NIST Engineering Laboratory 100 Bureau Drive, MS 8615 Gaithersburg, MD 20899-8615 Office: (301) 975-0684 Mobile: (202) 604-7943 Email: judith.mitrani-reiser@nist.gov

Web: https://www.nist.gov/el/materials-and-structural-

systems-division-73100

Emergency Preparedness

#### **EDUCATION**

**Ph.D.** | California Institute of Technology (2007) Applied Mechanics

M.S. University of California, Berkeley (2001) Structural Engineering & Mechanics of Materials

**B.S.** University of Florida (2000) Civil and Coastal Engineering

#### **PROFESSIONAL**

National Institute of Standards and Technology, Gaithersburg, MD

Associate Chief Director Materials and Structural Systems Division (2019 – Present)

Disaster and Failure Studies Program, Community Resilience Group (2016 – 2019)

Johns Hopkins University, Baltimore, MD

Adj. Prof.

Department of Civil Engineering, Whiting School of Engineering (2016 – 2019) Department of Emergency Medicine, JHMI, Joint Appointment (2014 – 2019)

Asst. Prof. Asst. Prof.

Asst. Res. Prof.

Department of Civil Engineering, Whiting School of Engineering (2010 – 2016)

Department of Civil Engineering (2008 – 2010)

Consultant

Utah Department of Health, Bureau of Emergency Management Services & Preparedness Administered short workshop to Health Department employees and local structural engineers on healthcare system functioning after a major earthquake. (2015)

AECOM (formerly URS Corporation)

Participated in FEMA's Hurricane Sandy Mitigation Assessment Team (MAT) and consulted on hurricane losses avoided in code-compliant structures. (2012 – 2014)

*Applied Technology Council (ATC)* 

Downtime estimation consultant for FEMA's P-58, "Next-Generation Performance-Based Seismic Design Guidelines." (2007 – 2009)

**Associate** 

Center for Refugee and Disaster Response

Bloomberg School of Public Health, JHU (2015 - 2018)

Visiting Prof.

Pontificia Universidad Católica de Chile, Santiago, Chile

Department of Structural and Geotechnical Engineering (Jan 2014, 2015, 2016)

Postdoc

Johns Hopkins University, Baltimore, MD

Department of Civil Engineering with Nicolas P. Jones (2007 – 2008)

#### RESEARCH

Areas

Earthquake Engineering Community Functioning Structural Failures
Disaster Science Risk Assessment Health Systems

Resilience Multi-Hazard

# **HONORS AND Awards**

Federal Executive Institute Leader (2020)

*EERI Board of Directors* (2018 – Present)

New Leadership Program Class 16 (2018)

NIST Engineering Laboratory Awards (Morale 2017; Safety 2018)

George Housner Fellowship, Caltech (2002)

Chancellor's Predoctoral Opportunity Fellowship, UC Berkeley (2000)

Florida Scholar, UF (1996-2000)

Anderson Scholar, UF (1998)

# **JOURNAL PUBLICATIONS**

**Bold** font indicates NIST DFS or JHU STIRM permanent and visiting research group members.

# Published/ In Press

- (23) Ceferino, L., **Mitrani-Reiser, J.**, Kiremidjian, A., Deierlein, G., and Bambaren, C., 2020. "Effective Plans for Hospital System Response to Earthquake Emergencies." *Nature Communications* (accepted for publication).
- (22) van de Lindt, J.W., Peacock, W.G., **Mitrani-Reiser, J.**, Rosenheim, N., Deniz, D., Dillard, M., Tomiczek, T., Koliou, M., Graettinger, A., **Crawford, P.S.**, Harrison, K., Barbosa, A., Tobin, J., Helgeson, J., Peek, L., Memari, M., Sutley, E.J., Hamideh, S., Gu, D., Cauffman, S., and Fung, J., 2020. "Community Resilience-Focused Technical Investigation of the 2016 Lumberton, North Carolina Flood: An Interdisciplinary Approach." Natural Hazards Review 21(3): August 2020.
- (21) **Zhao, X.**, Miers, I., Green, M., and **Mitrani-Reiser, J.**, 2019. "Modeling the Cybersecurity of Hospitals in Natural and Manmade Hazards." *Journal of Sustainable and Resilient Infrastructure* 4(1): pp. 36-49.
- (20) **Poulos, A., Tocornal, F.,** de la Llera, J.C., and **Mitrani-Reiser, J.,** 2018. "Agent-based modeling of an evacuation process in a K-12 school in Iquique, Chile." *Transportation Research Part C* (97): pp. 82-95.
- (19) Chodur, G.M., **Zhao, X.**, Biehl, E., **Mitrani-Reiser, J.**, Neff, R., 2018. "Assessing Food System Vulnerabilities: A Fault Tree Modeling Approach," *BMC Public Health* (18): 817.
- (18) **Mieler, M.W.** and **Mitrani-Reiser, J.,** 2018. "Mitigating multi-scale earthquake impacts: A review of the state-of-the-art in assessing loss of functionality in buildings." *Journal of Structural Engineering*, 144(3): March 2018.
- (17) Bruneau, M., Barbato, M., Padgett, J.E., Zaghi, A.E., **Mitrani-Reiser, J.**, Li, Y., 2017. "State of the Art of Multihazard Design, 2017. Journal of Structural Engineering, 143(10): October 2017.
- (16) Links, J.M., Schwartz, B.S., Lin, S., Kanarek, N., **Mitrani-Reiser, J.**, Kirk Sell, T., Boddie, C.R., Ward, D., Slemp, C., Burhans, R., Gill, K., Igusa, T., **Zhao, X.**, Aguirre, B., Trainor, J., Nigg, J., Ingelsby, T., Carbone, E., and Kendra, J.M., 2017. "COPEWELL: A Conceptual Framework and System Dynamics Model for Predicting Community Functioning and Resilience after Disasters," *Journal of Disaster Medicine and Public Health Preparedness*, 12(1): pp. 127-137.
- (15) **Poulos, A.**, de la Llera, J.S., and **Mitrani-Reiser, J.**, 2017. "Earthquake Risk Assessment of Buildings Accounting for Human Evacuation," *Journal of Earthquake Engineering and Structural Dynamics*, 46 (4), 561-583.
- (14) De la Llera, J. C., Rivera, F., **Mitrani-Reiser, J.**, Jünemann, R., and Ríos, M., 2017. "Data Collection after the 2010 Maule earthquake in Chile." *Bulletin of Earthquake Engineering*, 15 (2): pp. 555-588.
- (13) Rutkow, L., **Mitrani-Reiser, J.**, and Barnett, D.J., 2017. "Promoting Comprehensive Disaster Policy Through Interdisciplinary Collaboration." *Injury Prevention*, 23(3): pp.195-196.
- (12) Zaghi, A.E., Padgett, J.E., Bruneau, M., Barbato, M., Li, Y., **Mitrani-Reiser, J.**, McBride, A., 2016. "Forum Paper: Establishing Common Nomenclature, Characterizing the Problem,

