Rafael Diaz, Ph.D.

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DEGREES

Ph.D.	Old Dominion University, Modeling, and Simulation, 2007
M.B.A.	Old Dominion University, Finance, and IT, 2002
Graduate Certificate	Andres Bello Catholic University, Project Management, 1997
B.Sc.	Jose Maria Vargas University, Industrial Engineering, 1994

RESEARCH / TEACHING APPOINTMENTS

April 2019 – Present	Research Associate Professor, *Virginia Modeling, Analysis, and Simulation Center,* Old Dominion University, Suffolk, VA
Oct 2015 – Dec 2019	Research Affiliate, *MIT-Center for Transportation & Logistics* Massachusetts Institute of Technology, Cambridge, MA
Oct 2015 – April 2019	Professor of Supply Chains, *MIT-Zaragoza International Logistics Program,* Zaragoza Logistics Center (ZLC), Spain
Oct 2013 – Oct 2015	Research Associate Professor, *Virginia Modeling, Analysis, and Simulation Center,* Old Dominion University, Suffolk, VA
Feb 2008 – Oct 2013	Research Assistant Professor, *Virginia Modeling, Analysis, and Simulation Center,* Old Dominion University, Suffolk, VA
Aug 2007 – Feb 2008	Postdoctoral Research Associate, *Virginia Modeling, Analysis, and Simulation Center,* Old Dominion University, Suffolk, VA

ADMINISTRATIVE APPOINTMENTS

June 2022 – Present	Graduate Program Director (GPD), *School of Cybersecurity,* Old Dominion University, Norfolk, VA
June 2021 – Present	Digital Ship Lab Co-Director, *Digital Shipbuilding Enterprise - Virginia Modeling, Analysis, and Simulation Center,* Old Dominion University, Norfolk, VA
May 2019 – Present	Advanced Analytics Lab Director, *Virginia Modeling, Analysis, and Simulation Center,* Old Dominion University, Norfolk, VA
Jan 2015 – April 2019	PhD Program Director, *MIT-Zaragoza International Logistics Program,* Zaragoza Logistics Center (ZLC), Spain

PUBLICATIONS

A. JOURNAL ARTICLES PUBLISHED

1. **Diaz R.,** Behr Joshua, Acero Beatriz. Coastal Housing Recovery for Vulnerable Populations in a Post-Disaster Environment: A Supply Chain Perspective. *International Journal of Production Economics (IJPE)* 247 (2022): 108463. Impact Factor: 7.885

2. **Diaz R.,** Chan Phan, Golenbach Daniel. A Spherical Surface Driving Distances Approach to Hub Network Design in Highly Urbanized Environments. *Industrial Management & Data Systems.* (pending publication). Impact Factor: 5.090.

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3. **Diaz R.** Sailesh Kolachana, Rodrigo Falcão Gomes, Analyzing and Prioritizing Agility in Global Pharmaceutical Supply Networks: A Simulation. *Journal of Operational Research Society (JORS).* (pending publication). Impact Factor: 2.860

4. **Diaz R.,** Strategic Digital Shipbuilding Project Portfolio Configuration and Optimization. *International Journal of Simulation and Process Modelling (IJSPM).* (pending publication). V18, May 2022. Impact Factor: 2.085

5. Smith, K., **Diaz, R.,** Shen, Y. "Development of a Framework to Support Informed Shipbuilding based on Supply Chain Disruptions." *Procedia Computer Science* (2022) 200, 1093-1102. Impact Factor: 2.09

6. Longo F., Padovano A., Solina V., Venzl S., **Diaz R.** Human Ergonomic Simulation to Support the Design of an Exoskeleton for Lashing/De-lashing operations of Containers Cargo. *Procedia Computer Science* (2022) 200, 1894-1902. Impact Factor: 2.09

7. Whytlaw JL, Hutton N, Yusuf JE, Richardson T, Hill S, Olanrewaju-Lasisi T, Antwi-Nimarko P, Landaeta E, **Diaz R.** Changing Vulnerability for Hurricane Evacuation during a Pandemic: Issues and Anticipated Responses in the Early Days of the COVID-19 Pandemic. *International Journal of Disaster Risk Reduction* (2021): 102386. Impact Factor: 4.32

8. **Diaz R.,** Smith Katherine, Acero Beatriz, Longo Francesco, Padovano Antonio. Developing an Artificial Intelligence Framework to Assess Shipbuilding and Repair Sub-Tier Supply Chains Risk. *Procedia Computer Science* (2021) Vol. 180, 996-1002 . Impact Factor: 2.09

9. Longo, F., Padovano, A., Gazzaneo, L., Frangella, J. and **Diaz, R**.. Human factors, ergonomics and Industry 4.0 in the Oil&Gas industry: a bibliometric analysis. *Procedia Computer Science* 180 (2021): 1049-1058 . Impact Factor: 2.09

10. Longo, F., Padovano, A., Nicoletti, L., Fusto, C., Elbasheer, M. and **Diaz, R.,**. Fuzzy Cognitive Map-Based Knowledge Representation of Hazardous Industrial Operations. *Procedia Computer Science* 180 (2021): 1042-1048. 23-25 November 2020. Impact Factor: 2.09

11. Hill Saige, Hutton Nicole S., Whytlaw, Jennifer L., Yusuf, Juita-Elena; Behr, Joshua G., Landaeta, Eduardo, **Diaz R.** The Changing Logistics of Evacuation Transportation in Hazardous Settings During COVID-19. *Natural Hazards Review*. 22.3 (2021): 04021029. Impact Factor: 3.169

12. Hutton Nicole S., Mumford Steven W., Saitgalina Marina, Yusuf Juita-Elena (Wie) Behr Joshua G., **Diaz R.**, KieferJohn J. Building Nonprofit Resilience in Anticipation of Compound Hurricane-Pandemic Threat. *International Journal of Public Administration*. Ref: 201707086. . Impact Factor: 1.85

13. Aiello, G., Hopps, F., Santisi, D., Venticinque, M., **Diaz, R.**, Behr, J.G., Longo, F. and Padovano, Modeling and Simulation in Disaster and Emergency Management. *IEEE Transaction on Engineering Management* (2020) Vol. 67, 516-518 . Impact Factor: 6.146

14. **Diaz R.**, Smith Katherine, Landaeta Rafael, Padovano Antonio. Shipbuilding Supply Chain Framework and Digital Transformation: A Project Portfolios Risk Evaluation. *Procedia Manufacturing* (2020) Vol. 42, 173-180. Impact Factor: 1.794

15. **Diaz R.,** Behr Joshua, Padovano Antonio, Francesco Longo. Supply Chain Modeling in the Aftermath of a Disaster: A System Dynamics Approach in Housing Recovery. *IEEE Transaction on Engineering Management* (2019) Vol. 67.3, 531-544. Impact Factor: 6.146

16. **Diaz, R.**, and Erika Marsillac. Evaluating strategic remanufacturing supply chain decisions. *International Journal of Production Research* (2017) Vol. 55.9, 2522-2539. Impact Factor: 8.568

17. **Diaz, R.,** Joshua G. Behr, and ManWo Ng. Quantifying the economic and demographic impact of transportation infrastructure investments: A simulation study. *Simulation* (2016) Vol. 92.4 377-393. Impact Factor: 1.377

18. **Diaz R.,** Kumar Sameer, Bailey Mike. Analyzing Lost-Sale Stochastic Inventory Model with Markov-Modulated Demands: A Simulation-based Optimization Study. *Journal of Manufacturing Systems.* (2016) Vol. 13.7, 38 1-12. Impact Factor: 8.633,

19. **Diaz R.** Using dynamic demand information and zoning for the storage of non-uniform density stock-keeping units. *International Journal of Production Research.* (2016) Vol. 54.8: 2487-2498. Impact Factor: 8.568

20. Ng ManWo, **Diaz R.**, Behr Joshua. Inter- and Intra-regional Evacuation Behavior during Hurricane Irene: Results from a Large-Scale Phone Survey. *Journal of Travel Behaviour and Society* (2016) Vol., 3 21-28. Impact Factor: 4.983

21. Behr Joshua, **Diaz R.**, Muge Akpinar-Elci Health Service Utilization and Poor Health Reporting in Asthma Patients. *International Journal of Environmental Research and Public Health.* (2016) Vol. 13.7, 645. Impact Factor: 3.39

22. Liu Hua, Behr Joshua, **Diaz R.** Population vulnerability to storm surge flooding in coastal Virginia, U.S.A. *Integrated Environmental Assessment and Management* (2016). Vol. 12, Issue 3, 500–509. Impact Factor: 3.44

23. Behr Joshua, **Diaz R.,** Mitchell Molly. Household Adaptation Perceptions, Behaviors, and Capacity: Informing the Comprehensive Planning Process & Building Resiliency in Response to Sea Level Rise and Recurrent Flooding. *The Virginia Newsletter*. (2016) Vol. 92.1, 1-6

24. Behr G., **Diaz R.** Emergency Department Frequent Utilization for Non-emergent Presentments: Results from a Regional Urban Trauma Center Study. *PloS one* (2016) Vol. 11.1: e0147116. Impact Factor: 3.24

25. Ng, ManWo, **Diaz R.**, and Joshua Behr. "Departure time choice behavior for hurricane evacuation planning: The case of the understudied medically fragile population." *Transportation Research Part E: Logistics and Transportation Review* Vol. (2015) Vol. 77 215-226. Impact Factor: 6.875

26. **Diaz R.**, Behr Joshua, Britton B. Modeling Chronic Disease Patient Flows Diverted from Emergency Departments to Patient-Centered Medical Homes. *IIE Transactions – Healthcare Systems Engineering.* (2015): Vol. 5.4 268-285. Impact Factor: 1.2

27. **Diaz R.,** Behr Joshua, Britton B. Estimating cost adjustments required to accomplish target savings in chronic disease management interventions: a simulation study. *Simulation* (2015): Vol. 91 (7), 599-614. Impact Factor: 1.377

28. **Diaz R.,** Sameer Kumar, Behr Joshua. Housing Recovery in the Aftermath of a Catastrophe: Material Resources Perspective. *Computers & Industrial Engineering Journal* (2015). Vol. 81: 130-139. Impact Factor: 5.974

29. Behr J. G., **Diaz R.,** Knapp Barry, Kratzke Cynthia. Framework for classifying compliance and medical immediacy among low-acuity presentations at an urban trauma center. *International Journal of Emergency Medicine* (2015) Vol. 8.1: 1-9. Impact Factor: 1.79

