Abdullahi M. Salman, Ph.D.

Assistant Professor, The University of Alabama in Huntsville
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EDUCATION

Michigan Technological University Sep. 2014 – Aug. 2016
Ph.D., Civil Engineering

Michigan Technological University Aug. 2012 – May 2014
M.S., Civil Engineering (Structures)

Curtin University, Malaysia Campus Mar. 2007 – Jan. 2011
B.Eng., Civil and Construction
First Class Honors

RESEARCH INTERESTS

- Resilient and sustainable civil infrastructure systems
- Multi-hazard analysis
- Structural reliability
- Risk assessment and management
- Risk-based & multi-criteria decision making
- Infrastructure maintenance

ACADEMIC EMPLOYMENT

Assistant Professor Aug. 2018 - present
Department of Civil & Env. Engineering, The University of Alabama in Huntsville
Huntsville, Alabama, USA

Research Associate Sep. 2016 – Aug. 2018
Department of Civil Engineering, Case Western Reserve University
Cleveland, Ohio, USA

Teaching and Research Assistant Sep. 2014 – Aug. 2016
Department of Civil & Env. Engineering, Michigan Technological University
Houghton, Michigan, USA

AWARDS AND FELLOWSHIPS

- Michigan Tech Doctoral Finishing Fellowship, 2016
- Outstanding Graduate Student Teaching Award, Michigan Tech, 2016
- Shin Yang Best Graduate for Civil and Construction Award, Curtin University, 2011
- Samling Best Student Award, Curtin University, 2011
- Best Oral Presentation Award, Curtin University Technology, Science & Engineering Conference 2010
- Curtin University Dean's List Awards, 2009 & 2010

PROFESSIONAL EXPERIENCE

Road Sector Development Team – Federal Ministry of Works — Abuja, Nigeria
Assistant Engineer — Apr. 2011 – Apr. 2012

Bina Puri Construction Sdn. Bhd. — Kota Kinabalu, Malaysia
Intern — Dec. 2009 – Feb. 2010

TECHNICAL ACTIVITIES AND SERVICE

Service in Professional Organizations

- Member - Multihazard Mitigation Committee, Structural Engineering Institute – American Society of Civil Engineers (ASCE).
  Term: 10/1/2018 to 9/30/2024

- Member - Virtual Assessment Team (VAT), Hurricane Michael Early Access Reconnaissance
  Organizer: Structural Engineering Extreme Event Reconnaissance Network (StEER)
  Responsibilities:
  - Co-authored the Hurricane Michael Preliminary Virtual Assessment Team (P-Vat) Report
  - Co-authored the Early Access Reconnaissance Report (EARR)
  - Enriched Field Assessment Team (FAT) data with other information gleaned from inventory and high-resolution imagery
  - Participated in quality assurance and data cataloging processes

- Member – Virtual Assessment Team (VAT), Hurricane Florence Early Access Reconnaissance
  Organizer: Structural Engineering Extreme Event Reconnaissance Network (StEER)
  Responsibilities:
  - Co-authored the Early Access Reconnaissance Report (EARR)
  - Enriched Field Assessment Team (FAT) data with other information gleaned from inventory and high-resolution imagery
  - Participated in quality assurance and data cataloging processes

Service at UAH

- Member - CEE graduate education committee

Peer reviewer for:

- Reliability Engineering & System Safety
- ASCE Journal of Infrastructure Systems
- Engineering Structures
- IEEE Transactions on Power Delivery
- IEEE Transactions on Industrial Informatics

Professional memberships

- American Society of Civil Engineers (ASCE)
- American Institute of Steel Construction (AISC)
- American Concrete Institute (ACI)

Certifications:

- Fundamentals of Engineering (FE), State of Michigan, October 2013

PUBLICATIONS AND PRESENTATIONS

Journal Publications (Published or accepted)