- and Identifying Future Opportunities in Multi-Hazard Design," *Journal of Structural Engineering*, 142(12).
- (11) **Mieler, M.W.**, Uma, S.R., and **Mitrani-Reiser, J.**, 2016. "Using Failure Analysis to Establish Seismic Resilience Objectives for Building Components and Systems." *Bulletin of the New Zealand Society of Earthquake Engineering*, 49 (1): pp. 86-97.
- (10) **Mitrani-Reiser, J.**, Wu, S., and Beck, J.L. 2016. "Virtual Inspector and its application to immediate pre-event and post-event earthquake loss and safety assessment of buildings." *Natural Hazards*, 81(3): pp. 1861-1878.
- (9) **Liu, Z., Jacques, C.C.**, Szyniszewski, S., Guest, J.K., Schafer, B.W., Igusa, T., and **Mitrani-Reiser, J.**, 2016. "Agent-based simulation of building evacuation after an earthquake: coupling human behavior with structural response." *Natural Hazards Review*, 17(1), February 2016.
- (8) **Pita, G.L.**, Pinelli, J.-P., Gurley, K., and **Mitrani-Reiser, J.**, 2015. "State of the Art of Hurricane Vulnerability Models: A Review." *Natural Hazards Review*, 16(2), May 2015.
- (7) **Jacques, C.**, McIntosh, J.K., Giovinazzi, S., Kirsch, T.D., Wilson, T.M., and **Mitrani-Reiser, J.**, 2014. "Resilience of the Canterbury Health Care System to the 2011 Christchurch (Mw=6.2) Earthquake, NZ", *Earthquake Spectra*, 30(1): pp. 533-554.
- (6) **Mitrani-Reiser, J.**, Mahoney, M., Holmes, W.T., de le Llera, J.C., Bissell, R., and Kirsch, T.D., 2012. "A Functional Loss Assessment of a Hospital System in the Biobío Province." *Earthquake Spectra*, 28(S1): pp. S473-S502.
- (5) **Pita, G. L.**, Pinelli, J.-P., Gurley, K., Weekes, J., and **Mitrani-Reiser, J.**, 2012. "Assessment of hurricane-induced internal damage to low-rise buildings in the Florida Public Hurricane Loss Model," *Journal of Wind Engineering and Industrial Aerodynamics*, 104-106, pp. 76-87.
- (4) Ramirez, M., Liel, A., **Mitrani-Reiser, J.**, Haselton, C., Spear, A., Steiner, J., Miranda, E., and G.G. Deierlein, 2012. "Seismic Damage and Monetary Loss Performance of Modern Reinforced Concrete Frame Buildings", *Earthquake Engineering and Structural Dynamics*, 14(11): pp. 1455-1475.
- (3) Kirsch, T.D., **Mitrani-Reiser, J.**, Bissell, R., Sauer, L.M., Mahoney, M., Holmes, W.T., Santa Cruz, N., de la Maza, F., 2010. "Impact on Hospital Functions Following the 2010 Chilean Earthquake." *Journal of Disaster Medicine and Public Health Preparedness*, 4(2): pp. 122-128.
- (2) Goulet, C., Haselton, C., **Mitrani-Reiser, J.**, Beck, J.L., Deierlein, G., Porter, K.A., Stewart, J.P.. and Taciroglu, E., 2007. "Evaluation of the Seismic Performance of a Code-Conforming Reinforced-Concrete Building From Seismic Hazard to Loss Results," *Earthquake Engineering and Structural Dynamics*, 36(13): pp. 1973-1997.
- (1) Porter, K, **Mitrani-Reiser, J.** and Beck, J.L., 2006. "Near-Real-Time Loss Estimation for Instrumented Buildings," *The Structural Design of Tall and Special Buildings* 15 (1), 3-20, March 2006.

# REFEREED CONFERENCE PROCEEDINGS

#### Published

- \* denotes author which presented paper at conference; **bold** font indicates NIST DFS or JHU STIRM permanent and visiting research group members.
- (35) Deniz, D.,\* Sutley, E., van de Lindt, J.W., Peacock, W.G., Rosenheim, N., Gu, D., **Mitrani-Reiser, J.**, Dillard, M., Koliou, M., and Hamideh, S., 2019. "Flood Performance and Dislocation Assessment for Lumberton Homes after Hurricane Matthew," 13th International Conference on Applications of Statistics and Probability in Civil Engineering (ICASP13), Seoul, Korea.
- (34) van de Lindt, J.W.\*, Ellingwood, B., McAllister, T.P., Gardoni, P., Cox, D., Peacock, W.G., Cutler, H., Dillard, M.K., Lee, J., Peek, L., and **Mitrani-Reiser**, J., 2018. "Modeling Community Resilience: Update on the Center for Risk-Based Community Resilience Planning and the Computational Environment IN-CORE," 17th U.S.-Japan-New Zealand

