

Andrés D. González

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A. Professional Preparation

Bachelor of Science, Physics, Universidad de los Andes (Bogotá, Colombia), March 2009
Master of Science, Industrial Engineering, Universidad de los Andes, March 2012
Doctor of Philosophy, Civil Engineering, Rice University, August 2017
Doctor of Philosophy, Engineering, Universidad de los Andes, September 2017

B. Relevant Professional Appointments

8.2017 – present Assistant Professor, School of Industrial and Systems Engineering, University of Oklahoma, Norman, OK, USA.
1.2013 – 8.2017 Teaching/Research Assistant, Department of Civil and Environmental Engineering, Rice University, Houston, TX, USA.
9.2009 – 12.2012 Teaching Assistant, Department of Industrial and Systems Engineering, Universidad de los Andes, Bogotá, D.C., Colombia

C. Products

i. Related Products

González, A.D., Chapman, A., Dueñas-Osorio, L., Mesbahi, M. & D'Souza, R. 2017. Efficient Restoration Strategies using the Recovery Operator. *Computer-Aided Civil and Infrastructure Engineering*, 32(12), pp.991–1006. doi:10.1111/mice.12314
Morshedlou, N., González, A. D., & Barker, K. 2018. Work crew routing problem for infrastructure network restoration. *Transportation Research Part B: Methodological*, 118, 66–89. doi:10.1016/j.trb.2018.10.001
Smith, A.M., González, A.D., Dueñas-Osorio, L. & D'Souza, R.M. 2017. Interdependent Network Recovery Games. *Risk Analysis* (In press). doi:10.1111/risa.12923.
Chapman, A., González, A.D., Mesbahi, M., Dueñas-Osorio, L. & D'Souza, R. 2017. Data-guided Control: Clustering, Graph Products, and Decentralized Control. *In 57th IEEE Conference on Decision and Control (CDC2017)*. Melbourne, Australia.
González, A.D., Dueñas-Osorio, L., Sánchez-Silva, M. & Medaglia, A.L. 2016. The Interdependent Network Design Problem for Optimal Infrastructure System Restoration. *Computer-Aided Civil and Infrastructure Engineering*, 31(5), pp.334–350. doi:10.1111/mice.12171

ii. Other Products

Abolghasem, S., Gómez-Sarmiento, J., Medaglia, A. L., Sarmiento, O.L., González, A.D., Díaz del Castillo, A., Roza Casas, J. & Jacoby, E. 2018. A DEA-centric decision support system for evaluating Ciclovía-Recreativa programs in the Americas. *Socio-Economic Planning Sciences*, 61, pp.90–101. doi:10.1016/j.seps.2017.03.005
González, A.D., Dueñas-Osorio, L., Sánchez-Silva, M., Medaglia, A.L. & Schaefer, A. 2017. Optimizing the Resilience of Infrastructure Systems under Uncertainty using the Interdependent Network Design Problem. *In 12th International Conference on Structural Safety & Reliability (ICOSSAR2017)*. Vienna, Austria.

- González, A.D., Dueñas-Osorio, L., Medaglia, A.L. & Sánchez-Silva, M. 2016. The time-dependent interdependent network design problem (td-INDP) and the evaluation of multi-system recovery strategies in polynomial time. *In 6th Asian-Pacific Symposium on Structural Reliability and its Applications (APSSRA6)* (pp. 544–550). Shanghai, China.
- González, A.D., Sánchez-Silva, M., Dueñas-Osorio, L. & Medaglia, A.L. 2014. Mitigation Strategies for Lifeline Systems Based on the Interdependent Network Design Problem. *In M. Beer, S.-K. Au, & J. W. Hail, eds. Vulnerability, Uncertainty, and Risk: Quantification, Mitigation, and Management*. American Society of Civil Engineers (ASCE), pp. 762–771.
- González, A.D., Dueñas-Osorio, L., Medaglia, A.L. & Sánchez-Silva, M. 2014. Resource allocation for infrastructure networks within the context of disaster management. *In G. Deodatis, B. Ellingwood, & D. Frangopol, eds. Safety, Reliability, Risk and Life-Cycle Performance of Structures and Infrastructures*. New York, USA: CRC Press, pp. 639–646.

D. Synergistic Activities

1. *Knowledge transfer (sample)*. Developed a public database that serves as a benchmark for recovery and resilience analysis of systems of interdependent infrastructure networks, which is currently being used by multiple researchers from fields such as civil engineering, operations research, and statistical physics, among others.
2. *Collaborative teaching (sample)*. Coordinated and taught, with colleagues Kash Barker and Shima Mohebbi, an awarded “Presidential Dream Course” on Analytics of Resilient Cyber-Physical-Social Networks. This course included invited lectures of multiple national and international experts from related fields.
3. *Promoting multidisciplinary research dissemination activities (sample)*. Organized and chaired sessions on “optimizing the recovery and resilience of interdependent infrastructure systems” and “optimizing infrastructure resilience considering social aspects”, for the 2018 IISE Annual Conference and Expo in Orlando, FL, and the 2018 INFORMS Annual Meeting in Phoenix, AZ. The invited researchers represented diverse relevant fields, including computer science, civil engineering, aerospace engineering, transportation science, and operations research, among others.
4. *Peer review activities (sample)*. Select journals/agencies: Computer-Aided Civil and Infrastructure Engineering, IISE Transactions, Reliability Engineering and System Safety, Risk Analysis, Physica A, Journal of Infrastructure Systems, American Control Conference.