1. Mazumder, R.K., Salman, A.M., Li, Y., & Yu, X. (2018). Reliability Analysis of Water Distribution Systems using Physically-based Pipeline Failure Method. *ASCE J. of Water Resources Planning and Management. (In press).*
2. Salman, A.M. & Li, Y. (2018). A Probabilistic Framework for Multi-Hazard Risk Mitigation for Electric Power Systems Subjected to Seismic and Hurricane Hazards. *Structure & Infrastructure Engineering. DOI: https://doi.org/10.1080/15732479.2018.1459741*
3. Salman, A.M. & Li, Y. (2018). Flood Risk Assessment, Future Trend Modeling, and Risk Communication: A Review of Ongoing Research. *Natural Hazards Review, ASCE. 19(3).*
4. Mazumder, R.K., Salman, A.M., Li, Y., & Yu, X. (2018). Evaluation of Water Distribution Systems Performance and Asset Management. *ASCE Journal of Infrastructure Systems, 24(3).*
5. Salman, A. M., Li, Y., & Bastidas-Arteaga, E. (2017). Maintenance Optimization for Power Distribution Systems Subjected to Hurricane Hazard, Timber Decay and Climate Change. *Reliability Engineering & System Safety.* DOI: http://doi.org/10.1016/j.ress.2017.03.002
6. Salman, A. M. & Li, Y. (2017). A Framework to Investigate the Effectiveness of Interconnection of Power Distribution Systems Subjected to Hurricanes. *Structure & Infrastructure Engineering*. DOI: http://dx.doi.org/10.1080/15732479.2017.1345954
7. Salman, A.M. & Li, Y (2017). Multihazard Risk Assessment of Electric Power Systems. *ASCE Journal of Structural Engineering*, *143(3),* 04016198. DOI: http://dx.doi.org/10.1061/(ASCE)ST.1943-541X.0001688
8. Salman, A. M. & Li, Y. (2017). Assessing Climate Change Impact on System Reliability of Power Distribution Systems Subjected to Hurricanes. *ASCE Journal of Infrastructure Systems*, *23(1),* 04016024. DOI*:* http://dx.doi.org/10.1061/(ASCE)IS.1943-555X.0000316*.*
9. Salman, A. M. & Li, Y. (2016). Age-dependent Fragility and Life-cycle Cost Analysis of Wood and Steel Power Distribution Poles Subjected to Hurricanes. *Structure & Infrastructure Engineering*, *12(8), 890-903.* DOI: 10.1080/15732479.2015.1053949*.*
10. Salman, A. M., Li, Y., & Stewart, M. G. (2015). Evaluating System Reliability and Targeted Hardening Strategies of Power Distribution Systems Subjected to Hurricanes. *Reliability Engineering & System Safety, 144, 319-333.* DOI: https://doi.org/10.1016/j.ress.2015.07.028
11. Jayakumar, M. & Salman, A. M. (2011). Experimental Study on Sustainable Concrete with the Mixture of Low Calcium Fly Ash and Lime as a Partial Replacement of Cement. *Advanced Materials Research,* (250-253): 307-312.

Journal Publications (Under review)

12. Asadi, E., Salman, A.M., & Li, Y. (2018). Multi-Criteria Decision-Making for Seismic Resilience and Sustainability Assessment of Diagrid Buildings. *Engineering Structures*.
13. Mazumder, R.K., Salman, A.M., Li, Y., & Yu, X. (2018). Seismic Functionality and Resilience Analysis of Water Distribution Systems. *ASCE Journal of Pipeline System Engineering & Practice.*
14. Lyon, Z., Salman, A.M., & Li, Y. (2018). Life-cycle Cost and Environmental Analysis of Timber, Concrete and Steel Building Frames Considering Earthquake Impact. *ASCE Journal of Performance of Constructed Facilities.*
15. Braik, A., Salman, A.M., & Li, Y. (2018). Risk-based Failure Analysis of Utility Poles Subjected to Tornado Hazard. *ASCE Journal of Aerospace Engineering.*
16. Mazumder, R.K. & Salman, A.M. (2018). Seismic Damage Assessment Using RADIUS and GIS: A Case Study of Sylhet City, Bangladesh. *International Journal of Disaster Risk Reduction.*

Peer-Reviewed Conference Proceedings

1. Salman, A. M., Li, Y., & Bastidas-Arteaga, E. (2019). System-level Maintenance Optimization for Power Distribution Systems Subjected to Hurricanes. *13th International Conference on Applications of Statistics and Probability in Civil Engineering.* Seoul, South Korea, 26-30 May 2019. Abstract accepted.
2. Asadi, E., Shen, Z., Zhou, H., Salman, A. M., & Li, Y. (2019). Life-Cycle Resilience and Sustainability Assessment of RC Buildings with Thermal-Mass Walls. *13th International Conference on Applications of Statistics and Probability in Civil Engineering.* Seoul, South Korea, 26-30 May 2019. Abstract accepted.
3. Mazumder, R.K., Salman, A.M., Li, Y., & Yu, X. (2019). An Asset Management Framework for Water Distribution Systems Using Fuzzy Logic and Bayesian Inference. *13th International Conference on Applications of Statistics and Probability in Civil Engineering.* Seoul, South Korea, 26-30 May 2019. Abstract accepted.
4. Mortazavi, M., Heo, Y., & Salman, A.M. (2019). Vapor Cloud Explosion Risk Sensitivity to the Ignition Model for Offshore Process Systems. *13th International Conference on Applications of Statistics and Probability in Civil Engineering.* Seoul, South Korea, 26-30 May 2019. Abstract accepted.
5. Salman, A. M., Li, Y., & Bastidas-Arteaga, E. (2018). Impact of Climate Change on Optimal Wood Pole Asset Management. *6th International Symposium on Life-Cycle Civil Engineering.* Ghent Belgium, 28-31 October 2018. Paper accepted.
6. Salman, A.M. & Li, Y (2017). Multi-hazard Risk Assessment of Electric Power Systems. *16th World Conference on Earthquake Engineering.* Santiago Chile, January 9-13, 2017.
7. Salman, A. M. & Li, Y. (2017). Evaluating Climate Change Risk and Adaptation Strategies for Power Distribution Systems Subjected to Hurricanes. *12th International Conference on Structural Safety & Reliability*. Vienna, Austria. 6 – 9 August 2017.
8. Salman, A. M. & Li, Y. (2017). A probabilistic Framework for Seismic Risk Assessment of Electric Power Systems. X International Conference on Structural Dynamics, EURODYN 2017. Rome, Italy. 10 – 13 September 2017.