- Workshop on the Improvement of Structural Engineering and Resilience (ATC-15-16), Queenstown, New Zealand.
- (33) **Haghpanah, F.\***, Schafer, B., and **Mitrani-Reiser, J.**, 2018. "Performance Evaluation of Pedestrian Navigation Algorithms for City Evacuation Modeling" (No. 302), *Proc. Of the 11th National Conference on Earthquake Engineering*, Los Angeles, CA.
- (32) **Zhao, X.\***, **Mitrani-Reiser, J.**, Neff, R., and Biehl, E., 2018., "Food Security in the Aftermath of a Seismic Event" (No., 537), *Proc. Of the 11<sup>th</sup> National Conference on Earthquake Engineering*, Los Angeles, CA.
- (31) **Boston, M.\*** and **Mitrani-Reiser, J.**, 2018. "Comparing Resilience Rating Systems: Assessing Post-Earthquake Hospital Functionality" (No. 896), *Proc. Of the 11<sup>th</sup> National Conference on Earthquake Engineering*, Los Angeles, CA.
- (30) Ceferino, L.\*, Kiremidjian, A., Deierlein, G., and **Mitrani-Reiser, J.**, 2018. "Computing Hospital System Resilience: a supply-demand perspective" (No. 1533), *Proc. Of the 11th National Conference on Earthquake Engineering*, Los Angeles, CA.
- (29) **Mitrani-Reiser, J.\***, **Mieler, M.**, Kumar, H., Shrestha, S., Germaraad, M., O'Conor, K., and Kirsch, T.D., 2017. Investigating Community Resilience in Nepal: A Healthcare Focus, *Proc. Of the 16<sup>th</sup> World Conference on Earthquake Engineering*, Santiago, Chile.
- (28) **Zhao, X.** and **Mitrani-Reiser, J.**, 2017. Developing a Multi-hazard Weighting Scheme for Community Resilience Indicators, *Proc. Of the 16<sup>th</sup> World Conference on Earthquake Engineering*, Santiago, Chile.
- (27) **Mieler, M.** and **Mitrani-Reiser, J.**, 2017. Multi-scale earthquake impacts: A review of the state-of-the-art in modeling loss of functionality in buildings, *Proc. Of the* 16<sup>th</sup> World Conference on Earthquake Engineering, Santiago, Chile.
- (26) Vasquez, A., Rivera, F., de la Llera, J.C., and **Mitrani-Reiser, J.**, 2017. Healthcare network's response and resilience in Iquique after the 2014, Pisagua earthquake, *Proc. Of the 16<sup>th</sup> World Conference on Earthquake Engineering*, Santiago, Chile.
- (25) Favier, P., Rivera, F., **Poulos, A.**, Vasquez, J., de la Llera, J.C., and **Mitrani-Reiser, J.**, 2017. Impact on Chilean hospitals following the 2015 Illapel Earthquake, *Proc. Of the* 16<sup>th</sup> World Conference on Earthquake Engineering, Santiago, Chile.
- (24) **Poulos, A.**, Castro, S. de la Llera, J.C., and **Mitrani-Reiser, J.**, 2017. Seismic risk assessment of human evacuation in buildings, *Proc. Of the 16<sup>th</sup> World Conference on Earthquake Engineering*, Santiago, Chile.
- (23) de la Llera, J.C., **Mitrani-Reiser, J.**, Rovera, F., Fortuno, C., Junemann, R., **Poulos, A.**, and Vasquez, J., 2015. The 2010 Chile Earthquake: a five-year reflection, *Proc., of the 9<sup>th</sup> Pacific Conference on Earthquake Engineering*, Sydney, Australia.
- (22) Di Sarno, L.\*, Manfredi, G., Magliulo, G., Petrone, C., Masi, A., Santarsiero, G., Fabbrocino, G., Rainieri, C., **Mitrani-Reiser, J.**, and Giovinazzi, S., 2015. An Approach to the Seismic Performance Assessment of Medical Components, *Proc., Annual Conference of Italian National Association of Earthquake Engineering*, L'Aquila, Italy, September 2015.
- (21) Masi, A.\*, Di Sarno, L., Manfredi, G., Santarsiero, G., Giovinazzi, S., and **Mitrani-Reiser, J.**, 2015. Seismic Risk of Italian hospitals: analysis of assessment results to define criteria for intervention prioritization, *Proc., Annual Conference of Italian National Association of Earthquake Engineering*, L'Aquila, Italy, September 2015.
- (20) **Mitrani-Reiser, J.\***, **Jacques, C.**, and **Boston, M.**, 2014. Quantifying the Performance of Healthcare Facilities in Disasters: A Multi-hazard Approach, *Proc., 10<sup>th</sup> National Conference on Earthquake Engineering*, Anchorage, AK, July 2014.
- (19) **Boston, M.\***, **Mitrani-Reiser, J.**, **Jacques, C.**, and **Liu, Z.**, 2014. Towards Assessing the Resilience of a Community in Seismic Events Using Agent-Based Modeling, *Proc., 10<sup>th</sup> National Conference on Earthquake Engineering*, Anchorage, AK, July 2014.
- (18) **Pita, G.L.\*** and **Mitrani-Reiser, J.**, 2013. Modeling Hurricane-Induced Building Downtime, *12<sup>th</sup> Americas Conference on Wind Engineering*, Seattle, WA, July 2013

- (17) Leong, E.N., Liel, A.B.\*, **Mitrani-Reiser, J.**, Guglielmo, E., Friis, D., Lumbard, D., Oliveira, R., and Pekelnicky, R., 2013. Gender and Racial Diversity in the Structural Engineering, Proc., *ASCE's Structures Congress*, Pittsburgh, May 2013.
- (16) Jacques, C., Mitrani-Reiser, J.\*, and Kirsch, T.D., 2013. An All-Hazards Approach for Quantifying Loss of Function for Critical Healthcare Infrastructure, *Proc., ASCE's Structures Congress*, Pittsburgh, May 2013.
- (15) **Pita, G.L.\***, Pinelli, J-P., **Mitrani-Reiser, J.**, Cocke, S., Gurley, K., 2012. Analysis of Hurricane Andrew Insurance Claim Data for Residential Buildings, *Proc., ATC-SEI Advances in Hurricane Engineering*, Miami, FL, October 2012.
- (14) **Mitrani-Reiser, J.\***, **Jacques, C.**, Kirsch, T.D., Giovinazzi, S., McIntosh, J.K., and Wilson, T.M., 2012. Response of the Regional Health Care system to the 22nd February 2011, Christchurch Earthquake, NZ, *Proc., 15<sup>th</sup> World Conference on Earthquake Eng.*, Lisbon, Portugal, Sept. 2012.
- (13) **Liu, Z.**, Jalalpour, M., **Jacques, C.**, Szyniszewski, S., **Mitrani-Reiser, J.\***, Guest, J., Igusa, T., & Schafer, B.W., 2012. Interfacing Building Response with Human Behavior Under Seismic Events, *Proc., 15<sup>th</sup> World Conference on Earthquake Engineering*, Lisbon, Portugal, Sept. 2012.
- (12) **Liu, Z.**, **Jacques, C.\***, Jalalpour, M., Szyniszewski, S., **Adelburg, J.**, Guest, J.K., Igusa, T., Schafer, B.W., and **Mitrani-Reiser, J.**, 2012. Seismic Evacuation Model Accounting for Human-Structure Interaction, *Proc., 2<sup>nd</sup> International Conference on Evacuation Modeling and Management*, Chicago, IL, August, 2012.
- (11) McIntosh, J.K.\*, **Jacques, C., Mitrani-Reiser, J.,** Kirsch, T.D., Giovinazzi, S., and Wilson, T.M., 2012. The Impact of the 22<sup>nd</sup> February 2011 Earthquake on Christchurch Hospital, *Proc., New Zealand Society for Earthquake Eng. Annual Meeting*, Wellington, New Zealand, May 2012.
- (10) **Pita, G. L.**, Pinelli, J.-P.\*, Cocke, S., Gurley, K., Weekes, J., and **Mitrani-Reiser, J.**, 2011. Assessment of hurricane-induced internal damage to low-rise buildings in the Florida Public Hurricane Loss Model, *Proc., International Conference of Wind Engineering*, Amsterdam, Netherlands, July 2011.
- (9) **Pita, G. L.**, Francis, R.\*, **Liu, Z.**, **Mitrani-Reiser, J.**, Guikema, S. , Pinelli, J.-P., 2011. Statistical tools for populating/predicting input data of risk analysis models, *Proc., International Conference on Vulnerability and Risk Analysis and Management (ICVRAM)*, Hyattsville, MD, April 2011.
- (8) **Pita, G. L.**,\* Pinelli, J.-P., Gurley, K., Weekes, J., and **Mitrani-Reiser, J.**, 2011. Wind Vulnerability Curves for Low-Rise Commercial-Residential Buildings in the Florida Public Hurricane Loss Model, *Proc., International Conference on Vulnerability and Risk Analysis and Management*, Hyattsville, MD, April 2011.
- (7) Ryan, K.\*, Sayani, P., Baez, Y., and **Mitrani-Reiser, J.**, 2009. Comparative Life Cycle Performance Assessment of Conventional and Seismic Isolated Buildings, *Proc., International Symposium on Seismic Response Controlled Buildings for Sustainable Society*, Tokyo, Japan, September 2009.
- (6) **Mitrani-Reiser, J.\***, Luco, N., Ryu, H., and Jones, N.P., 2009. Virtual Building Inspection for Open Risk Assessment Software, *Proc., 10<sup>th</sup> International Conference on Structural Safety and Reliability*, Osaka, Japan, September 2009.
- (5) Luco, N.\*, Martinez, E.M., Field, E.H., Ryu, H., and **Mitrani-Reiser, J.**, 2009. An Interactive Web Tool for Quantitative Risk Assessment of Woodframe Houses ("ResRisk"): A Progress Report, *Proc.*, 10<sup>th</sup> International Conference on Structural Safety and Reliability, Osaka, Japan, September 2009.
- (4) Krishnan, S.\*, Komatitsch, D., Tromp, J., Muto, M., **Mitrani-Reiser, J.**, and Beck, J.L., 2008. Simulation of an 1857-like Mw 7.9 San Andreas fault earthquake and the response of tall steel moment frame buildings in southern California- A Prototype study, Seismic loss estimation based on end-to-end simulation, *Proc., 14th World Conference on Earthquake Engineering*, Beijing, China, October 2008.

