

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

ACADEMIC BACKGROUND

PhD Modeling and Simulation Old Dominion University, Norfolk, VA (AACSB-accredited) <i>Dissertation:</i> Characterizing Error Generation in Stochastic Inventory Models that Present Serially-Correlated Components in their Demands	2007
MBA <i>Concentrations: Information and Technology and Finance</i> Old Dominion University, Norfolk, VA	2002
Project Management Graduate Certificate Andres Bello Catholic University, Caracas, Venezuela	1997
BS Industrial Engineering <i>Minor: Management</i> Jose Maria Vargas University, Caracas, Venezuela	1994

RESEARCH / TEACHING APPOINTMENTS

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

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

JOURNAL ARTICLES PUBLISHED

1. **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
2. 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
3. **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.
4. **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
5. **Diaz, R.**, and Erika Marsillac. Evaluating strategic remanufacturing supply chain decisions. *International Journal of Production Research* (2017) Vol. 55.9, 2522-2539.
6. **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.
7. **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
8. **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.
9. 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.
10. 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.
11. 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.

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

12. 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
13. 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.
14. 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.
15. **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.
16. **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.
17. **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.
18. 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.
19. 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.
20. Akpinar-Elci Muge, Martin Francis, Behr Joshua, **Diaz R.**, Saharan Dust, climate variability, and Asthma. *International Journal of Biometeorology*. (2015), February.
21. **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
22. **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).
23. **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

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

24. 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.
25. 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.
26. 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
27. **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.
28. Behr J. and **Diaz R.** Hurricane Preparedness: Community Vulnerability and Medically Fragile Populations. *The Virginia News Letter*. (2014) Vol 90 (2): 1-10
29. **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.
30. **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.
31. 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)*. Vol. 19: S55-S62.
32. 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.
33. **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.
34. 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.
35. **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.

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

36. James Blando, Leonard Bielory, Viann Nguyen, **Diaz R.**, Hueiwang Anna Jeng (2012). Anthropogenic Climate Change and Allergic Diseases. *Atmosphere*, Vol. 3: 200-212.
37. **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.
38. **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.
39. **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.
40. **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

JOURNAL ARTICLES ACCEPTED

41. 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*. Ref: NHENG-1341. - *Minor Revisions*
42. 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. *Minor Revisions*

JOURNAL ARTICLES UNDER REVIEW

1. **Diaz R.**, Coastal Housing Recovery for Vulnerable Populations in a Post-Disaster Environment: A Supply Chain Perspective. Submitted to Humanitarian Operations & Crisis Management (HOCM). *Production and Operations Management (POMS)*.
2. **Diaz R.**, Chan Phan, Golenbach Daniel. A Spherical Surface Driving Distances Approach to Hub Network Design in Highly Urbanized Environments. *Transportation Research Part E (TRE)*.
3. Laranjeira L., Knoppen D., **Diaz R.** An operations management perspective to exploration & exploitation. *Journal of Operations Management (JOM)*
4. **Diaz R.** Sailesh Kolachana, Rodrigo Falcão Gomes, Analyzing and Prioritizing Agility in Global Pharma Supply Networks: A Simulation Study. *International Journal of Production Economics (IJPE)*.

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

5. **Diaz R.** and Ardalán A. Simulation Analysis of Net-CONWIP Priority Rule in Constant Work-In-Process Systems. *Computers and Industrial Engineering (CAIE)*.
6. **Diaz R.**, Behr J. Asthma and Heavily Trafficked Roads in Maritime Port Communities: Assessing the Public Health Risks. *Travel Behaviour and Society (TBS)*
7. **Diaz R.**, Darryl Draper-Amason, Johnson Jessica. A Lean Management and Learning Approach to Configuring and Evaluating Digital Shipbuilding Project Portfolios. *International Journal of Simulation and Process Modelling (IJSPM)*.

JOURNAL ARTICLES IN PROGRESS

1. **Diaz R.**, Cook David, Romero Lina, Bernard Ludovico. Analyzing Sourcing Networks for a Coffee Retailer. *International Journal of Production & Operations Management (IJPOM)*.
2. **Diaz R.**, Spiros Lekkakos, Basile Bruna, Caropresso Fernanda, Bello Pilar. Capacity Planning Optimization for a pharmaceutical company. *European Journal of Operational Research (EJOR)*.
3. Landaeta R and **Diaz R.** Transferring Knowledge across Projects: The Moderating Effects of Job Demands. *IEEE Transactions on Engineering Management*.
4. Laranjeira L., **Diaz, R.** Knoppen D. The impact of new product introductions on consumer packaged goods manufacturing operations. *Journal of Operations Management (JOM)*.

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.** 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.
4. **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.

