (2018) Flood Risk Analysis in an Underserved area of Chaco, Argentina and Identification of Mitigation Strategies. *Advanced School on Water, Energy, and Food - NEXUS*. Poster presentation.
2. O. Ishizawa, J. Rivera, J. Miranda, J. Suarez, L. Jimenez, M. Boyer, **Pita, G.**, (2015) Weathering Storms: Understanding the Impact of Natural Disasters on the Poor in Central America. .Regional Study Workshop *Aggregated Shocks, Poverty and ex-ante Risk Management in Latin America and the Caribbean*. The World Bank. Washington, DC. Aug. 31, 2015.
3. J. Mitrani-Reiser, **Pita, G.**, , J.-P. Pinelli, K. Gurley, J. Weekes, (2011). Development of Hurricane Damage Models for Residential Buildings, *2011 NSF Engineering Research and Innovation Conference*, Atlanta, GA.
4. Baheru, T., **Pita, G.**, , Chowdhury, A., and Pinelli, J.-P. (2012) Hurricane-Induced Interior Damage to Low-Rise Buildings: A Status Report of Ongoing Research at Florida International University. *3rd American Association for Wind Engineering Workshop*. Hyannis, MA. August 12 - 14, 2012.
5. **Pita, G.**, , J.-P. Pinelli, J. Mitrani-Reiser, K. Gurley, J. Weekes (2010). Latest Improvements in the Florida Public Hurricane Loss Model, *AAWE Workshop 2010*. Marco Island. FL.

Exhibits

1. Gonzalo Pita, the Sheridan Libraries, and the NIST Museum. 2020. *Landmarks in the History of Natural Catastrophe Modeling: An exhibit from Johns Hopkins University and the NIST Museum*. Gaithersburg, MD: National Institute of Standards and Technology. <https://www.nist.gov/nist-museum/landmarks-history-natural-catastrophe-modeling>
2. Gonzalo Pita, the Sheridan Libraries. 2019. *Landmarks in the History of Natural Catastrophe Modeling*. Eisenhower Library. JHU. <https://engineering.jhu.edu/case/2019/10/11/now-showing-landmarks-in-the-history-of-natural-catastrophe-modeling>

Technical Reports & Projects

More than 20.

Consulting, Applied and Research Projects

Projects in United States, Anguilla, Argentina, Aruba, Belize, Bonaire, Brazil, Costa Rica, Cuba, Curacao, Dominica, Dominican Republic, El Salvador, Fiji, Grenada, Guadeloupe, Guatemala, Honduras, Jamaica, Martinique, Mexico, Nicaragua, Panama, Saba, St. Eustatius, St. Barthelemy, St. Lucia, St. Martin/St.Marteen.

Symposia/Workshops Organized

- Chair of the 1st Workshop and Symposium of Flood Risk Analysis in Northeast Argentina. October 20, 2020
 - Organizer of the “Webinar Introduction to the Probabilistic Seismic Vulnerability Tool. World Bank. May 21, 2015. Washington, DC
 - Organizer of World Bank’s Technical Workshop on Country Seismic Disaster Risk Profiles. World Bank and CEPREDENAC (Centro de Coord. de Prevención de los Desastres Naturales de América Central). Marzo 19-20, 2014. Managua, Nicaragua
 - Co-Organizer of the World Bank’s Technical Assistance Project on Seismic Probabilistic Risk Assessment in Santa Tecla, El Salvador. November 11-12, 2013. San Salvador.
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Student Supervision

10 students in advisor, co-advisor, and mentoring capacities.

Teaching

500.658 - NDRM	JHU	Lecturer	Spring 2021
International Project Management	U. de Salamanca	Visiting Professor	Fall 2020
500.650 - NDRM (EP Master online)	JHU	Lecturer	Fall 2020
500.658 - NDRM	JHU	Lecturer	Spring 2020
545.658 - NDRM (EP Master online)	JHU	Lecturer	Fall 2019
500.110 - What is Engineering	JHU	Lecturer	Summer 2019
500.658 - NDRM	JHU	Lecturer	Spring 2019
500.110 - What is Engineering	JHU	Lecturer	Summer 2018
560.458 - NDRM	JHU	Lecturer	Spring 2018
500.111 - Intro to Nat. Disaster Risk Modeling	JHU	Lecturer	Fall 2017
500.110 - What is Engineering	JHU	Lecturer	Summer 2017
560.458 - NDRM	JHU	Lecturer	Spring 2017
500.111 - Intro to Nat. Disaster Risk Modeling	JHU	Lecturer	Fall 2016
500.110 - What is Engineering	JHU	Lecturer	Summer 2016
565.460 - Natural Disaster Risk Modeling (NDRM)	JHU	Lecturer	Spring 2016
560.766 - Multi-Hazard Risk Mitigation	JHU	Teach. Assistant	Spring 2013
Design of Steel and Timber Structures	UTN-FRC	Teach. Assistant	2002-2006
Physics I	UTN-FRC	Teach. Assistant	2001-2002

Invited Presentations & Attendance

- UC Berkeley. *Simulations and Data Needs for Disaster Recovery Planning*. Jan. 30-31, 2020
 - Johns Hopkins University. Eisenhower Library. *Catastrophe Modeling Exhibition*. October 21, 2019
 - University of Campinas, Brazil. *Advanced School on Water, Energy, and Food*. October 15-26, 2018
 - Johns Hopkins University. *Dept. of Civil Engineering Graduate Seminar Series*. October 8, 2015.
 - University College London, EPICentre. *Natural Risk Research Projects at the World Bank*. July 8, 2015.
 - National Center for Atmospheric Research. *Engineering for Climate Extremes Workshop*. November 19-21, 2015.
 - Universidad Nacional de San Juan, Argentina. *Asoc. Argentina de Geofisicos y Geodestas (AAGG). 1st Symposium on Severe Convection in South-America*. Nov. 10-14, 2014.
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Service

- Member of the Argentine Commission Wind Effects on Structures CIRSOC 102.

- Member of the Scientific Committee of BBAA VIII (8th International Colloquium on Bluff Body Aerodynamics and Applications), Boston, MA. June 7-11, 2016.
 - Analysis of the Damage produced by the Tornados and Downburst Storm in Bell Ville, December 2012. - Argentina.
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Reviewer for

1. J. of Infrastructure Systems (1943-555X)
 2. Natural Hazards Review (ISSN: 1527-6988)
 3. Wind and Structures (ISSN: 1226-6116)
 4. Natural Hazards (ISSN: 0921-030X)
 5. J. of Wind Engineering & Industrial Aerodynamics (ISSN: 0167-6105)
 6. J. of Architectural Engineering (ISSN: 1076-0431)
 7. Int'l J. of Disaster Risk Reduction (ISSN: 2212-4209)
 8. Hurricanes and Climate Change, Vol. 3. Springer (ISBN: 978-3-319-47592-9)
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Honors

	awarded by	
2016 Innovation Award - Finalist Diploma	The World Bank	2016
Outstanding Ph.D. Student Award	Florida Institute of Technology	2007, 2009
Student Merit Award - Honor Mention	Society of Risk Analysis	2009
Fulbright Scholarship	U.S. Department of State	2006
Talents Award	Punto a Punto/Ferrocons	2003