30. Kumar Sameer, **Diaz R.,** Behr Joshua. Modeling the effects of labor on housing reconstruction: A system perspective (2015). *International Journal of Disaster Risk Reduction (IJDRR)* - Vol. 12 (2015): 154-162. Impact Factor: 4.32

31. Akpinar-Elci Muge, Martin Francis, Behr Joshua, **Diaz R.,** Saharan Dust, climate variability, and Asthma. *International Journal of Biometeorology.* (2015), February. Impact Factor: 3.787

32. **Diaz R.,** Szklo-Coxe, Mariana, Behr Joshua. Modeling the Transition from Adverse to Healthy Sleep Behaviors among School-Age Children. *International Journal of Information Systems and Social Change* (2015). Vol. 6 No. 2. *1-15.* Impact Factor: 0.56

33. **Diaz R.,** Behr Joshua, Longo Francesco, Landaeta Rafael, Nicoletti Letizia. Modeling Energy Portfolio Scoring: A Simulation Framework. *International Journal of Business Analytics* (2015). Vol. 2(4). Impact Factor: 0.513

34. **Diaz R.,** Behr Joshua. Analyzing the effects of serially–correlated demands on costs and service levels: a lost–sale case inventory system. *International Journal of Applied Management Science* (2014) - Vol. 6, No. 4 . Impact Factor: 0.462

35. Ng ManWo, Behr Joshua, **Diaz R.** Unraveling the evacuation behavior of the medically fragile population: Findings from Hurricane Irene. *Transportation Research Part A: Policy and Practice* (2014). Vol. 64: 122-134. Impact Factor: 5.594

36. Behr J., **Diaz R.** Modeling and simulation standards development, adoption and conformity in the attainment of system values: A framework for the tension between two process ideals. *Simulation* (2014). Vol. 90.5: 591-605. Impact Factor: 1.377

37. Nicoletti Letizia, Chiurco Alessandro, Arango Carlos, **Diaz R.** Hybrid approach for container terminals performances evaluation and analysis. *International Journal of Simulation and Process Modelling* (2014). Vol. 9.1: 104-112. Impact Factor: 1.26

38. **Diaz R.,** Behr J. A Simulation Framework for Evaluating the Effectiveness of Chronic Disease Management Interventions. *International Journal of Information Systems in the Service Sector* (2014). Vol. 6 No. 4. Impact Factor: 0.82

39. Behr J. and **Diaz R.** Hurricane Preparedness: Community Vulnerability and Medically Fragile Populations. *The Virginia Newsletter*. (2014) Vol 90 (2): 1-10

40. **Diaz R.,** Behr J, Anna Jeng, Manwo Ng. The Effects of Transit Corridor Developments on the Healthcare Access of Medically Fragile Vulnerable Populations. *International Journal of Privacy and Health Information Management* (2013). Vol. 1.2: 57-75.

41. Longo, Francesco, and **Diaz R**. "Special Issue on Modeling, Simulation, and Computational Methods for Privacy and Healthcare Information." *International Journal of Privacy and Health Information Management* (2013). 1(2), Vol. iv-vii, July-December 2013

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42. **Diaz, R.,** and Andreas Tolk. "M&S optimization applications in industry and engineering, part 2." *Simulation* 89.9 (2013): 1039-1040.

43. **Diaz, R.,** and Andreas Tolk."M&S optimization applications in industry and engineering." *Simulation* 89.3 (2013): 251-253.

44. **Diaz R.,** Behr J., Liu Hua, Longo, Francesco. A Systems Framework for Modeling Health Disparities in the Prevalence in Chronic Conditions following a Natural Disaster Event. *International Journal of Privacy and Health Information Management* (2013) Vol. 1.1 12-28.

45. Behr J. and **Diaz R.** Disparate health implications stemming from the propensity of elderly and medically fragile populations to shelter in place during severe storm events (2013). *Journal of Public Health Management and Practice (JPHMP).* (2013) Vol. 19: S55-S62. Impact Factor: 1.791

46. Ardalan, A. and **Diaz R.** An Evaluation of the NERJIT Priority Rule in a Kanban-Controlled Flowshop. *Production and Operations Management (POMS).* (2012). Vol. 21.5: 923-938. Impact Factor: 4.965

47. **Diaz R.,** and Ezell Barry C. Using Analytical Network Process Decision Methodology to Analyze and Allocate Resources in the Army Training Support System. *International Journal of Operations Research.* (2012). Vol. 3. No. 3: 53-73. Impact Factor: 0.525

48. Ardalan A., and **Diaz R.** NERJIT: Using Net Requirement Data in Kanban-Controlled Jumbled-Flow Shops. *Production and Operations Management (POMS)* (2012). Vol. 21: 606–618. Impact Factor: 4.965

49. **Diaz R.,** Behr J. & Tulpule M. A System Dynamics Model for Simulating Ambulatory Health Care Demands (2012). *Simulation in Healthcare.* Vol. 7. No. 4: 243-250. Impact Factor: 1.929

50. James Blando, Leonard Bielory, Viann Nguyen, **Diaz R.,** Hueiwang Anna Jeng (2012). Anthropogenic Climate Change and Allergic Diseases. *Atmosphere*, Vol. 3: 200-212. Impact Factor: 2.686

51. **Diaz R.,** and Ezell Barry C. Simulation-based Optimization Approach to a Lost Sale Stochastic Model. *International Journal of Operations Research* (2012). Vol. 3. No. 2. Pages 46-63. Impact Factor: 0.525

52. **Diaz R.,** and Bailey M. Building knowledge to improve enterprise performance from inventory simulation models. *International Journal of Production Economics (IJPE).* (2011). Volume 134, Issue 1, Pages 108-113. Impact Factor: 7.885

53. **Diaz R.,** Talley W., & Tulpule M. Forecasting Empty Container Volumes. *Special Issue of the Asian Journal of Shipping and Logistics.* (2011). Vol. 27 No. 2: 217-236. Impact Factor: 2.49

54. **Diaz R.,** and Ardalan A. An Analysis of Dual-Kanban Just-In-Time Systems in a Non-repetitive Environment. *Production and Operations Management (POMS).* (2010). Vol. 19, No. 2. Impact Factor: 4.965

B. JOURNAL ARTICLES ACCEPTED - PENDING REVISIONS

55. **Diaz R.** and Ardalan A. Simulation Analysis of Net-CONWIP Priority Rule in Constant Work-In-Process Systems. *Operations Management Research (OMR).* Impact Factor: 2.706. *Accepted with revisions.*

56. **Diaz R.,** Acero Beatriz, Behr Joshua. Evacuating and Sheltering Medically Fragile Populations: Examining the Effects of Health Awareness Under the COVID-19 Pandemic. *Transportation Research Part E: Logistics and Transportation Review (TRE).* Impact Factor: 6.875. *Accepted with revisions.*

57. Laranjeira L., Knoppen D., **Diaz R.** An Operations Management Perspective to Exploration & Exploitation. *Production and Operations Management (POMS).* Impact Factor: 4.965. *Accepted with revisions.*

58. **Diaz R.,** Behr J., Acero Beatriz, Giles Bridget, Yusuf, Juita-Elena. A Simulation-based Disaster Management Framework to Analyze Housing Recovery: The Case of Hampton Roads, U.S. *IEEE Transaction on Engineering Management.* Impact Factor: 6.146

C. JOURNAL ARTICLES UNDER REVIEW

59. **Diaz R.,** Acero B., Behr J., Hutton N. Impacts of Household Vulnerability on Hurricane Evacuation under COVID-19: the Case of U.S. Hampton Roads. *Transportation.* Impact Factor: 5.192

60. Acero B., **Diaz R.,** Behr J. Flooding Perceptions and its impact to evacuate. *Transportation Research Part D.* Impact Factor: 5.495

61. Smith, K., **Diaz, R.,** Shen. Multi-layer Network Dependency Analysis enabled by Recurrent Neural Networks. *Sustainable Futures. Special Issue: Toward logistics 4.0: a sustainable and resilient supply chain.* Impact Factor: N/A.

D. JOURNAL ARTICLES IN PROGRESS

1. **Diaz R.,** Behr J. Asthma and Heavily Trafficked Roads in Maritime Port Communities: Assessing the Public Health Risks. *Travel Behaviour and Society (TBS).* Impact Factor: 4.983

2. Kang, Liuwang, **Diaz R.,** Smith Katie. A Data-Driven Cyber-Physical Security Vulnerability Assessment System for Autonomous Driving in Port Networks. *IEEE Transactions on Intelligent Transportation Systems.* Impact Factor of 6.319

3. **Diaz R.,** Cook David, Romero Lina, Bernard Ludovico. Analyzing Sourcing Networks for a Coffee Retailer. *Journal of Operations Management (JOM).* Impact Factor: 6.36

4. **Diaz R.,** Spiros Lekkakos, Basile Bruna, Caropresso Fernanda, Bello Pilar. Capacity Planning Optimization for a pharmaceutical company. *European Journal of Operational Research (EJOR).* Impact Factor: 5.334

5. Laranjeira L., **Diaz, R.,** Knoppen D. The impact of new product introductions on consumer packaged goods manufacturing operations. *Journal of Operations Management (JOM).* Impact Factor: 6.36

6. Laranjeira L., **Diaz, R.,** Knoppen D. The impact of new product introductions on consumer-packaged goods manufacturing operations. *Journal of Operations Management (JOM).* Impact Factor: 6.36

7. **Diaz, R.,** Smith Katherine, Shivani B. A Genetic-based Algorithm to Guide Housing Recovery Supply Chain Labor Assignments after a Catastrophic Event. *European Journal of Operational Research (EJOR)*: Impact Factor: 5.334

8. **Diaz, R.,** Joshua G. Behr, Acero Beatriz. Examining the Effects of Enabling Mechanisms that Accelerate Housing During Post-Disaster Recovery. *IEEE Transaction on Engineering Management.* Impact Factor: 6.146

E. BOOK CHAPTERS

1. **Diaz, R.,** and Joshua G. Behr. *A simulation framework for evaluating the effectiveness of chronic disease management interventions.* Health Economics and Healthcare Reform: Breakthroughs in Research and Practice (2018). 455-474.

2. **Diaz, R.,** et al. *Modeling Energy Portfolio Scoring: A Simulation Framework* in Public Health and Welfare: Concepts, Methodologies, Tools, and Applications: Concepts, Methodologies, Tools, and Applications (2017): 203-226

3. **Diaz, R.,** Behr, J. G., Longo, F., & Liu, H. *A systems framework for modeling health disparities in the prevalence of chronic conditions following a natural disaster event*. In Crisis Management: Concepts, Methodologies, Tools, and Applications. (2014) (pp. 497-513). IGI. Global.