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

NEWSLETTER ARTICLES

1. 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](#)
2. **Diaz, R.** Adapting Manufacturing Logistics to the Digital Era. *Mundo Empresarial*. September 1, 2017. Available Online: [100 Decalogo expertos ZLC Diaz.pdf](#). Visited: 12/1/2019
3. **Diaz, R.** Building a Better Approach to Disaster Recovery. April 7, 2016. Available Online: MIT-ZLC Newsletter. [www.zlc.edu.es/news/](#). Visited: 12/1/2019
4. **Diaz, R.** and Lekkakos Spyridon. New approach to capacity planning cuts drug company capital requirements. Available Online: MIT-ZLC Newsletter. [www.zlc.edu.es/news/](#). Visited: 12/1/2019
5. **Diaz, R.** Can Companies Be Both Innovative and Efficient? MIT-ZLC Newsletter. Available Online: [www.zlc.edu.es/news/](#). Visited: 12/1/2019
6. **Diaz, R.** Reshaping Manufacturing Logistics for the Digital Age. MIT-ZLC Newsletter. Available Online: [www.zlc.edu.es/news/](#). Visited: 12/1/2019
7. **Diaz, R. and De la Cruz Teresa.** Logistics Education a Remedy for Improving Healthcare. Available Online: MIT-ZLC Newsletter. [www.zlc.edu.es/news/](#). Visited: 12/1/2019
8. **Diaz, R. and Gomes Leonardo.** Building an ambidextrous supply chain & operations strategy. Available Online: MIT-ZLC Newsletter. [www.zlc.edu.es/news/](#). Visited: 12/1/2019

PEER-REVIEWED CONFERENCE PROCEEDINGS

1. Longo, F., Padovano, A., Gazzaneo, L., Frangella, J. and **Diaz, R.**, 2021. “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
2. Longo, F., Padovano, A., Nicoletti, L., Fusto, C., Elbasheer, M. and **Diaz, R.**, 2021. “Fuzzy Cognitive Map-Based Knowledge Representation of Hazardous Industrial Operations. International Conference on Industry 4.0 and Smart Manufacturing.” 23-25 November 2020.
3. **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.

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

4. 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.
5. **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.
6. 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, D.C., November 6-7, 2019.
7. 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.
8. McLeod George, Behr Joshua, **Diaz R.** GIS for Storm Flood Population Vulnerability Analysis. CoastGIS Conference 2015.
9. **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.
10. **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.
11. Longo Francesco, Nicoletti Letizia, **Diaz R.**, Behr Joshua. Health Care Facility Improvement through Simulation. IWISH 2013. Athens, Greece.
12. **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.
13. 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. Spring Simulation Conference, 2012. April 7-10, 2013. San Diego, CA.
14. **Diaz R.**, Szklo-Coxe, Mariana, Behr Joshua, Toba Lionel. Modeling Sleeping behavior -source of chronic diseases and risky behavior: A preliminary compartmentalized simulation model.

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

2012 International Annual Conference American Society of Engineering Management. October 17-20, 2012. VA Beach.

15. **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.
16. 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.
17. **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.
18. **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.
19. 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.
20. 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.
21. **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.
22. **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.
23. 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.

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

24. **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.
25. 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.
26. **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.
27. 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.
28. 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.
29. 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.
30. 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 D.C.
31. **Diaz R.** Using Optimization Coupled with Simulation to Construct Layout Solutions. Spring Simulation Conference, 2010. April 11-15, 2010. Orlando, Florida.
32. Bruzzzone 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.
33. 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.

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

34. 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.**, 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.
2. **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.
3. **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.
4. 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.
5. **Diaz, R.**, Smith, K., “Assessing Risk of Shipbuilding and Repair Sub-Tier Suppliers.” Decision Science Conference (DSI) Conference 2020. Online
6. 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.
7. **Diaz R.**, Ardalan. Net-CONWIP: Improving pull-based control systems. Decision Science Conference (DSI), 2017. November 22-26, 2017.
8. 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.
9. **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.
10. Behr Joshua, **Diaz R.** Sheltering and Facilitating Housing Stock Recovery Following a Catastrophic Storm” presented on Thursday, March 31th. The annual Virginia Emergency

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

Management Symposium is March 30- April 1, 2016. Virginia Department of Emergency Management and the Virginia Emergency Management Association. Newport News, VA.

11. **Diaz R.** and Behr Joshua. Evacuation rational of vulnerable populations: Moderators and Mediators. Healthcare Organizations Emergency Preparedness Seminars (HOEPS). April 2015. VA.
12. 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.
13. **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.
14. **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.
15. 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.
16. **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.
17. **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.
18. **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.
19. 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.
20. **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.