Non-peer-reviewed Conference Proceedings & Presentations

9. Mazumder, R. K., Salman, A. M. & Li, Y. (2019). Reliability Assessment of Corroded Water Distribution Infrastructure. ASCE Pipelines Conference. Nashville, Tennessee, July 21-24, 2019. Abstract accepted. Paper submitted on ???.
10. Asadi, E., Shen, Z., Zhou, H., Salman, A.M. and Li, Y. (2018). Multi-Criteria Decision Model for Risk-Based Life-Cycle Assessment of Building Structures. The Future Smart and Resilient City, Rice University, Houston, Texas, Oct. 4, 2018.
11. Salman, A. M., Li, Y., & Li, Q. (2018). Targeted Hardening of Electric Power Distribution Systems under Hurricane Hazard. *Structures Congress 2018*. Fort Worth, Texas, April 19–21, 2018.
12. Mazumder, R. K., Salman, A. M. & Li, Y. (2018). Risk and Resilience of Aging Water Distribution Systems. *Structures Congress 2018*. Fort Worth, Texas, April 19–21, 2018.
13. Salman, A. M. & Li, Y. (2017). Seismic Risk Assessment of Spatially Distributed Infrastructure Systems: Comparing Two Approaches. International Conference on Structural Engineering Dynamics, ICEDyn 2017. Ericeira, Portugal. 3 – 5 July, 2017.
14. Salman, A. M. & Li, Y. (2017). Uncertainty Quantification in Modeling the Impact of Climate Change on Hurricane Hazard. 2nd International Conference on Uncertainty Quantification in Computational Sciences and Engineering UNCECOMP 2017. Rhodes Island, Greece. 15-17 June 2017.
15. Salman, A. M. & Li, Y. (2016). A Probabilistic Framework for Comparing the Reliability of Wood and Steel Power Distribution Poles Subjected to Hurricanes. *16th Asian-Pacific Symposium on Structural Reliability and its Application.* Shanghai, China. 28-30 May 2016.
16. Salman, A. M. & Li, Y. (2016). Impact of Climate Change on Reliability of Electric Power Distribution Systems Subjected to Hurricanes in Coastal Regions. *OCEANEXT Interdisciplinary Conference*. Nantes, France. 8 – 10 June 2016.

17. Salman, A. M. & Fang, S. (2016). Quantification of Uncertainty in Probabilistic Seismic Risk Assessment of Electric Power Systems. *MAA MathFest*. Columbus, Ohio. 3 – 6 Aug. 2016.
18. Salman, A. M. (2010). Study on High Strength Concrete with Low Calcium Fly Ash and Lime. *Curtin University of Technology Science and Engineering Conference 2010*. Miri, Malaysia. 29 – 30 November 2010.

Reports

1. Alipour, Alice; Aly, Aly Mousaad; Davis, Brett; Gutierrez Soto, Mariantonieta; Kijewski-Correa, Tracy; Lenjani, Ali; Lichty, Benjamin; Miner, Nathan; Roueche, David; Salman, Abdullahi; Smith, Daniel; Sutley, Elaina; Mosalam, Khalid; Prevatt, David; Robertson, Ian, (2018-10-19), "STEER - HURRICANE MICHAEL: PRELIMINARY VIRTUAL ASSESSMENT TEAM (P-VAT) REPORT" , DesignSafe-CI [publisher], Dataset [DOI: https://ezid.cdlib.org/id/doi:10.17603/DS2RH71]
2. Kijewski-Correa, Tracy; Prevatt, David; Musetich, Matthew; Roueche, David; Mosalam, Khalid; Hu, Fan; Salman, Abdullahi; Peng, Han; Gonzalez, Camila; Robertson, Ian, (2018-09-25), "HURRICANE FLORENCE: FIELD ASSESSMENT TEAM 1 (FAT-1) EARLY ACCESS RECONNAISSANCE REPORT (EARR)" DesignSafe-CI [publisher], Dataset [DOI: https://ezid.cdlib.org/id/doi:10.17603/DS2TT3G]