4. **Diaz R.** and Behr Joshua G. *Business M&S* in *Handbook of Real-world Applications* in Modeling and Simulation (2012). Wiley, Edited by John A. Sokolowski, Catherine M. Banks.

5. **Diaz R.** and Behr Joshua G. *Discrete-event Simulation* in *Modeling and Simulation Fundamentals: Theoretical Underpinnings and Practical Domains* (2010). Wiley, Edited by John A. Sokolowski, Catherine M. Banks.

F. BOOK SERIES

1. **Diaz R.** *Introduction to Homeland Security Supply Chains – A Maritime and Cybersecurity Perspective –Wiley (Expected 2024)*

2. Behr J. **Diaz R.** (2015) *Wiley Series in Modeling and Simulation –* Founder Editors. *Wiley.*

G. NEWSLETTER ARTICLES

1. **Diaz R.** Examining shipbuilding supply chain risks and using AI to determine Ripple Effects. Digital Shipbuilding Newsletter. Issue 2 (2022) [DS Winter Newsletter (1).pdf(Review)- Adobe cloud storage](#)

2. **Diaz R.** Maritime Industry 4.0. Digital Shipbuilding Newsletter. Issue 1 (2021) [VDSP Summer 2021 Newsletter.pdf(Review)- Adobe cloud storage](#)

3. Behr, Joshua, and **Diaz, R.** ODU. Researchers Help Prepare for a World with Simultaneous. May 14, 2020 Pandemic and Hurricanes. (2020) Available Online: [ODU. Researchers Help Prepare for a World with Simultaneous Pandemic and Hurricanes](#)

4. **Diaz, R.** Adapting Manufacturing Logistics to the Digital Era. *Mundo Empresarial*. September 1, 2017. Available Online: [100_Decalogo_expertos_ZLC_Diaz.pdf](#). and [https://www.zlc.edu.es/news/adaptacion-de-la-logistica-de-fabricacion-a-la-era-digital/](#) Visited: 12/1/2019

5. **Diaz, R.** Can Companies Be Both Innovative and Efficient? MIT-ZLC Newsletter. Available Online: [https://www.zlc.edu.es/news/can-companies-be-both-innovative-and-efficient/](#) Visited: 12/1/2019

6. **Diaz, R.** Reshaping Manufacturing Logistics for the Digital Age. MIT-ZLC Newsletter. Available Online: [https://www.zlc.edu.es/news/reshaping-manufacturing-logistics-for-the-digital-age/](#) Visited: 12/1/2019

7. **Diaz, R.** Building a Better Approach to Disaster Recovery. April 7, 2016. Available Online: MIT-ZLC Newsletter. [https://www.zlc.edu.es/news/building-a-better-approach-to-disaster-recovery/](#) Visited: 12/1/2019

8. **Diaz, R.** and Lekkakos Spyridon. New approach to capacity planning cuts drug company capital requirements. Available Online: MIT-ZLC Newsletter. [https://www.zlc.edu.es/news/new-approach-to-capacity-planning-cuts-drug-company-capital-requirements/](#) Visited: 12/1/2019

9. **Diaz, R.** and De la Cruz Teresa. Logistics Education a Remedy for Improving Healthcare. Available Online: MIT-ZLC Newsletter. [https://www.zlc.edu.es/news/espanol-logistics-education-a-remedy-for-improving-healthcare/](#) Visited: 12/1/2019

10. **Diaz, R**. and Gomes Leonardo. Building an ambidextrous supply chain & operations strategy. Available Online: MIT-ZLC Newsletter. [https://www.zlc.edu.es/news/can-companies-be-both-innovative-and-efficient/](#) Visited: 12/1/2019

NEWS AND PODCAST

1. VMASC Awarded $1.15 Million from US Department of Education for Graduate Research. News @ O.D.U., January 27, 2022
   - [VMASC Awarded $1.15 Million from US Department of Education for Graduate Research](#)

2. VMASC Researchers Awarded $1M from NSF to Help Tackle Vulnerable Populations' Post-Storm Displacement from Homes. News @ ODU, September 24, 2021
   - [Researchers at ODU awarded grant for development of platform to aid in storm recovery | 13newsnow.com](#)

3. ODU. Researchers Offer Strategies to Address Pandemic-Related Hesitancy to Evacuate or Seek Shelter During Storms. September 10, 2021

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4. ODU-led Cybersecurity Projects Granted Funding (Shipbuilding and repair). News @ ODU, and [ODU-led Cybersecurity Projects Granted Funding - News Break](#), July 19, 2021

5. There's a link between pediatric asthma and neighborhoods that flood — especially low-income ones, ODU. researchers say - The Virginian-Pilot (pilotonline.com). July 6, 2021

6. Pediatric Asthma – Another Negative Outcome of Recurrent Flooding, ODU. Researchers Find. News @ O.D.U., June 11, 2021

7. A rising tide – ODU. aims to lift all boats in global maritime industry. https://www.virginiabusiness.com/article/a-rising-tide-2/ . Virginia Business. April 29, 2021

8. ODU. Researchers Lead Local Resilience Partnership Aimed at Helping Displaced Vulnerable Populations During Disaster Events. News @ ODU, March 05, 2021

9. Old Dominion University Professors Awarded Nearly $1 Million in Cybersecurity-Related Grant Funding Through Coastal Virginia Center for Cyber Innovation. News @ ODU. February 08, 2021

10. First Science Pub Focuses on Hurricane Sheltering and Evacuating During the Pandemic « News @ ODU, September 25, 2020

11. Old Dominion University Partners With Hampton Roads Community Foundation to Speed Severe Weather Recovery. News @ ODU, February 28, 2020 [Ohttps://www.odu.edu/news/2020/2/odu_hrcf_collaborati#.YolZj-7MI2w](https://www.odu.edu/news/2020/2/odu_hrcf_collaborati#.YolZj-7MI2w)

12. ODU. Researchers Help Prepare for a World with Simultaneous Pandemic and Hurricanes. News @ O.D.U., May 14, 2020

13. ODU. Hosts Presentation for Top FEMA Officials. News @ ODU. August 14, 2020

14. Growing storm threat requires year-round readiness – The Virginian-Pilot (pilotonline.com) https://www.pilotonline.com/opinion/vp-ed-column-behr-steinhilber-1020-20191020-2rrpcrtb2zbxfbjtfo6ppgmd7e-story.html

15. The Logistics team of the Airbus delegation in Getafe visits Zaragoza Logistics Center and ITAINNOVA (europapress.es). February 27. 2019

16. Supply Chian Innovation - Rafael Diaz profesor del MIT Zaragoza - ZLC. Pre PILOT 2018 - YouTube. May 24, 2018

17. IBERCAJA collaborates with ZLC in the celebration of the debate forum on Log - Corporate Website | Ibercaja Bank. (09-05-2018)

18. Industry 4.0 and hyperconnectivity, future of the supply chain | Nexotrans. May 31, 2018

    [Industry 4.0 and hyperconnectivity, future of the supply chain | Nexotrans](#)

19. Adaptation of manufacturing logistics to the digital age - Rafael Díaz, the digital economic by industrialization, innovation, business internationalization of Aragon and Spain in Spanish (opennemas.com). 04 July 2017

20. HUD. Officials Huddle with VMASC Researchers on Vulnerability Project. News @ ODU. August 27, 2015

21. ODU. Researchers' Vulnerability Studies Attract Federal HUD. Grant. News @ ODU. May 21, 2015

22. ODU. Hosts White House-Sponsored Event on Sea Level Rise Preparedness, Mitigation. News @ ODU. December 02, 2014

23. New Tool Developed By ODU. Researchers Aimed at Encouraging Residents to Evacuate Before Big Storms. News @ ODU. July 02, 2014

24. Behr, Joshua and Diaz, Rafael, "Researching Storms to Prepare for the Next One" (2013). News Items. 22. https://digitalcommons.odu.edu/odurc_news/22

25. ODU. Profs to Talk About Perceptions, Behavior of Local Residents in Response to Hurricane Threat. News @ ODU. January 28, 2013

26. VMASC Researchers' Study Looks at Region's Vulnerabilities Following a Major Storm. News @ ODU. May 30, 2013

27. VMASC profs to talk about perceptions behavior of local residents in response to hurricane threat. News @ ODU. March 2013

28. NIH Funds Study of Regional Health Care Systems by ODU. Researchers. News @ ODU. November 26, 2012

29. NIH funds VMASC study of Regional Health care systems. News @ ODU.

PEER-REVIEWED CONFERENCE PROCEEDINGS

1. **Diaz, R.,** Smith, K., Shen Yuzhong. Digital Transformation, Applications, and Vulnerabilities in Maritime and Shipbuilding Ecosystems. ISM 2022. Submitted.

2. Johnson Jessica, Smith K., **Diaz R.** Adaptive Assessment Feedback in Competency-Based Learning Ecosystems. Proceedings and presentation at this year's Interservice/Industry Training, Simulation and Education Conference, November 29 - December 3, 2021

3. Longo F., Padovano A., Solina V., Venzl S., **Diaz R.** Human Ergonomic Simulation to Support the Design of an Exoskeleton for Lashing/De-lashing operations of Containers Cargo. ISM 2021

4. Smith, K., **Diaz, R.,** Shen Yuzhong. Development of a framework to support informed shipbuilding based on supply chain disruptions. ISM 2021.

5. Smith, K., **Diaz, R.,** Shen Yuzhong, Longo Francesco. Conceptual Development of a Probabilistic Graphical Framework for Assessing Port Resilience. 23rd International Conference on Harbor, Maritime and Multimodal Logistic Modeling & Simulation. 14-16 September 2021. Online.

6. Longo F., Padovano A., Nicoletti L., Elbasheer M., **Diaz R.** Digital twins for manufacturing and logistics systems: is simulation practice ready? 3rd European Modeling & Simulation Symposium. Online 14-16 September 2021. Online.

7. **Diaz R.,** Smith Katherine, Landaeta Rafael, Padovano Antonio. Shipbuilding Supply Chain Framework and Digital Transformation: A Project Portfolios Risk Evaluation. International Conference on Industry 4.0 and Smart Manufacturing. 23-25 November 2020, Online.

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8. Longo, F., Padovano, A., Gazzaneo, L., Frangella, J. and **Diaz, R.** "Human factors, ergonomics and Industry 4.0 in the Oil&Gas industry: a bibliometric analysis." International Conference on Industry 4.0 and Smart Manufacturing. 23-25 November 2020, Online.