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

21. 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.
22. **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.
23. **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.
24. 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.
25. **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.
26. **Diaz R.**, Ardalan A. CONWIP and Net-CONWIP: A Simulation Study. International Conference OR. Complex Systems. September. 1- 3, 2010. Munich, Germany.
27. 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.
28. **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.
29. 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.
30. **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.

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

31. **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.
32. 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.
33. **Diaz R.** Analyzing Inventory Models with Markovian Auto-correlated Demand Via Simulation Optimization. INFORMS Annual Meeting. October 14, 2008. Washington D.C.
34. 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.
35. **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.
36. **Diaz R.** A Simulation Optimization Approach to Solve Stochastic Inventory Problems with Autocorrelated Demand. INFORMS Annual Meeting. November 4-7, 2007. Seattle, WA.
37. 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 Behr J. Giles B. Statistical Analysis of Mediators and Moderators Affecting High-Frequency Emergency Department Utilizers: A Structural Equation Modeling Approach. Ongoing.
2. **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).
3. **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. U.S. Catastrophic Planning Team (HRCPT) and VA Department of Emergency Management (VDEM). July 2013.

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

4. **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.
5. **Diaz R** and Talley W. Optimization of Refuse Collection Routing for the City of Hampton VA. Hampton VA. October 2011.
6. **Diaz R** and Talley W. Educating College Students in M&S. Opportunity Inc. June 2010.
7. **Diaz R**. Improving Productivity at SYSCO by Enhancing Storage Assignment and Family-Based Grouping. May 2009.
8. Talley W. and **Diaz R** Modeling the Economic Impact of Six Transportation Alternatives for the Hampton Roads Region. November 2008.
9. Sokolowski J., & **Diaz R**. Mathematical characterization of forecasting model for the Anheuser-Busch products. R.N. V07-005. March 2008.
10. Sokolowski J., Banks C., Armstrong R., Gaskins R., & **Diaz R**. Population dynamics investigative research to support Marine Corps Studies System Irregular Warfare. R.N. V06-002. November 2006.
11. **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.

TEACHING

OLD DOMINION UNIVERSITY

1. Homeland Security Logistics: Data Analytics Perspectives (To be taught for the Graduate School and School of Continuing Education- Fall 2021)
2. Logistics and Supply Chains. Spring 2015, Fall 2013, Summer 2013
3. Supply Chain and Logistics. Fall 2014
4. Operations Management. Spring 2014, Fall 2013
5. Management Science / Operations Research. Spring 2013
6. Supply Chain and Reverse Logistics. Spring 2010

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

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

OLD DOMINION UNIVERSITY – EXECUTIVE EDUCATION

8. Introduction to System Dynamics Simulation. Fall 2012
9. Modeling and Simulation for Healthcare Management. Spring 2011

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

10. Strategic Supply Chain Innovation and Sustainability. Spring 2018

MIT – ZARAGOZA LOGISTICS CENTER (ZARAGOZA, SPAIN)

11. Data Analytics and Innovation: ZLOG – Spring 2019
12. Supply Chain Network Design and Optimization: ZLOG Elective - Spring 2018
13. Logistics Systems – Analytics Methods: ZLOG Core Course. Fall 2015, Fall 2016, Fall 2017, Fall 2018
14. Strategic Manufacturing Logistics: ZLOG Advanced Elective. Spring 2016, Spring 2017, Spring 2018
15. Forecasting. Spring 2016, Fall 2016
16. Process Planning and Control. Spring 2017
17. Lean Management. Spring 2017, Spring 2018, Spring 2019
18. Supply Chain Modeling and Simulation (PhD Level). Summer 2017, Summer 2018.
19. Healthcare Logistics Management Analytics– Core class development (Masters and PhD levels) – Erasmus+. Ongoing.

FRAUNHOFER INSTITUTE – UNIVERSITY DORTMUND, GERMANY

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

MIT ZARAGOZA – EXECUTIVE EDUCATION

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

21. Introduction to Business Analytics and digital transformation (Airbus). March 2019
22. Demand Management Analytics and S&OP (Baltic Mills). October 2018
23. Supply Chain Innovation – Introduction to Industry 4.0 and digitization (Automotive Cluster - Galicia). December 2017
24. Network Design (Asia Group). Summer 2016
25. 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 Internet of Things 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.