- (3) Goulet, C.,\* Haselton, C.,\* **Mitrani-Reiser, J.**, Stewart, J.P., Taciroglu, E., and Deierlein, G.G., 2006. Evaluation of the Seismic Performance of a Code-Conforming Reinforced-Concrete Frame Building Part I: Ground Motion Selection and Structural Collapse Simulation, paper NCEE-1576, *Proc., 8th Nat'l Conference on Earthquake Engineering*, San Francisco, CA, April 2006.
- (2) **Mitrani-Reiser, J.**,\* Haselton, C., Goulet, C., Porter, K.A., Beck, J.L, and Deierlein, G. 2006. Evaluation of the Seismic Performance of a Code-Conforming Reinforced-Concrete Frame Building Part II: Loss Estimation, paper NCEE-969, *Proc., 8th National Conference on Earthquake Engineering*, San Francisco, CA, April 2006.
- (1) Porter, K.A.\*, **Mitrani-Reiser, J.**, Beck, J.L. and Ching, J.Y., 2006. Smarter Structures: Real-Time Loss Estimation for Instrumented Buildings, paper NCEE-1236, *Proc., 8th National Conference on Earthquake Engineering* San Francisco, CA, April 2006.

# **OTHER PUBLICATIONS**

#### Report

- \* denotes author which presented paper at conference; **bold** font indicates NIST DFS or JHU STIRM permanent and visiting research group members.
- (7) van de Lindt, J.W., Peacock, W.G., and **Mitrani-Reiser**, **J.** (Editors), 2018. "The Lumberton, North Carolina Flood of 2016: A Community Resilience Focused Technical Investigation." *The Center for Risk-Based Community Resilience Planning Technical Report*. (October 2018)
- (6) Mitrani-Reiser, J., Jacques, C., Kirsch, T., Comerio, M., Holmes, B., Mahin, S. Giovinazzi, S., McIntosh, J., and Wilson, T., 2013. "A Comparative Study on the Seismic Preparedness of Hospitals Following Recent Damaging Events." *California Seismic Safety Commission (CSSC) Technical Report.*
- (5) Giovinazzi, S., **Mitrani-Reiser, J.**, Kirsch, T., Wilson, T.M., **Jacques, C.**, McIntosh, J.K., and Johnston, D., 2011. Assessing the Post-Earthquake Functionality of the Health System Following the Canterbury Earthquakes in NZ. Hospital Functions and Services, NHRP.
- (4) **Mitrani-Reiser, J.**, and Jones, N.P., 2010. "A Decision Support Tool for Open Risk Assessment Software: Collaborative Research with Johns Hopkins University," *USGS Technical Report 2010 for Award No 08HQGR001*. Reston, Virginia.
- (3) Haselton, C., Goulet, C., **Mitrani-Reiser, J.**, Beck, J.L., Deierlein, G., Porter, K.A., Stewart, J.P., and Taciroglu, E., 2008. "Benchmarking of the Seismic Performance of a Code-Conforming Reinforced-Concrete Building," *PEER Technical Report 2007/12*. Berkeley, California.
- (2) Porter, K.A., J.L. Beck, J.Y. Ching, and **Mitrani-Reiser, J.**, 2004. "Real-Time Loss Estimation for Instrumented Buildings," *Earthquake Engineering Research Laboratory Report*, California Institute of Technology, Pasadena, CA.
- (1) **Mitrani, J.**, Goethals, J. and Glaser, S. 2002. "Field Testing of Wireless Interactive Sensor Nodes," *Port and Airport Research Institute Technical Report*, Yokosuka, Japan.

# Special Earthquake Reports

- (3) Lizundia, B., Shrestha, S.N., Bevington, J., Davidson, R., Jaiswal, K., Jimee, G.K., Kaushik, H., Kumar, H., Kupec, J., Mitrani-Reiser, J., Poland, C., Shrestha, S., Welton-Mitchell, C., Tremayne, H., and Ortiz, M., 2016. "EERI Earthquake Reconnaissance Team Report: M7.8 Gorkha, Nepal Earthquake on April 25, 2015 and its Aftershocks." EERI LFE Report, May 2016 (185 pp).
- (2) Comerio, M., et al., 2011. "Learning from Earthquakes: The M 6.3 Christchurch, New Zealand, Earthquake of February 22, 2011," EERI Newsletter Insert, May 2011 (16 pp).
- (1) Moehle, J., et al., 2010. "Learning from Earthquakes: The Mw 8.8 Chile Earthquake of February 27, 2010," EERI Newsletter Insert, June 2010 (20 pp).