9. Longo, F., Padovano, A., Nicoletti, L., Fusto, C., Elbasheer, M. and **Diaz, R.** "Fuzzy Cognitive Map-Based Knowledge Representation of Hazardous Industrial Operations. International Conference on Industry 4.0 and Smart Manufacturing." 23-25 November 2020.

10. Kosteczko, J. P., & Smith, K., & Johnson, J., & **Diaz, R.** (2020, June), *Virginia Digital Shipbuilding Program (VDSP): Building an Agile Modern Workforce to Improve Performance in the Shipbuilding and Ship Repair Industry* Paper presented at 2020 ASEE Virtual Annual Conference Content Access, Virtual Online. 10.18260/1-2—35487

11. **Diaz, R**., Garcia, Hector. "A Real-Time Data-driven Lean Management Approach to Facility and Equipment Management" Proceedings of the ShipTech 2020 - Charleston, South Carolina, 26-27 March 2020.

12. Kosteczko, J., Smith, K., Johnson, J., **Diaz, R.** "Virginia Digital Shipbuilding Program (VDSP) – Building an agile, modern workforce to improve performance in the shipbuilding and ship repair industry." Proceedings of the 2020 ASEE Annual Conference & Exposition. Montréal, Quebec, Canada, June 21-24, 2020.

13. **Diaz, R.,** Smith, K., Landaeta, R., Padovano, A. "Shipbuilding Supply Chain Framework and Digital Transformation: A Project Portfolios Risk Evaluation." Proceedings of the International Conference on Industry 4.0 and Smart Manufacturing. Rende, Cosenza, Italy, November 20-22, 2019.

14. Joe, M., Smith, K., **Diaz, R.** "Employing H2 and AR Immersive Environments with Real-Time Feedback to Enhance Digital Engineering Workforce Development." Proceedings of the American Society of Naval Engineers Design Sciences Series: Digital Engineering: Digital Twin. Washington, DC, November 6-7, 2019.

15. Padovano Antonio, **Diaz R.**, Longo Francesco, Behr Joshua. A methodological framework to implement lean in dynamic and complex socio-technical systems. The International Conference on Modeling & Applied Simulation. Budapest, Hungary. September 2018.

16. Behr Joshua, **Diaz R.,** Giles Bridget, McLeod George. Policy implications and measurements of variation in recovery times across population groups. Social Coast Forum 2018

17. Earnest David C., Behr Joshua G., and **Diaz R.** Social Capital or Social Vulnerability? Assessing Competing Determinants of Community Resilience and Recovery from Natural Disasters. Annual Convention of the Midwest Political Science Association. Chicago, IL: April 17, 2015.

18. McLeod George, Behr Joshua, **Diaz R.** GIS for Storm Flood Population Vulnerability Analysis. CoastGIS Conference 2015.

19. Behr Joshua, **Diaz R.,** Earnest David C., and Hans-Peter Plag. Social and Community Indicators of Storm-related Population Vulnerability. Social Coast Forum 2014. Charleston, SC: February 18-20, 2014

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20. **Diaz R.,** Behr Joshua, Sameer Kumar, Toba Ange-Lionel, Longo Francesco, Nicoletti Letizia. Modeling the Recovering Housing Stock after the Occurrence of Catastrophic Event: A Supply Chain view. MAS 2013. September 28-30, 2013. Athens, Greece.

21. **Diaz R.,** Behr Joshua, Sameer Kumar, Toba Ange-Lionel, Longo Francesco Analyzing the Impact of Public Health Interventions on Ambulatory Healthcare Capacities. IWISH 2013. September 28-30, 2013. Athens, Greece.

22. Longo Francesco, Nicoletti Letizia, **Diaz R.,** Behr Joshua. Health Care Facility Improvement through Simulation. IWISH 2013. Athens, Greece.

23. **Diaz R.,** Marsillac Erika. A Newsvendor Perspective of Remanufacturing Using Monte Carlo Simulation. Global Supply Chain Management Conference 2013. September 26-28, 2013 in Detroit. MI.

24. Bruzzone Agostino, Longo Francesco, Nicoletti Letizia, Chiurco Alessandro, **Diaz R.** Advanced Modeling & Simulation Based Tools for Supporting The Design and Management of A Job Order Manufacturing System. April 7-10, 2013. San Diego, CA.

25. **Diaz R.,** Szklo-Coxe, Mariana, Behr Joshua, Toba Lionel. Modeling Sleeping behavior -source of chronic diseases and risky behavior: A preliminary compartmentalized simulation model. 2012 International Annual Conference American Society of Engineering Management. October 17-20, 2012. VA Beach.

26. **Diaz R**., Khattak Asad, Behr Joshua, Jeng Anna, Longo Francesco, Duanmun Jun. The Effects of Transit Corridor Developments on the Healthcare Access of Medically Fragile Vulnerable Populations. European Modeling and Simulation Symposium 2012 (EMMS and IWISH). Sep 17- 20. Vienna, Austria.

27. Bruzzone Agostino, Nicoletti Letizia, Chiurco Alessandro, **Diaz R.,** Palaia Emanuela Marine Ports Environmental sustainability: a state of the art overview. Conference on Harbor, Maritime & Multimodal Logistics Modelling and Simulation. Sep 17- 20. 2012. Vienna, Austria.

28. **Diaz R.,** Szklo-Coxe Mariana, Behr Joshua. Using modeling and simulation in analyzing Sleep Behavior Issues: A state of the art overview. Spring Simulation Conference, 2012. March 26-29, 2012. Orlando, Florida.

29. **Diaz R.,** Behr Joshua, Jeng Anna, Liu Hua, Longo Francesco. Analyzing the Effects of Policy Options to Mitigate the Effect of Sea Level Rise on the Public Health and Medically Fragile Population: A System Dynamics Approach. Spring Simulation Conference, 2012. March 26-29, 2012. Orlando, Florida.

30. Agostino Bruzzone, Francesco Longo, Letizia Nicoletti and **Diaz R.** Traffic Controllers and Pilots Training in Marine Ports Environments by Using Simulation. Spring Simulation Conference, 2012. March 26-29, 2012. Orlando, Florida.

31. Tulpule Mandar, **Diaz R.,** Behr Joshua, Tulpule Mandar. Towards Modeling the Population Dynamics in the United States. MODSIM World 2011. October 11-14, 2011. Virginia Beach, Virginia.

32. **Diaz R.,** Behr Joshua, Tulpule Mandar. Simulation-based Optimization for Improving Chronic Healthcare Management Interventions. The 23rd European Modeling & Simulation Symposium. September 12-14, 2011. Rome, Italy.

33. **Diaz R.,** Tulpule Mandar, Behr Joshua. Modeling the Empty Container Flow: Identifying Primary Influencing Factors through Scenario Analysis. The International Conference on Harbor, Maritime & Multimodal Logistics Modelling and Simulation. September 12-14, 2011. Rome, Italy.

34. Bruzzone, Agostino, Longo Francesco, Nicoletti, Letizia, **Diaz R.** Virtual Simulation for training in ports environments. Summer Computer Simulation Conference. 27-30 June 2011, World Forum, The Hague, Netherlands.

35. **Diaz R.,** Tulpule Mandar, Behr Joshua, Longo Francesco, Cimino Antonio. Energy Portfolio Simulation Considering Environmental and Public Health Impacts. April 6-9, 2011. Spring Simulation Conference Boston, MA.

36. Behr Joshua, **Diaz R.**, Tulpule Mandar, Longo Francesco, Cimino Antonio. Modeling and Simulating the Economic and Demographic Impact of Transport Infrastructure Investment. Spring Simulation Conference. April 6-9, 2011. Boston, MA.

37. **Diaz R.,** Tulpule M., Longo Francesco, Cimino Antonio. Monte Carlo Applications in One-time Decisions Projects. The International Conference on Harbor, Maritime & Multimodal Logistics Modelling and Simulation. October 13 – 15, 2010. Fes – Morocco.

38. Tulpule M., **Diaz R.,** Longo Francesco, Cimino Antonio. Analyzing the Economic and Operational Impact of Empty Containers on Ports and Terminals. The International Conference on Harbor, Maritime & Multimodal Logistics Modelling and Simulation. October 13 – 15, 2010. Fes – Morocco.

39. Cimino Antonio, Longo Francesco, Miraballi G., **Diaz R.** A computerized methodology and Advanced Approach for the Effective Design and Productivity Enhancement of an Industrial Workstation. The International Conference on Harbor, Maritime & Multimodal Logistics Modelling and Simulation. October 13 – 15, 2010. Fes – Morocco.

40. Behr Joshua, **Diaz R.** Modelling and Simulating Public Health Stemming from the Evolution in the Electric Energy Portfolio of South-eastern Virginia. International Multi-Conference on Technological Innovation. Orlando, FL, June 29 - July 2, 2010.

41. Behr Joshua, **Diaz R.** A System Dynamics Approach to Modeling the Sensitivity of Inappropriate Emergency Department Utilization. 2010 International Conference on Social Computing, Behavioral Modeling, & Prediction (SBP10). March 29, 2010. National Institutes of Health. Washington DC.

42. **Diaz R.** Using Optimization Coupled with Simulation to Construct Layout Solutions. Spring Simulation Conference, 2010. April 11-15, 2010. Orlando, Florida.

43. Bruzzone Agostino, Cimino Antonio, **Diaz R.,** Longo Francesco. Inventory Control with Products Returns: A state of the Art Overview. Spring Simulation Conference, 2010. April 11-15, 2010. Orlando, Florida.

44. Cimino Antonio, **Diaz R.,** Longo Francesco, Mirabelli Giovanni. Empty Containers Repositioning: a State of the Art Overview. Spring Simulation Conference, 2012. April 11-15, 2010. Orlando, Florida.

45. Ardalan A., **Diaz R.** Analysis of global and local decision rules in a dual-kanban job shop. Proceedings of the 26th National Conference of the American Society of Engineering Management. October 2005. VA Beach, Virginia.

CONFERENCE PRESENTATIONS

1. **Diaz R.,** Kang L. " A Data-Driven Cyber-Physical Security Vulnerability Assessment System for Autonomous Driving in Port Network" Department of the Navy (DON)) IT Conference 2022. May 23-26, 2022.

2. **Diaz R.,** Smith, K., "Digital Port Supply Chains: A Sustainable and Resilient Perspective" has been accepted for presentation at the 2022 Online POMS Annual Conference. April 21 - 25, 2022.

3. **Diaz R.,** Smith, K., "Developing an Artificial Intelligence Approach to Assess Supply Chain Disruptions" 2022 Online POMS Annual Conference. April 21 -25, 2022.

4. Behr J., **Diaz R.** Recover Hampton Roads. Texas A&M's Preparedness, Response, Innovation, Mitigation, and Recovery (PRIMR), 2021

5. Behr Joshua, **Diaz R.** Recover Hampton Roads: A University-Foundation Partnership with Norfolk and Portsmouth. Society for Applied Anthropology (SfAA), 2021

6. Behr Joshua, **Diaz R.** CIMA Management Platform. Virginia State Voluntary Organizations Active in Disasters (VOAD), 2021

7. **Diaz R.,** Smith, K.. An Artificial Intelligence Framework to Evaluate the effects of cyberattacks on Maritime and Shipbuilding Supply Chains. 2021 NATO - CA2X2 FORUM. Sept 14, 2021

8. Behr J., **Diaz R.,** Giles B. "A University-Community Foundation Partnership to Shorten Displacement Times of Vulnerable Households." Natural Hazards Center. Online. July 15, 2021.

9. **Diaz, R**., Smith, K., Acero B. Urcioli L. "Digitalization of Maritime and Port Operations: A Sustainable and Resilient Perspective." Production and Operation Management Society (POMS) Conference 2021. Online. April 30 to May 5, 2021.

10. **Diaz R.,** Behr J., Acero B. "Coastal Housing Recovery for Vulnerable Populations in a Post-Disaster Environment: Supply Chain Analytics Perspective." Production and Operation Management Society (POMS) Conference 2021. Online. April 30 to May 5, 2021.

11. **Diaz, R.,** Smith, K. "An Artificial Intelligence Approach to Assess Shipbuilding and Repair Supply Networks ." Production and Operation Management Society (POMS) Conference 2021. Online. April 30 to May 5, 2021.

12. Urcioli L., **Diaz, R.,** "A model to evaluate cybersecurity in seaport terminals." Production and Operation Management Society (POMS) Conference 2021. Online. April 30 to May 5, 2021.

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13. **Diaz, R.,** Smith, K., "Assessing Risk of Shipbuilding and Repair Sub-Tier Suppliers." Decision Science Conference (DSI) Conference 2020. Online

14. Behr J., **Diaz R.,** Giles Bridget, and McLeod Georg. Policy Implications and Measurement of Variation in Repair/Rebuild Recovery Times across Population Groups. Social Coast Forum, Charleston, NC 2018.

15. **Diaz R.,** Ardalan. Net-CONWIP: Improving pull-based control systems. Decision Science Conference (DSI), 2017. November 22-26, 2017.

16. Gomes Leonardo, **Diaz R.** The Operational Implications of Introducing New Products into Consumer Packaged Goods Supply Chains: The Case of a Spanish Consumer Packaged Goods Manufacturer. INFORMS Annual Meeting 2017.

17. **Diaz R.,** Behr Joshua, David Ernest. Modeling Temporary, Interim, and Permanent Housing Recovery. Housing Stock Recovery Following a Catastrophic Storm (6/5/2016). POMS conference presentation – Orlando, FL.

18. Behr Joshua, **Diaz R.** Sheltering and Facilitating Housing Stock Recovery Following a Catastrophic Storm" presented on Thursday, March 31th. The annual Virginia Emergency Management Symposium is March 30- April 1, 2016. Virginia Department of Emergency Management and the Virginia Emergency Management Association. Newport News, VA.

19. **Diaz R.** and Behr Joshua. Evacuation rational of vulnerable populations: Moderators and Mediators. Healthcare Organizations Emergency Preparedness Seminars (HOEPS). April 2015. VA.

20. Behr Joshua and **Diaz R.** Medically Fragile Populations and the Severe Storm Vulnerabilities in Southeastern VA: Hurricane Irene, Virginia Emergency Management Symposium. March 18, 2015. VA.

21. **Diaz R.,** Ardalan Ali. Net-CONWIP: A Production Method that Uses Demand and Supply Information to Prioritize Sequencing. Decision Science Conference (DSI) Conference, 2014. November 22-26, 2014. Tampa, FL.

22. **Diaz R.,** Behr Joshua. Modeling Chronic Disease Patient Flows within a Medical Group. Decision Science Conference (DSI) Conference, 2014. November 22-26, 2014. Tampa, FL.

23. Ardalan Ali, **Diaz R.** Comparison of Two Priority Rules in Kanban-Controlled Job Shop. International Federation of Operational Research Societies (IFORS) Conference, 2014. July 13-18, 2014. Barcelona, Spain.

24. **Diaz R**. Exploring the Effects of Serially-Correlated Demand Acting over a Stochastic Inventory System. Production and Operation Management Society (POMS) Conference, 2014. May 9-11, 2014. Atlanta, Georgia.

25. **Diaz R.,** Behr Joshua, Britton Bruce. Modeling the impact of catastrophic events on regional ambulatory operations. Production and Operation Management Society (POMS) Conference, 2013. May 3-11, 2013. Denver, Colorado.

26. **Diaz R.,** Behr Joshua. A supply chain perspective in rebuilding housing stocks after natural disasters. Production and Operation Management Society (POMS) Conference, 2013. May 3-11, 2013. Denver, Colorado.

27. Behr Joshua, **Diaz R.** Severe Storm Event Mitigation and Recovery Forecasting Tool. Dynamics of Preparedness. University of Pittsburgh, MIDAS Center of Excellence. October 22-24, 2012. Pittsburg, PA.

28. **Diaz R.,** Behr Joshua, Jeng Anna, Tulpule Mandar. Quantifying the Effects of Remediation Policy Options to Address Impacts of Sea Level Rise on the Public Health of Vulnerable Populations: A System Dynamics Approach. October 11-14, 2011. MODSIM World 2011. Virginia Beach, VA.

29. Behr Joshua, **Diaz R.,** Tulpule Mandar, Ezell Barry. Neighborhood Community Vulnerability and Medically Fragile Populations: Assisting Localities to Plan for and Protect Citizens in the Event of Natural Disasters. Applications of M&S in Healthcare Management. INFORMS Annual Meeting 2011. November 13-16. Charlotte, NC.

30. **Diaz R.,** Behr Joshua, Tulpule Mandar. A System Dynamics Approach to Measuring the Disparate Impacts of SLR on Hampton Roads' Underserved Populations Residing in the Chesapeake Bay's Coastal Zone. Applications of M&S in Healthcare Management. INFORMS Annual Meeting 2011. November 13-16, 2011. Charlotte, NC.

31. **Diaz R.,** Tulpule Mandar. Chronic Disease Management: Analyzing the Impact of Interventions on Patient Health. June 20-22, 2011. Applications of M&S in Healthcare Management. INFORMS Healthcare, Montreal, Canada.

32. Tulpule Mandar, **Diaz R.** Simulation-based optimization for managing chronic healthcare interventions. June 20-22, 2011. Applications of M&S in Healthcare Management. INFORMS Healthcare, Montreal, Canada.

33. **Diaz R.,** Behr J. Tulpule M. A System Dynamics (SD) approach to analyze trade-offs and conditional effects at play within the demand-supply emergency departments. October 13–15, 2010. MODSIM World 2010. Hampton, VA.

34. **Diaz R.,** Ardalan A. CONWIP and Net-CONWIP: A Simulation Study. International Conference OR. Complex Systems. September. 1- 3, 2010. Munich, Germany.

35. Tulpule M., **Diaz R.,** An advanced layout optimization algorithm using cluster and frequency information. International Conference OR. Complex Systems. September 1- 3, 2010. Munich, Germany.

36. **Diaz R.** Hampton Roads sensor and unmanned systems technology cluster partnership workshop on port security. Panelist for Port harbor and emergency management. Association for unmanned vehicle system international – Hampton Roads Chapter. January 25, 2010. Portsmouth, VA.

37. Behr Joshua and **Diaz R,** Emergency department utilization for non-emergent conditions: An in-depth assessment of the decision calculus of patients at a major urban trauma center. American Public Health Association. November 2009. Philadelphia, PA.

38. **Diaz R.,** Talley Wayne. The economic impact of transportation infrastructure projects in urban and suburban regions: A System Dynamics Evaluation. MODSIM World 2010. October 2009. VA Beach, VA.

39. **Diaz R.** An Application of Simulation-based Optimization in Emergency Departments Resource Allocation. INFORMS Annual Meeting 2009. Applications of M&S in Healthcare Management. October 2009. San Diego, CA.

40. Behr J. and **Diaz R.** A System Dynamic Approach to Modeling the Sensitivity of Inappropriate Emergency Department Utilization. INFORMS Annual Meeting 2009. October 2009. San Diego, CA.

41. **Diaz R.** Analyzing Inventory Models with Markovian Auto-correlated Demand Via Simulation Optimization. INFORMS Annual Meeting. October 14, 2008. Washington DC.

42. Ardalan A. & **Diaz R.** A Simulation Analysis of Local and Global Priority Rules in Job Shops. The 3rd World Conference on Production and Operations Management, Tokyo August 5-8, 2008.

43. **Diaz R.** Using simulation-based optimization for bioterrorism preparedness in an emergency room. Panelist for Ensuring Your Community's Emergency Preparedness. A joint program of ACHE's Healthcare Administrators of Tidewater (HCAT) and Virginia HIMSS. August 13, 2008. Suffolk, VA.

44. **Diaz R.** A Simulation Optimization Approach to Solve Stochastic Inventory Problems with Autocorrelated Demand. INFORMS Annual Meeting. November 4-7, 2007. Seattle, WA.

45. Ardalan A. & **Diaz R**. A Simulation Analysis of Local and Global Priority Rules in Job Shops. INFORMS International. July 8-11, 2007. San Juan, Puerto Rico.

TECHNICAL PAPERS

1. **Diaz R.** and Szklo-Coxe, Mariana. Analyzing the effects of truck driver sleeping schedules, maritime port performance, bottlenecks, and cybersecurity supply chains under pandemic. Ongoing.

2. **Diaz R.**, Kang Liuwang, and Marsillac E. Examining the impact of autonomous vehicles on the sustainable container terminals: seeking the optimal mix using AI between manned and unmanned vehicles. Ongoing.

3. Behr and **Diaz**. National Oceanic and Atmospheric Administration (NOAA). Flooding in shipbuilding communities. Partially funded by VMAC-ODU Digital Shipbuilding. 2021.

4. Behr and **Diaz**. HUD. Community Engagement and Planning Grant. SCC-CIVIC-FA Track B Convergence, Inventory, Matching, and Assignment (CIMA) to Optimize Post-event. 2021

5. Behr and **Diaz**. COVID-19. COVID-19 Evacuation and Sheltering Risk Perception Study. 2020

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6. **Diaz R.** Healthcare Logistics Education and Learning Pathway. HELP Project. Semi-annual report. 2018.