# Practice Oriented

(2) FEMA (contributing author: J. Mitrani-Reiser), 2013. P-942: Superstorm Sandy: Observations, Conclusions, and Recommendations, Technical Report Prepared for the

- U.S. Department of Homeland Security (DHS) Federal Emergency Management Agency, Washington, DC.
- (1) FEMA (contributing author: J. Mitrani-Reiser), 2012. *P-58: Seismic Performance Assessment of Buildings*, Technical Report Prepared for the U.S. Department of Homeland Security (DHS) Federal Emergency Management Agency, Washington, DC.

# **CONFERENCE PRESENTATIONS/EXTENDED ABSTRACTS**

- \* denotes author which presented at conference; **bold** font indicates NIST DFS or JHU STIRM research group member.
- (17) **Crawford, P.S.\*, Mitrani-Reiser, J.**, and Graettinger, A., 2019. "Facilitating Large-Scale Data Collection by Synthesizing Remote Sensing, GIS, and Machine Learning," Natural Hazards Workshop, Broomefield, CO, July 2019.
- (16) **Mitrani-Reiser, J.\***, 2018. "A Multi-disciplinary Field Study of the City of Lumberton after the 2016 Hurricane Matthew," Structures Congress, Fort Worth, TX, April 2018.
- (15) **Mitrani-Reiser, J.\***, 2018. "Disaster metrology: standardizing post-disaster data collection procedures," Structures Congress, Fort Worth, TX, April 2018.
- (14) Balbus, J.M.\*, Kirsch, T.D., and **Mitrani-Reiser, J.**, 2017. "Integrating Urban Infrastructure and Health System Impact Modeling for Disasters and Mass-Casualty Events," American Geophysical Union, New Orleans, LA, December 2017.
- (13) **Mitrani-Reiser, J.\***, Links, J.\*, Slemp, C.\*, and Carbonne, E.\*, 2016. "CoPE-WELL: A Decision Support Tool for Predicting and Enhancing Community Functioning and Resilience Post-Disaster," Preparedness Summit, Dallas, TX, April 2016.
- (12) **Mitrani-Reiser, J.\***, 2015. "The Nepal Earthquake: Dispatches from the Field," Natural Hazards Workshop, Boulder, CO, July 2015.
- (11) **Mitrani-Reiser, J.\***, 2015. "Organizational and Institutional Resilience," Natural Hazards Workshop, Boulder, CO, July 2015.
- (10) **Jacques, C.\***, Giovinazzi, S., Kirsch, T.D., and **Mitrani-Reiser, J**. Characterization of the Canterbury, New Zealand Healthcare System for Use in Seismic Simulation. Poster session. Presented at the EERI 2015 Annual Meeting; 2015 March 29 April 3; Boston, MA, USA.
- (9) **Jacques, C.C.\***, Giovinazzi, S., and **Mitrani-Reiser, J.**, 2014. "Quantifying the Resilience of Healthcare Systems in Earthquakes: a Practical Approach," *Proc., 3rd International Conference on Urban Disaster Reduction, Boulder, CO, Oct 2014.*
- (8) **Mitrani-Reiser, J.\***, 2014. "Quantifying Societal Impacts of Natural Disasters," Systems Institute Workshop, Johns Hopkins University, Baltimore, MD, Oct 2014.
- (9) De la Llera, J. C.\*, Rivera F., Jünemann R., **Mitrani-Reiser**, **J.**\*, Fortuño C., Hube M., Santa María H., Ríos, M., Lagos R., Guendelman T., Candia G., Ledezma C., Hube M., Cienfuegos R., Lindenberg, J., 2014. "Post Earthquake Data Collection: the 2010 Maule Earthquake," *Post Earthquake Data Workshop*, Anchorage, AK, July 2014.
- (8) **Mitrani-Reiser, J.\***, 2013. "East Coast Earthquakes, Damage to Critical Building Systems, and Performance-Based Design," *National Society of Professional Engineers Meeting*, Washington, DC, Dec 2013.
- (7) **Jacques, C.\*** and **Mitrani-Reiser, J.,** 2013. "Quantifying Resilience of Healthcare Facilities," Emergency *Public Health and Disasters Conference*, Torrence, CA, May 2013.
- (6) Jacques, C.\*, Liu, Z., Szyniszewski, S., Schafer, B., and Mitrani-Reiser, J. "Modeling Post-Earthquake Evacuation of Damaged Structures: an Agent-Based Approach" Poster Session. Presented at the EERI 2013 Annual Meeting; 2013 February 12-15; Seattle, WA, USA.
- (5) **Mitrani-Reiser, J.\***, 2013. "Applying Models of Human Behavior and Memory in Disasters Across Space and Time," *National Council for Science and the Environment (NCSE)*, Disasters & the Environment, Washington, DC, Jan 2013.

- (4) **Jacques, C.\***, **Adelburg, J.**, & **Mitrani-Reiser, J.** "Earthquake Outreach: Design of an Educational Module for High School Students on Seismic Design in a Healthcare Context." Poster session. Presented at the EERI 2012 Annual Meeting and National Earthquake Conference; 2012 April 10-13; Memphis, TN, USA.
- (3) **Mitrani-Reiser, J.\***, 2012. "Quantifying Loss of Function of Critical Building Systems due to Recent Seismic Events," *EERI Annual Meeting*, Memphis, TN, April 2012.
- (2) **Mitrani-Reiser, J.\*** and Beck, J.L., 2007. Incorporating Losses Due to Repair Costs, Downtime and Fatalities in Probabilistic-Based Earthquake Engineering, *Proc., Computational Methods in Structural Dynamics and Earthquake Engineering*, Crete, Greece, June 2007.
- (1) **Mitrani-Reiser, J.\***, 2007. "Modeling Decision Variables: Dollars, Deaths, and Downtime," *PEER Annual Meeting*, San Francisco, CA, Jan 2007. (plenary talk)