7. Behr and **Diaz**. Modeling the Mobility and Coordination of Material, Labor, and Displaced Populations – HUD Final Report. 2017

8. **Diaz R.** Supply Chain Capacity Network Analysis. Carreras Logistics. 2016

9. **Diaz R.** and Lekkakos Spiros. Clariant – Support Supply Chain Education Program Approach. 2016.

10. Behr and **Diaz R.** Asthma Project. City of Portsmouth (2015).

11. Behr and **Diaz R.** Policy Resistance within a Region's Healthcare System: A System Dynamics Approach (2014)

12. **Diaz R.** and Behr J. Giles B. 1. Chronic Disease Management Tool Development Prototype October 2014. National Center for Collaboration in Medical Modeling and Simulation (NCCMMS).

13. **Diaz R.** and Behr J. 1. Behavioral Study Report; 2. Refuge of Last Resort –Identification and Capacity study; 3. Shelters – Identification and Capacity Study; 4. Housing Report. US Catastrophic Planning Team (HRCPT) and VA Department of Emergency Management (VDEM). July 2013.

14. **Diaz R**. and Behr J. The effects of Sea Level Rise in Hampton Roads VA: a System Dynamics Simulation Study. ODU. Research Foundation. April 2012.

15. **Diaz R.** and Behr W. Optimization of Refuse Collection Routing for the City of Hampton VA. Hampton VA. October 2011.

16. **Diaz R.** and Talley W. Educating College Students in M&S. Opportunity Inc. June 2010.

17. **Diaz R.** Improving Productivity at SYSCO by Enhancing Storage Assignment and Family-Based Grouping. May 2009.

18. Talley W. and **Diaz R.** Modeling the Economic Impacts of Six Transportation Alternatives for the Hampton Roads Region. November 2008.

19. Sokolowski J., & **Diaz R.** Mathematical characterization of a forecasting model for the Anheuser-Busch products. RN V07-005. March 2008.

20. Sokolowski J., Banks C., Armstrong R., Gaskins R., & **Diaz R.** Population dynamics investigative research to support Marine Corps Studies System Irregular Warfare. RN V06-002. November 2006.

21. **Diaz R.** Using the Analytical Network Process approach to Analyze and Allocate Resources using Dependencies in the Army Training Support System Context. Spring - Fall 2005.

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GRANT FUNDED RESEARCH

1. **National Science Foundation (NSF)   (Role: Co-PI)**   12/15/2021-31/01/2026
   Award: $3.900,000.00
   Project Title: Preparing Future Cybersecurity LeADERS through Applied Learning Experiences
   PI: Brian Payne, Co-PIs: Chunsheng X.

2. **VMASC Internal Research and Development (Role: PI)**   07/01/2022-07/01/2023
   Award: $100,000
   Project Title: Exploring the Applications of Supply Chain Management, AI, and Cybersecurity to Maritime Synchromodality and Offshore Winds Energy (OSW)
   Co-PIs: K. Smith.

3. **National Science Foundation (NSF)   (Role: Co-PI)**   09/30/2021-09/30/2023
   Award: $199,900
   Project Title: <u>Supplemental Funding</u> - SCC-CIVIC-FA Track B Convergence, Inventory, Matching, and Assignment (CIMA) to Optimize Post-event Housing Repair for Displaced Vulnerable Populations
   PI: J. Behr, Co-PIs: B. Giles, Linda Rice (HRCF).

4. **US Department of Housing and Urban Development (Role: PI)**   12/01/2020-12/01/2022
   Award: $750,000
   Project Title: Modeling the Mobility and Coordination of Material, Labor, and Displaced Vulnerable Populations for Housing Recovery: An Artificial Intelligence Approach
   Co-PIs: J. Behr

5. **Hampton Roads Community Foundation (HRCF)   (Role: Co-PI)** 01/30/2020- 01/30/2025
   Award: $500,000
   Project Title: Recover HamptonRoads, 2020-2025
   PI: J. Behr

6. **Department of Education (Role: Co-PI)**   10/01/2022-12/31/2024
   Award: $1,100,000.00
   GROW M&S: Graduate Research Opportunities and Workforce Readiness in Modeling and Simulation
   * Project #5: - A Simulation-Based Framework for Mitigating Port Systemic Cybersecurity
     Risks - Role (***Principal Investigator (PI)***)
   Overall PI: Jessical Johnson; Sub-Project PI: Rafael Diaz, Co-PI: K. Smith

7. **National Science Foundation (NSF)   (Role: Co-PI)**   10/01/2021-10/31/2022
   Award: $1,000,000.00
   Project Title: SCC-CIVIC-FA Track B Convergence, Inventory, Matching, and Assignment (CIMA) to Optimize Post-event Housing Repair for Displaced Vulnerable Populations
   PI: J. Behr, Co-PIs: B. Giles, Linda Rice (HRCF)

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8. **VMASC Internal Research and Development (Role: Co-PI)**   06/01/2021-05/31/2022
   Award: 73,001
   DSB M&S Development and Lab Support
   PI: K. Smith

9. **Coastal VA, Commonwealth Cyber Initiative (Role: PI)**   07/01/2021-07/01/2022
   Award: $300,000
   Project Title: A Real-Time Dependency Network Approach to Quantifying Risks and Ripple
   Effects from Cyberattacks in Shipbuilding and Repair Supply Networks
   Co-PIs: S. Shen (UVA)

10. **Coastal VA, Commonwealth Cyber Initiative (Role: PI)**   01/01/2021-01/01/2022
    Award: $400,000
    Project Title: Virginia State Investments in Port of Virginia: A Simulation-based Framework for
    Identifying, Assessing, and Mitigating Systemic Cybersecurity at the Operational Technology
    Layer
    Co-PIs: S. Shen (UVA)

11. **National Science Foundation (Role: Co-PI)**   02/01/2021-07/31/2021
    Award: $50,000
    Project Title: SCC-CIVIC-PG Track B Convergence, Inventory, Matching, and Assignment
    (CIMA) to Optimize Post-event Housing Repair for Displaced Vulnerable Populations
    PI: J. Behr, Co-PIs: B. Giles, Wie Yusuf

12. **Virginia Department of Emergency Management (Role: Co-PI)**   01/01/2021-01/01/2022
    Award: $212,000
    Project Title: COVID-19 Evacuation and Sheltering Risk Perception Study.
    PI: J. Behr, Co-PIs: B. Giles,Wie Yusuf

13. **TED TEXT LLC (Role: Co-PI)**   12/09/2020-06/09/2021
    Award: $58,650
    Using Text Data: Competency Evaluation System and texting system
    PI: K. Smith

14. **Healthcare Erasmus+ (Role: PI)**   09/01/2017-04/31/2019
    Award: N/A
    Structuring and delivering healthcare management program at Masters and PhD level

15. **Aves Nobles – Supply Chain Innovation (Role: PI)**   03/01/2017-12/31/2018
    Award: N/A

16. **Carreras Logistics (Role: PI)**   01/01/2016-09/01/2016
    Award: N/A

17. **Clariant – Support Supply Chain Education Program (Role: PI)**   03/01/2016-09/01/2016
    Award: N/A

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18. City of Portsmouth – Sea Level Rise (Role: Co-PI) 08/01/2014-08/15/2015
Award: $135,000
Analytics – The impact of SLR: Resiliency and Adaptation
PI: J. Behr, Co-PIs: B. Giles,

19. US Department of Housing and Urban Development (Role: Co-PI) 12/01/2015-12/01/2017
Award: $414,000
Project Title: Modeling the Mobility and Coordination of Material, Labor, and Displaced Populations
PI: J. Behr, Co-PIs: B. Giles,

20. National Center for Collaboration in M&S (Role: PI) 06/01/2013-06/15/2014
Award: $37,800
Chronic Disease Management Tool Development
Co-PI: J. Behr

21. National Institutes of Health (Role: Co-PI) 10/01/2012-10/01/2014
Award: $422,530
Policy Resistance within a Region's Healthcare System: A System Dynamics Approach
PI: J. Behr, Co-PIs: B. Giles,

22. VDEM (Role: PI) 09/01/2012-06/01/2013
Award: Total=$674,117
Hampton Roads Regional Catastrophic Planning Team for the Twenty-Four Jurisdictions of the Greater Hampton Roads Region in Southeastern Virginia and Northeastern North Carolina Phase III Work Plan and Costs
Co-PIs: J. Behr, B. Giles,

23. Perry Endowment (Role: Co-PI) 07/01/2011-10/01/2012
Award: $113,000
Mapping and modeling Neighborhood Community Vulnerability and Medically Fragile Populations for protection in natural disasters
Co-PI: J. Behr

24. ODURF – Seed Grant (Role: PI) 06/01/2011-04/15/2012
Award: $37,800
The Disparate Impacts of SLR on Hampton Roads' Underserved Populations.
Co-PI: J. Behr

25. City of Hampton (Role: PI) 09/01/2009-06/30/2010
Award: $34,600
Simulation-based Optimization Routing
Co-PI: J. Behr

26. Opportunity Inc. Department of Labor (Role: PI)   09/01/2009-06/30/2010
Award: $71,500
Educating College Students in M&S Engineering
Co-PI: W. Talley

27. Sysco Inc. **(Role: PI)**   08/01/2008-02/01/2009
Award: $30,000
Improving Productivity at SYSCO by Enhancing Storage Assignment
Co-PI: -

28. EDA II (Role: Co-PI)   07/01/2008-07/01/2009
Award: $100,000
Developing Business Analytics M&S Research Cluster.
PI: J. Sokolowski

29. Commonwealth of VA (Role: Co-PI)   07/01/2008-11/15/2008
Award: $250,000
Six transportation alternatives
PI: M. Robison

30. EURPAC (Role: Co-PI)   02/01/2008-04/15/2008
Award: $10,000
Econometrics Modeling - Forecasting
PI: J. Sokolowski

GRANTS SUBMITTED AND PENDING

31. Visiting Fellowship Morgan Advanced Studies Institute (MASI) - Swansea University
Aimed award: 4,200 Euros   04/2023
LegalTech for Supply Chain Cybersecruity Sandbox
Interdisciplinary grant proposal to the bilateral EPSRC-NSF (UK -USA)

32. ODU Graduate School   (Co-PI)   07/2022-07/2023
Award: $38,000 (pending receipt)
Project Title: Cyber Security in Shipbuilding Industry: Data Science + Risk

33. Coastal VA, Commonwealth Cyber Initiative (PI)   07/2022-12/2023
Aimed Award: $30,000
Project Title: Assessing Shipbuilding Supply Chain Agility and Reconfiguration

34. Dominion Energy (Co-PI)   08/2022-08/2023
Award: $300,000 (pending receipt)
Project Title: Technical Support Grant, Recover Hampton Roads

CURRENT GRANT PROPOSAL DEVELOPMENT

35. Coastal VA, Commonwealth Cyber Initiative (PI)   To be submitted: Fall 2022
Aimed award: $150,000
Project Title: Investigating the Effects of Collaborative Scheduling between Autonomous and Man-Driven Vehicles

36. US Department of Transportation(PI)   To be submistted: Fall 2022
Aimed award: $400,000
Project Title: Examining the Hybrid Transportation Environment: Manned and Unmanned Vehicles – Insurance

37. National Science Foundation (NSF)   To be submistted: TBD
Aimed award: $TBD
Sub-Project Title: CoPe Coastlines and People - Identification and Prioritization of Recurrent Flooding Research – Impacts on Regional Workforce and Supply Chains

38. US Department of Housing and Urban Development (PI)   To be submitted: Fall 2022
Aimed award: $700,000
Project Title: Methodology to Monitor Housing Recovery Pace and Evaluate Return of Investment among Temporary Housing Alternatives for Vulnerable Populations

39. National Science Foundation (NSF) – CIVIC PROGRAM(PI)   To be submitted: Fall 2022
Award: $500,900
Project Title: The effects of compounded threats on vulnerable communities

40. National Science Foundation (NSF). Cyber-Physical Systems (PI)   To be submitted: 2023
Aimed award: $300,000
Project Title: A Simulation-based Framework for Anomaly Detection and Mitigation under Hybrid Autonomous Vehicle Conditions.

UNIVERSITY SERVICE

1. Member Academic Committee Revising Maritime Programs. Spring/Summer 2022

   o Sub-committee: Maritime content as part of potential new degree and certificate programs

2. Chair search committee - VMASC Data Analysts, Spring/Summer 2022

3. Chair MODSIM Conference – Transportation, Business, and Industry track, Spring 2022

4. Member of Associate Vice-President of Maritime Initiative Search Committee, Spring 2022

5. Chair search committee - VMASC Senior Project Scientist Search Committee –Back-End Developer, Summer 2021

6. Chair search committee - VMASC Project Scientist Search Committee –Front-End Developer, Summer 2021

7. Chair search committee - VMASC Associate Research Search Committee –Cybersecurity Shipbuilding – Network Ripple Effects, Summer 2021

8. Member of UVA – PostDoc Associate –Cybersecurity Port of VA, Cyber-Physical Space Research, Summer 2021

9. Chair search committee - VMASC – PostDoc Associate –Supplier and sub-tier supplier network and Cyber-Physical Space Research, Spring 2021

10. Member of Business and Technology Partner – National Shipbuilding Research Program (NSRP) – Fall 2020 to Present.

11. Maritime Initiative Leadership – Strategic Sub-Committee – ODU. – Fall 2021 to Present.

12. Maritime Initiative Leadership Group – ODU. – Fall 2020 to Present.

13. Maritime Industrial Base Ecosystem (MIBE) - Academic Member – ODU. – 2019 to Present.

14. Latino Mentorship Program – ODU. –2020 to Present.

15. Latino Student Support – O.D.U. – 2019 to Present.

16. Latino Employee Association- Member – ODU.   – 2019 to Present.

17. PhD Summer Academy Director – MIT Zaragoza – Summer 2018.

18. PhD student selection process (Rounds I and II) – MIT Zaragoza – Spring 2017, Spring 2018.

19. MS student selection process (Rounds I, II, and III)– MIT Zaragoza – Spring 2017, Spring 2018.

20. MS, student selection process – MIT Zaragoza – Winter 2016 (Source: MIT Sloan Business School).

21. MS student selection process – MIT Zaragoza – Fall 2016 (Source: CTL Micromaster).

22. Member of the faculty search committee – MIT Zaragoza – Fall 2016.

23. Member of the faculty search committee – MIT Zaragoza – Spring-Summer 2016.

24. PhD/M.S student selection process – MIT Zaragoza – Spring 2016.

25. PhD/M.S. student selection process – MIT Zaragoza – Fall 2015.

26. Member of VMASC Senior Project Scientist Search Committee –Transportation focus, Spring 2014.

27. Organizer and Acting Co-Director, VMASC -Advanced Analytic Lab, Fall 2013.

28. Member and organizer VMASC - M&S Capstone General application 2013.

29. Member of VMASC Software Developer Search Committee, Spring 2012.

30. Member and organizer VMASC - M&S Capstone General application 2012.

31. Member and organizer VMASC -M&S Capstone Application track 2011.

32. Member of VMASC Senior Project Scientists Search Committee, Spring 2010.

33. Member of the Department of Modeling, Simulation, and Visualization Engineering Faculty Search Committee –Healthcare focus, Spring 2010.

34. Member and organizer VMASC - M&S Capstone Application track 2010.

35. Member of VMASC Faculty Search Committee – Operations Research focus, Spring 2009.

36. Member and organizer VMASC - M&S Capstone Application track 2009.

37. Member of VMASC Faculty Search Committee –Healthcare focus, Spring 2008.

38. Member of VMASC Faculty Search Committee – Military/Healthcare focus, Spring 2008.

PROFESSIONAL SERVICE
a. Scholarly Journals

1. Reviewer, Journal IEEE Transactions in Engineering Management (2022 - present)

2. Reviewer, Journal PLOS One (2022 – present)

3. Reviewer, Journal of Operational Research Society (2021 - present)

4. Reviewer, Journal of Transportation Research Part E (2011- present)

5. Reviewer, International Journal of Production and Operations Management (IJPOM) - (2016- present)

6. Reviewer, International Journal of Production Economics (IJPE) - (2015- present)

7. Reviewer, Journal of Transportation Research Part A (2015- present)

8. Special Issue Editor, International Journal of Privacy and Health Information Management (IJPHIM) (2013).

9. Reviewer, International Journal of Production Research (IJPR) - (2013- present)

10. Special Issue Editor, SIMULATION: Transactions of the Society for Modeling and Simulation International (2012).

11. Reviewer, Simulation in Healthcare (2012-present).

12. Reviewer, Production and Operations Management (POMS) (2012-present).

13. Reviewer, Journal of Modeling and Simulation (2012-present).

14. Associate Editor, SIMULATION: Transactions of the Society for Modeling and Simulation International (2011).

15. Reviewer, Maritime and Port Logistics of the Journal of Mechanical Engineering (2011).

16. Reviewer, SIMULATION: Transactions of the Society for Modeling and Simulation International (2008- Present)

17. Reviewer, International Journal of Simulation and Process Modelling (2010 – present).

b. Professional Societies and Academic Institutions

1. Chair Session, Emerging Applications - Productions and Operations Management (2020)

2. Productions and Operations Management (2010 – Present)

3. Decision Science Institute (2008– Present)

4. INFORMS (2008– Present)

5. Reviewer, Decision Science Conference, 2017.

    (Sessions 1: Modeling Manufacturing System; Session 2: Global Supply Chain)

6. Reviewer, Spring Simulation Conference, 2014 and 2015.

7. Symposium Chair: Enterprise Applications, Spring Simulation Conference 2013, April 8- 11, 2013, San Diego, CA.

8. Reviewer, Best Symposium Enterprise Applications Paper Award, Spring Simulation Conference, 2013, April 8- 11, 2013, San Diego, CA.

9. Reviewer. 2013 International Conference on Social Computing, Behavioral Modeling, & Prediction (SBP13)." April 3 - 5, 2013. Washington, DC.

10. Reviewer and Panelist National Science Foundation (NSF) -NSF-P121701 Health Care and Supply Chains. Summer 2012. Washington, DC.

11. Reviewer, European Modeling and Simulation Symposium 2012 (EMMS and IWISH). Sep 17- 20. Vienna, Austria.

12. Symposium Chair: Enterprise Applications. Spring Simulation Conference, 2012. April 7-10, 2012. San Diego, CA.

13. Reviewer, Spring Simulation Conference, 2012, 2012. April 7-10, 2012. Orlando, FL.

14. Session Chair and Reviewer, Conference on Harbor, Maritime & Multimodal Logistics Modelling and Simulation. September 12-14, 2011. Rome, Italy.

15. Session Chair, Applications of M&S in Healthcare Management. INFORMS Annual Meeting 2011. November 13-16, 2011. Charlotte, NC.

16. Session Chair, Applications of M&S in Healthcare Management. INFORMS Healthcare, June 24, 2011. Montreal, Canada.

17. Chair Session, Emerging Applications, Spring Simulation Conference 2011, April 6-9, 2011. Boston, MA.

18. Reviewer, Conference on Harbor, Maritime & Multimodal Logistics Modelling and Simulation. October 13 – 15, 2010. Fes – Morocco.

19. Session Chair, Spring Simulation Conference, 2010. April 11-15, 2010. Orlando, Florida.

20. Session Chair. INFORMS Annual Meeting 2009. Applications of M&S in Healthcare Management. October 2009. San Diego, CA.

21. Supported revision of Certified Modeling Simulation exam questions 2011 and 2012.

22. Reviewer and Panelist Centers for Disease Control and Prevention (CDC) / National Institutes of Health (NIH.) Special Emphasis Panel (SEP). Combining Subjective and Objective Methods

for Quantifying Contact Rates and Mixing Pattern in School-Aged Children (CK11-006). Summer 2011.

SELECT COMMUNITY SERVICE

1. Guest Speaker. Trends in Shipbuilding Supply Chains. USMMA. June 22, 2022.

2. Academic Moderator in conjunction with Industry Moderator. Digital Transformation. Department of the Navy (DON)) IT Conference 2022. May 23-26, 2022.

3. Guest Speaker - The Daily Work of Justice - Flooding – William & Mary. March 2022

4. Moderator. COVID-19 Convergence II. September 2021

5. Guest Speaker. ODU REYES (Remote Experience for Young Engineers and Scientists) - Planning for Hurricane Recovery in Hampton Roads: The CIMA Platform – Summer 2021.

6. Moderator. COVID-19 Convergence I . June 23, 2020

7. Guest Speaker and Panelist. Maritime COE's Forum - NATO. Maritime Industrial Base and Naval Readiness: Compound Hurricane-Pandemic Threat. May 28, 2020

8. Panel Moderator: Net Trends in Supply Chain. Fourth Global Supply Chain Research Forum 2018. Spain. May 29, 2018.

9. Guest Speaker and Panelist. A Manufacturing and Logistics Analytics Perspective and Industry 4.0. Panel: Innovative Value Networks. Third Global Supply Chain Research Forum 2017. Spain. May 30, 2017.