# **INVITED PRESENTATIONS**

# Invited Talks, Lectures, and Seminars

- (57) Task Force on Environmental Health Risks and Safety Risks to Children, Webinar, Feb. 2020.
- (56) Keynote at PEER (Pacific Earthquake Engineering Research) Center's Annual Meeting, Berkeley, CA, Jan. 2020.
- (55) Organization of American States' Ministerial Dialogue on Building Urban Resilience (Energy and Climate Partnership of the Americas), Washington, DC, Nov. 2019.
- (54) Forum on Medical and Public Health Preparedness for Disasters and Emergencies, National Academies, Washington, DC, Oct. 2019.
- (53) Bill Anderson Fund Workshop, University of Delaware, Newark, DE, Oct. 2019.
- (52) National Academies' Committee on Best Practices in Assessing Mortality & Significant Morbidity Following Large-Scale Disasters, Washington, DC, Aug. 2019.
- (51) Plenary at NIST Disaster Resilience Symposium, Gaithersburg, MD, Aug 2019.
- (50) Natural Hazards Workshop, Boulder, CO, July 2019.
- (49) Keynote at International Conference of Natural Hazards and Infrastructure, Crete, Greece, June 2019.
- (48) Loudoun County Public Library's Science on Tap Public Lecture, June 2019.
- (48) ASCE Infrastructure Resilience Division Research Forum, Reston, VA, May 2019.
- (47) Disasters and Health: State of Science Symposium, Washington, DC, April 2019.
- (46) NIST Center of Excellence on Semiannual Meeting, Ft. Collins, CO, April 2019.
- (45) National Transportation Safety Board, Washington, DC, November 2018.
- (44) Plenary at NIST Disaster Resilience Symposium, Gaithersburg, MD, Aug 2018.
- (43) Natural Hazards Workshop, Boulder, CO, July 2018.
- (42) NIST Center of Excellence on Semiannual Meeting, Ft. Collins, CO, April 2018.
- (41) Federal Interagency Disaster Meeting, NIH, Bethesda, MD, March 2018.
- (40) Department of Commerce Disaster Working Group, Washington, DC, March 2018.
- (39) Carnegie Mellon University, Dept. of Civil Engineering, Feb 2018.
- (38) Stanford University, Dept. of Civil & Environmental Engineering, Nov 2017.
- (37) Oregon State University, Dept. of Civil & Construction Engineering, Oct 2017.
- (36) Keynote Lecture at 10th ASNEngr Annual Conference, Manassas, VA, June 2017.
- (35) Public Webinar at the Center for Risk-Based Community Resilience Planning Semiannual Meeting, Ft. Collins, CO, April 2017.
- (34) EERI Annual Meeting, Portland, Oregon, March 2017.
- (33) Caltech Symposium on Making Rational Decisions Under Uncertainty and Model Complexity, Pasadena, CA, March 2017.
- (32) EERI Learning from Earthquakes Travel Study Program, Santiago, Chile, Jan 2017.
- (31) NIST Center of Excellence Semiannual Meeting, Gaithersburg, MD, Nov 2016.

- (30) International Workshop on Modeling of Physical, Economic, and Social Systems for Resilience Assessment, Washington, DC, Oct 2016.
- (29) Natural Hazards Workshop, Boulder, CO, July 2016.
- (28) Plenary at Utah Earthquake Resiliency Workshop, West Jordan, UT, April 2016.
- (27) Utah Earthquake Resiliency Workshop, Plenary, April 2016.
- (26) National Institute of Standards and Technology (NIST), Engineering Lab, April 2016.
- (25) University of Maryland, College Park, MD, Dept. of Mechanical Eng., March 2016.
- (24) University of California, Berkeley, Pacific Earthquake Engineering Research (PEER) Center, Jan 2016.
- (23) University of California, Berkeley, Structural Engineering and Mechanics of Materials, Nov 2015.
- (22) Structural Engineers Association of Utah/EERI-Utah, Seminar, Oct 2015.
- (21) University of Connecticut, Dept. of Civil & Environmental Engineering, Sept 2015.
- (20) National Institute of Building Sciences, MMC Webinar, Sept 2015.
- (19) University of Pittsburg Medical Center, Seminar, Sept 2015.
- (18) University of California, Berkeley, PEER's Nepal Earthquake Debrief, Aug 2015.
- (17) Utah Hospital Association, Lecture, May 2015.
- (16) University of Virginia, Dept. of Civil & Environmental Engineering, April 2015.
- (15) University of Florida, Dept. of Civil & Environmental Engineering, March 2015.
- (14) University of Delaware, Disaster Research Center, Nov 2014.
- (13) Rutgers University, School of Planning and Public Policy, Oct 2014.
- (12) Virginia Tech, Dept. of Civil & Environmental Engineering, Sept 2014.
- (11) Pontificia Universidad Católica de Chile, Dept. of Structural & Geotechnical Engineering, Jan 2014.
- (10) Johns Hopkins University, Dept. of Environmental Health Sciences, Dec 2013.
- (9) Pontificia Universidad Católica de Chile, Dept. of Structural & Geotechnical Engineering, Jan 2013.
- (8) University of Puerto Rico, Mayaguez, Dept. of Civil Engineering, Nov. 2012.
- (7) Carnegie Mellon University, Dept. of Civil Engineering, May 2012.
- (6) Tulane University, Tulane Engineering Forum, March 2012.
- (5) Johns Hopkins University, Johns Hopkins Medicine International, June 2010.
- (4) National Institute of Standards and Technology (NIST), Engineering Lab, April 2009.
- (3) Rensselaer Polytechnic Institute (RPI), Dept. of Civil Engineering, Nov 2008.
- (2) Johns Hopkins University, Dept. of Civil Engineering, April 2008.
- (1) Caltech, Dept. of Civil Engineering, Feb 2008.

#### **PROFESSIONAL SERVICE**

#### Disaster Fieldwork

NIST Disaster and Failure Studies (DFS) Program

Anchorage Earthquake, Alaska (Prelim Recon Homebase Lead, 2019)

Camp Fire, California (Prelim Recon Homebase Lead, 2018)

Hurricane Michael, Florida (Prelim Recon Homebase Lead, 2018)

Tubbs Fire, California (Prelim Recon Homebase Lead, 2017)

Hurricane Maria, Puerto Rico (Mortality Project Lead 2017 - present)

Hurricane Irma, Florida (Prelim Recon Homebase Lead, 2017)

Hurricane Harvey, Texas (Prelim Recon Homebase Lead, 2017)

Hurricane Matthew, North Carolina (Team Lead, 2016; Team Member, 2018)

EERI Learning from Earthquakes (LFE) Program

Gorkha Earthquake, Nepal (Hospital Team Lead, June 2015)

Christchurch Earthquake, New Zealand (Hospital Team Lead, March 2011)

Maule Earthquake, Chile (Hospital Team Lead, March 2010)

FEMA Mitigation Assessment Team

Hurricane Sandy (Hospital Team Lead, December 2012)

California Seismic Safety Commission Team

Baja California Earthquake (March 2011)

#### Technical Committees

NSTC's Subcommittee on Resilience Science and Technology's (SRST)

Task Team 4, Member (2019 - Present)

Confidential Reporting of Structural Safety

CROSS-US ExCom and Expert Panel (2019 - Present)

Health and Human Services – Technical Expert Panels (TEP)

Assessing and Predicting Medical Needs in a Disaster, Panelist (2018 – Present)

American Society of Civil Engineers – Structural Engineering Institute (ASCE-SEI)

Multi-Hazard Risk Mitigation Committee, Vice Chair (2016 – 2018); Secretary (2010 – 2014)

Disaster Resilience Committee, Member (2012 - Present)

Federal Emergency Management Agency

Nationwide Building Code Losses Avoided Study, Review Panelist (2019 - Present)

Hazus Puerto Rico Wind Damage Function Study, External Reviewer (2019 - Present)

P-942: Mitigation Ass. Report: Hurricane Sandy, Main Comm. Member (2012 – 2013)

P-58: Seismic Performance Assess. of Buildings, Main Comm. Member (2007 – 2009)

# Professional Committees

Earthquake Engineering Research Institute (EERI)

Board Director (2018 - Present)

Public Health Working Group, Member (2019 – Present)

Learning from Earthquakes Committee, Board Liaison (2018 - Present)

Learning from Earthquakes Committee (2011 – 2018)

Initiatives Development Committee (2015 – 2018)

Publications Committee (2011 - 2013)

National Capital Chapter, Vice President (2011 - 2014)

Public Policy and Advocacy Committee, Member (2010 – 2014)

American Society of Civil Engineers – Structural Engineering Institute

SEI Young Professionals Committee, Member (2011 – 2014)

#### Associate Editor

American Society of Civil Engineers

Natural Hazards Review (2010 - 2017)

# Proposal Panels

National Institute of Standards and Technology

Disaster Resilience FFO (2018); Disaster Resilience FFO (2016)

National Science Foundation

CAREER (2019); CAREER (2018); Hazard SEES (2015); CAREER (2013); CMMI (2012),

CAREER (2010); IMEE (2009)

U.S. Geological Survey

Earthquake Effects (2012; 2008; 2007)

National Academies of Science/USAID

Partnerships for Enhanced Engagement in Research (PEER) Science (2014)

# Meeting & Workshop Organization

 $Research\ Methods\ Meeting\ for\ Hurricane\ Maria\ Technical\ Investigation$ 

Workshop Co-Chair (2019)

National Conference on Earthquake Engineering, Los Angeles, CA

Chair, Socioeconomics and Public Policy (2017 – 2018)

National Conference on Earthquake Engineering, Anchorage, AK

Proceedings Committee, Co-Chair (2012 – 2014) Technical Committee, Member (2013 – 2014)

EERI Annual Meeting & National Earthquake Conference, New Orleans, LA Organizing Committee (2011)

Workshop on Vulnerable Pop., Comm. Resilience & Health System Impact, Baltimore, MD Workshop Chair (2012)

Chile Earthquake Research Needs Workshop, NSF, Arlington, VA Organizing Committee (2010)

Journal Reviewer Earthquake Spectra Journal of Env. Research & Public Health

Earthquake Eng. & Structural Dynamics Structures and Buildings Natural Hazards Review Computers and Geosciences

Journal of Structural Engineering Georisk

Risk Analysis

**Professional Associations** 

(ASCE) American Society of Civil Engineers, Member (1998 - Present)

(EERI) Earthquake Engineering Research Institute, Member (2001 – Present)

(WADEM) World Assoc. for Disaster and Emergency Medicine, Member (2012 – 2015)

(SSA) Seismological Society of America, Member (2013 – 2017)

(SRA) Society for Risk Analysis, Member (2009 – 2014)

#### **TEACHING**

Undergraduate Courses *Johns Hopkins University* (2010 – 2016)

560.220 Civil Analysis, Fall 2010, '11, '12, '13, '14, '15

Graduate Courses Johns Hopkins University (2010 - Present)

 $560.630\ Structural\ Dynamics,\ Fall\ 2014,\ Spring\ 2015,\ {}^{\backprime}16$ 

560.692 Graduate Seminar in Civil Engineering, Fall 2010, Spring 2011

560.752 Structural Dynamics, Spring 2011, '12, Fall 2012

560.766 Multi-Hazard Risk Mitigation, Fall 2014

Lecturer

Johns Hopkins University (2012 - Present)

 $305.861\ Graduate\ Seminar\ in\ Injury\ Research\ and\ Policy,\ Spring\ 2015$ 

800.644 Topics in Interdisciplinary Medicine, Spring 2015, '16

180.670 Intro to Public Health Emergency Preparedness, Spring 2012, '16

**Development** 

*National Effective Teaching Institute (NETI)* 

3-Day Workshop in Vancouver, Canada, June 2011

Directors: Rebecca Brent, Richard Felder, Michael Prince

Outreach

Johns Hopkins University:

- Preparing Future Faculty Teaching Academy, JHU (Spring 2016)
   Faculty Mentor of PFFTA Fellow, Guanbo Bian
- Teaching Topics and Tapas, JHU (January 2016) Lecturer: Designing Active Learning Exercises
- Preparing Future Faculty, University of Nebraska-Lincoln (2015 2016) Faculty Mentor of PFF Fellow, Andrea Arguelles
- Summer Teaching Institute, JHU (May 2014) Lecturer and Panelist: Course Planning
- WSE Education Innovation Seminar, Baltimore, MD (Dec 2011) Lecturer: Contextualizing introductory computation

*Pre-K* – 12:

• Girl Scouts Emergency Preparedness Patch Program (2016 – Present)

#### Patch Program Leader

- JHU's STEM Achievement in Baltimore Elementary Schools (2014 2015) Faculty Mentor, John Ruhrah Elementary School
- Bryn Mawr STEM Summer Internship (June 2014 Sept 2014) Faculty Mentor
- Engineering Innovation Summer Program, JHU (Summer 2011, 2012) Lab Director

# Service

# Johns Hopkins University

- (SABES) STEM Achievement in Balt. Elementary Schools (2012 2016) Faculty Advisory Board Member
- (PFFTA) Preparing Future Faculty Teaching Academy (2014 2015) Faculty Advisory Board Member
- (GSI) Gateway Sciences Initiative: Active Learning eStudio Project (2012) Faculty Participant in Design and Use of eStudio

#### MENTORSHIP

# Postdoc Advisor

#### Post-doctoral Scholars

- Shane Crawford (2019 Present)
- Mike Mieler (2014 2016)
- Gonzalo Pita (2012 2014)

#### **PhD**

#### Graduate Students, PhD

- Xilei Zhao, PhD Candidate, graduated May 2017
- Megan Boston, PhD Candidate, graduated May 2017
- Caitlin Jacques, PhD Candidate, graduated May 2016

#### MS

### Graduate Students, MSE

- Fardad Haghpanah (2017)
- Zhang Liu (2015)
- Xinyi Lin (2013)
- Claire Li (2011)

# **Visiting Scholars**

#### Visiting Graduate Students:

- Luis Ceferino, PhD at Stanford University (2019)
- Felipe Tocornal, MS at Universidad Católica de Chile (2014)
- Alan Polous, MS at Universidad Católica de Chile (2014)
- Gonzalo Pita, PhD at Florida Inst. of Technology (2009 2012)