10. Guest Speaker and Panelist. Stay or Go? The Household Decision Calculus among Vulnerable and Medically Fragile Populations in Anticipation of an Impending Severe Storm Event. In Feeding of under-resourced individuals and households during times of disaster, Committee Meeting, Norfolk, VA. January 20, 2017

11. Panel Moderator. Second Global Supply Chain Research Forum 2016. Panel: Supply Chain Digitalization. Spain. May 24, 2016.

12. Panelist. Increasing sheltering capacities in the presence of a catastrophic event and displaced population demand for the U.S. Hampton Roads region: a mathematical programming approach. City of Norfolk Emergency Management. Rafael Diaz, Joshua Behr, and Jim Riddick. (2013)

13. Guest Speaker and Panelist. HRCPT Long-term housing recovery strategy workshop conducted by Dewberry. April 25, 2013. Hampton, VA.

14. Guest Speaker and Panelist Diaz R. Sea Level Rise – Eco-conference - Panelist. April 16, 2013. Norfolk, VA.

15. Panelist. Exploring the alternative of analyzing and testing health interventions targeted to children in the city of Suffolk, Rafael Diaz, Joshua Behr, Andrea Parodi, 2011.

16. Panelist. Analyzing the flow of low-acuity patients through Primary Care Physician (P.C.P.s) and Specialists venues to provide healthcare services to underserved populations: A Modeling and Simulation study, Access partnership, Suffolk, Virginia, Rafael Diaz, Joshua Behr, 2010.

17. Guest Speaker and panelist. Hampton Roads sensor and unmanned systems technology cluster partnership workshop on port security. Panelist for Port harbor and emergency management. Association for unmanned vehicle system international – Hampton Roads Chapter. Spring, 2010. Portsmouth, VA.

18. Panelist. Educators Modeling and Simulation Day – Tidewater Community College (TCC) - Panelist. Summer 2009. Suffolk, VA.

19. Guest Speaker and Panelist. Using simulation-based optimization for bioterrorism preparedness: An Emergency Department perspective. Ensuring Your Community's Emergency Preparedness. A joint program of ACHE's Healthcare Administrators of Tidewater (HCAT) and Virginia HIMSS. August 13, 2008. Suffolk, VA.

TEACHING

A. OLD DOMINION UNIVERSITY

1. Introduction to Homeland Security Logistics. Fall 2021, Spring 2022, Fall 2022

2. Independent Study: Serious Game Designing. Summer 2022

3. Logistics and Supply Chains. Fall 2021, Spring 2015, Fall 2013, Summer 2013

4. Supply Chain and Logistics. Fall 2014

5. Operations Management. Spring 2014, Fall 2013

6. Management Science / Operations Research. Spring 2013

7. Supply Chain and Reverse Logistics. Spring 2010

8. Business Productivity Software. Spring 2001, Summer 2001, Fall 2001, Spring 2002, Summer 2002, Fall 2003

B. OLD DOMINION UNIVERSITY – EXECUTIVE EDUCATION

9. Introduction to System Dynamics Simulation. Fall 2012

10. Modeling and Simulation for Healthcare Management. Spring 2011

C. MIT – CENTER OF TRANSPORTATION AND LOGISTICS (CAMBRIDGE, MA)

11. Strategic Supply Chain Innovation and Sustainability. Spring 2018

D. MIT – ZARAGOZA LOGISTICS CENTER (ZARAGOZA, SPAIN)

12. Data Analytics and Innovation: ZLOG – Spring 2019

13. Supply Chain Network Design and Optimization: ZLOG Elective - Spring 2018

14. Logistics Systems – Analytics Methods: ZLOG Core Course. Fall 2015, Fall 2016, Fall 2017, Fall 2018

15. Strategic Manufacturing Logistics: ZLOG Advanced Elective. Spring 2016, Spring 2017, Spring 2018

16. Forecasting. Spring 2016, Fall 2016

17. Process Planning and Control. Spring 2017

18. Lean Management. Spring 2017, Spring 2018, Spring 2019

19. Supply Chain Modeling and Simulation (PhD Level). Summer 2017, Summer 2018.

20. Healthcare Logistics Management Analytics– Core class development (Masters and PhD levels) – Erasmus+. Ongoing.

E. FRAUNHOFER INSTITUTE – UNIVERSITY DORTMUND, GERMANY

21. Research Stream Positioning and Development: Methodological perspectives. PhD Summer Academy 2016.

F. MIT ZARAGOZA – EXECUTIVE EDUCATION

22. Introduction to Business Analytics and digital transformation (Airbus). March 2019

23. Demand Management Analytics and S&OP (Baltic Mills). October 2018

24. Supply Chain Innovation – Introduction to Industry 4.0 and digitization (Automotive Cluster - Galicia). December 2017

25. Network Design (Asia Group). Summer 2016

26. Introduction to Business Analytics (Spain Army - Logistics Group). Fall 2015

ADVISORY

1. Katherine Smith. Adaptive Risk Network Dependency Analysis of Complex, Cyclic, and Acyclic Hierarchical Analytics – PhD Dissertation. ODU. Ongoing (2020- Present).

2. Leonardo Gomes. Building Ambidextrous Supply chain Strategies into Food & Beverage manufacturing operations – PhD Dissertation. Aves Nobles and MIT-ZLC (2017- 2019).

3. Fernanda Caropresso, Bruna Basil, Pilar Bello. Strategic Capacity Network Optimization. ***Outstanding Master's Thesis Award*** - MIT-ZLOG program (2017-2018).

4. Daniel Golenbach, Chan Phan. Hub and Spoke Network Design for a Fast-Growth Company

   Outstanding Master's Thesis Award - MIT-ZL Blended program (2017-2018).

5. Byron Garcia, Ricardo Cabral. Strategic Distribution Network Analysis of Engine Spare Parts Operations (2017-2018) MIT-ZLC.

6. Ted Lynch and Scott Conner. Resiliency and Sourcing Strategy in the Semiconductor Industry (2017-2018) MIT-ZLC.

7. Sailesh Kolachana and Rodrigo Falcão Gomes. Analyzing and Prioritizing Agility in Global Pharma Supply Networks- Pfizer (2016-2017) MIT-ZLC.

   ** Finalist Outstanding Master's Thesis Award**

8. Snehashish Sridhar and Ruben Sifuentes. An IoT approach to Minimizing Bullwhip Effects. Accenture (2016-2017) MIT-ZLC.

9. Lina Romero Ludovico Bernard. Thesis: Analyzing Sourcing Networks for a Coffee Retailer. (2015-2016) MIT-ZLC.

10. Alberto Dávila Cardozo and Jesús Buil Ramos. Thesis: Análisis y planificación de la implementación de las 5S´s en los laboratorios de ITAINNOVA por medio de simulación. (2015-2016) MIT-ZLC.

11. Mandar Tulpule (2010-2012) and Toba Lionel (2012-2015) – Modeling and Simulation. ODU.

TEACHING ASSISTANT AND GRADUATE RESEARCH APPOINTMENTS

Graduate Teaching Assistant[2] Old Dominion University	2006-2007
Instructor[1] Old Dominion University, Norfolk, VA	2000-2002
Graduate Research Assistant[1,2] Old Dominion University, Norfolk, VA	2003-2007

PROFESSIONAL DEVELOPMENT

- Cybersecurity Certification: Security +. Comptia. (In progress)

- Python, Data Camp, January 2022
  - Network Analysis

Rafael Diaz, Ph.D.

Virginia Modeling, Analysis & Simulation Center (VMASC), Old Dominion University
1030 University Blvd. Suffolk, VA 23435 ⬥ (757) 917-3045 – rdiaz@odu.edu

- ▪ Data Engineering
- ▪ Building Data Engineering Pipeline in Python

- • Tableau. Data Camp, September 2021
  Analyzing Data in Tableau, Connecting Data, and Creating Dashboard in Tableau

- • PowerBI, Data Camp, August 2021
  Visualization and Creating Calculations with DAX

- • Introduction to SQL, SQL Server, and Intermediate, July 2021
  PostgreSQL, MySQL, SQL Server, and Oracle

- • Cybersecurity. Udemy, August 2020 – January 2021
  - ▪ Fundamentals of Operations Technology (OT) and Cybersecurity. Udemy Academy
  - ▪ Internet and Computer Security: A hands-on Approach
  - ▪ The Complete Cyber Security Course: Network Security

- • R (Fundamental, Intermediate, and Advanced) Data Camp, October 2019

- • Python, Data Camp, November 2019
  - ▪ Supply Chain Analytics using PuLP from Python
  - ▪ Natural Language Processing (NLP.)
  - ▪ Econometrics. Data Camp, March 2021
  - ▪ Machine Learning Scientist with Python

- • Artificial Intelligence Data Camp, January - March 2020
  - ▪ Intermediate and Advanced Deep Learning with Keras.

- • Big Data with PySpark. Data Camp, February 2019

- • Online Case Method Teaching Seminar, Harvard Business Publishing. February 2018

- • Case Method Teaching Seminar, Harvard Business Publishing. Italy. February 2017

- • Data Science and Big Data Analytics: Making Data-Driven Decisions. Massachusetts Institute of Technology (MIT). October - November 2017.

HONORS AND AWARDS

Venia Docendi, Universidad de Zaragoza, Spain   2016-2019

Erasmus+   2018

Rafael Diaz, Ph.D.

Virginia Modeling, Analysis & Simulation Center (VMASC), Old Dominion University
1030 University Blvd. Suffolk, VA 23435 ⬥ (757) 917-3045 – rdiaz@odu.edu

Outstanding Research Award, MIT-Global Scale	2017
U.S. Citizenship (Norfolk, VA)	2014
Best Paper Award *The International Conference on Harbor, Maritime & Multimodal. Rome, Italy*	2011
Postdoctoral Fellowship, Old Dominion University	2007- 2008
Faculty Award, Old Dominion University	2007
Dissertation Fellowship, Old Dominion University	2006-2007
Modeling and Simulation Fellowship, Old Dominion University	2003-2006

PROFESSIONAL AND CONSULTING EXPERIENCE

Zim American-Israeli, Norfolk, VA Operations Management (Logistic Analyst / MBA Internship)	2002-2003
Fivenez Bank (BPE International Group), Caracas, Venezuela Business Process Consultant	1997-1999
Nueva Tecnología de Negocios, Caracas, Venezuela Management Consultant	1995-1997
Compañía Nacional Teléfonos De Venezuela (CANTV)	1993-1994