# Undergraduate Researchers

### *Undergraduate Student Researchers:*

- Nathan Idrogo, Texas Tech University (B.S. 2017)
- Stephen Wong, Johns Hopkins University (B.S. 2015)
- Kara Mahoney, George Mason University (B.S. 2014)
- Linnea Cripe, Johns Hopkins University (B.S. 2014)
- Amory Martin, Johns Hopkins University (B.S. 2014)
- Jason Adelstein, Princeton University (B.S. 2014)
- Majid, Jaidi, Johns Hopkins University (B.S. 2013)
- Meagan Young, Johns Hopkins University (B.S. 2012)
- Erin Kelly, Johns Hopkins University (B.S. 2012)
- Peter Wildfeuer, Johns Hopkins University (B.S. 2011)

*Outreach* Johns Hopkins University:

- Women of Whiting Seminar Series (2017)
- Homewood Postdoctoral Retreat (April 2015)

Panelist: *Academic Careers* 

- Homewood Postdoctoral Association (Dec 2014)
   Moderator: Careers at Primarily Undergraduate Institutions
- Annual Hopkins Postdoc Retreat (May 2014) Panelist: *Specific Aims 101*
- Professional Development Day for Grad. Students and Postdocs (Dec 2011)
   Presentation: Academic Career Tracks: Science and Engineering
- Professional Development Workshop (May 2011)
  Presentation: Application and Interviewing in the Sciences and Engineering
- Johns Hopkins Workshop on NSF Grant Writing (April 2010) Presentation: *Writing a successful NSF proposal*

#### Service

#### Johns Hopkins University

- (SHPE) Society of Hispanic Professional Engineers (2010 2016) Faculty Advisor
- (HWPDA) Homewood Post-doctoral Association (2007 2010) Founder and Faculty Advisor

#### **INTERNAL SERVICE**

#### Service Activities

#### National Institute of Standards and Technology

- Disaster and Failure Studies Summer Seminar Series *Chair (2019)*
- Materials and Structural Systems Division Seminar Series *Chair* (2017–2018)

#### *Johns Hopkins University*

- (SSEI) Student Services Excellence Initiative, Provost Office (2016) Steering Committee Member
- (E2SHI) Environment, Energy, Sustainability, and Health Inst. (2015 2016) Executive Committee Member
- WSE National Advisory Council Meeting (2014) Faculty Panelist
- Geospatial Sciences Teaching and Research Focus Group (2010 2014) Faculty Member
- Johns Hopkins University Admissions Open House (2013)

  Presentation: Learning from Katrina and Superstorm Sandy: Building Resilience
- Johns Hopkins University Family Weekend (2012)

  Presentation: Earthquake Engineering and Public Health Emergency Preparedness
- Homewood Associates Luncheon (2012) Faculty Participant
- Faculty-Student Interaction Programs (2011; 2012; 2013) Faculty Participant
- Search Committee for Assistant Dean for Engineering Education Outreach (2010) Search Committee Member
- Department of Civil Engineering Faculty Search Committees General Search (2016); MoM Search (2015); Structures Search (2013); SI Search (2012)
- Department of Civil Engineering Committee of Graduate Admissions *Chair (2015)*
- Department of Civil Engineering Committee of Student Recruitment

Chair (2010 - 2013), Member (2010 - 2015)

• Department of Civil Engineering Committee of Undergraduate Education *Member (2010 – 2015)* 

# RESEARCH PROJECTS

# **Funding**

Completed Projects:

- RIPS: Quantifying Disaster Resilience of Critical Infrastructure-Based Societal
  Systems with Emergent Behavior and Dynamic Interdependencies
  National Science Foundation, Sept 2014 Aug 2019, \$2,500,000
  PIs: Mitrani-Reiser (JHU-WSE), Miller-Hooks (UMD); co-PIs: Green (JHU-WSE), Nigg (Delaware), Fisher-Liu (UMD)
- Feeding the City in an Uncertain World: Creating Resilient Urban Food Systems in Baltimore and Beyond

*JHU's 21st Century Cities Initiative,* Sept 2015 – Aug 2016, \$39,961 PI: Neff (JHU-BSPH); **co-PI: Mitrani-Reiser (JHU-WSE)**, Barnett (JHU-BSPH

 Public Health Systems Preparedness and Emergency Response Research Center (PERRC): Harmonization Project

> Center for Diseases Control and Prevention, Sept 2014 – Sept 2016 Pl: Links (JHU-BSPH); **Senior Personnel: Mitrani-Reiser (JHU-WSE)**

- National Research Center for Integrated Natural Disaster Management
   FONDAP Center of Excellence in Chile, Sept 2014 Sept 2017
   PI: Cifuentes, Pontificia Universidad Católica de Chile; International
   Collaborator: Mitrani-Reiser (JHU-WSE) Multi-criteria disaster vulnerability
   assessment: critical infrastructure, human behavior, and public policy
- National Science Foundation, Sept 2012 Aug 2015, \$380,001

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  Output

  Description:

PI: Mitrani-Reiser (JHU-WSE); co-PIs: Barnett (JHU), Rutkow (JHU-BSPH)

Towards a Community Resilience Index

Center for Diseases Control and Prevention, Sept 2012 – Sept 2015, \$300,000 PI: Links, JHU-BSPH; **Senior Personnel: Mitrani-Reiser (JHU-WSE)** 

 Multi-Hazard Scenario Development for Modeling Post-Disaster Behavior of Physical and Human Infrastructures

National Institutes of Health (NIH), Jan 2013 – Jun 2013, \$149,996 PI: Epstein (JHU-JHMI); **Subaward PI: Mitrani-Reiser (JHU-WSE)** 

 Survey and Evaluation of Recent Hospital Evacuations Following Damaging Earthquakes in California, Mexico, and New Zealand

California Seismic Safety Commission, Aug 2011 – Mar 2013, \$38,919

- PI: Mitrani-Reiser (JHU-WSE); co-PI: Kirsch (JHU-JHMI)
- Interfacing Building Models under Earthquake Loading with Human Behavior
   Center for Diseases Control and Prevention, June 2011 Sept 2011, \$148,600
   PI: Epstein (JHU-JHMI); Subaward PI: Mitrani-Reiser (JHU-WSE)
- NEESR-SG: TIPS Tools to Facilitate Widespread Use of Isolation and Protective Systems, a NEES/E-Defense Collaboration

Center for Diseases Control and Prevention, Sept 2014 – Sept 2015, \$ PI: Ryan (Utah State University); **Subaward PI: Mitrani-Reiser (JHU-WSE)** 

Modeling Building Downtime due to Hurricane Impacts

National Science Foundation, Jul 2008 - June 2011, \$299,999

**PI:** Mitrani-Reiser (JHU); coPIs: Jones (JHU); Guikema (JHU)

 A Decision Support Tool for Open Seismic Risk Assessment Software: Collaborative Research with Johns Hopkins University and USGS U.S. Geological Survey, Dec 2007 – Nov 2008, \$62,159

PI: Jones (JHU-WSE); co-PI: Mitrani-Reiser (JHU-WSE)