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

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

UNIVERSITY SERVICE

1. Maritime Initiative Leadership – Strategic Sub-Committee – ODU – Fall 2021 to Present.
2. Maritime Initiative Leadership Group – ODU – Fall 2020 to Present.
3. Maritime Industrial Base Ecosystem (MIBE) - Academic Member – ODU – 2019 to Present.
4. Latino Mentorship Program – ODU –2020 to Present.
5. Latino Student Support – ODU – 2019 to Present.
6. Latino Employee Association- Member – ODU – 2019 to Present.
7. PhD Program Director – MIT Zaragoza – Spring 2017 – Spring 2019.
8. PhD Summer Academy Director – MIT Zaragoza – Summer 2018.
9. PhD student selection process (Rounds I and II) – MIT Zaragoza – Spring 2017, Spring 2018.
10. M.S. student selection process (Rounds I, II, and III)– MIT Zaragoza – Spring 2017, Spring 2018.
11. M.S, student selection process – MIT Zaragoza – Winter 2016 (Source: MIT Sloan Business School).
12. M.S student selection process – MIT Zaragoza – Fall 2016 (Source: CTL Micromaster).

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

13. Member of the faculty search committee – MIT Zaragoza – Fall 2016.
14. Member of the faculty Search committee – MIT Zaragoza – Spring-Summer 2016.
15. PhD/M.S student selection process – MIT Zaragoza – Spring 2016.
16. PhD/M.S. student selection process – MIT Zaragoza – Fall 2015.
17. Member of VMASC Senior Project Scientist Search Committee –Transportation focus, Spring 2014.
18. Organizer and Acting Co-Director, VMASC -Advanced Analytic Lab, Fall 2013.
19. Member and organizer VMASC - M&S Capstone General application 2013.
20. Member of VMASC Software Developer Search Committee, Spring 2012.
21. Member and organizer VMASC - M&S Capstone General application 2012.
22. Member and organizer VMASC -M&S Capstone Application track 2011.
23. Member of VMASC Senior Project Scientists Search Committee, Spring 2010.
24. Member of the Department of Modeling, Simulation, and Visualization Engineering Faculty Search Committee –Healthcare focus, Spring 2010.
25. Member and organizer VMASC - M&S Capstone Application track 2010.
26. Member of VMASC Faculty Search Committee – Operations Research focus, Spring 2009.
27. Member and organizer VMASC - M&S Capstone Application track 2009.
28. Member of VMASC Faculty Search Committee –Healthcare focus, Spring 2008.
29. Member of VMASC Faculty Search Committee – Military/Healthcare focus, Spring 2008.

PROFESSIONAL SERVICE

Scholarly Journals

1. Reviewer, Journal of Transportation Research Part E (2011- present)
2. Reviewer, International Journal of Production and Operations Management (IJPOM) - (2016-present)
3. Reviewer, International Journal of Production Economics (IJPE) - (2015- present)

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

4. Reviewer, Journal of Transportation Research Part A (2015- present)
5. Special Issue Editor, International Journal of Privacy and Health Information Management (IJPHIM) (2013).
6. Reviewer, International Journal of Production Research (IJPR) - (2013- present)
7. Special Issue Editor, SIMULATION: Transactions of the Society for Modeling and Simulation International (2012).
8. Reviewer, Simulation in Healthcare (2012-present).
9. Reviewer, Production and Operations Management (POMS) (2012-present).
10. Reviewer, Journal of Modeling and Simulation (2012-present).
11. Associate Editor, SIMULATION: Transactions of the Society for Modeling and Simulation International (2011).
12. Reviewer, Maritime and Port Logistics of the Journal of Mechanical Engineering (2011).
13. Reviewer, SIMULATION: Transactions of the Society for Modeling and Simulation International (2008- Present)
14. Reviewer, International Journal of Simulation and Process Modelling (2010 – present).

Professional Societies and Academic Institutions

1. Productions and Operations Management (2010 – Present)
2. Decision Science Institute (2008– Present)
3. INFORMS (2008– Present)
4. Reviewer, Decision Science Conference, 2017.
(Sessions 1: Modeling Manufacturing System; Session 2: Global Supply Chain)
5. Reviewer, Spring Simulation Conference, 2014 and 2015.
6. Symposium Chair: Enterprise Applications, Spring Simulation Conference 2013, April 8- 11, 2013, San Diego, CA.

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

7. Reviewer, Best Symposium Enterprise Applications Paper Award, Spring Simulation Conference, 2013, April 8- 11, 2013, San Diego, CA.
8. Reviewer. 2013 International Conference on Social Computing, Behavioral Modeling, & Prediction (SBP13).” April 3 - 5, 2013. Washington, D.C.
9. Reviewer and Panelist National Science Foundation (NSF) -NSF-P121701 Health Care and Supply Chains. Summer 2012. Washington, D.C.
10. Reviewer, European Modeling and Simulation Symposium 2012 (EMMS and IWISH). Sep 17-20. Vienna, Austria.
11. Symposium Chair: Enterprise Applications. Spring Simulation Conference, 2012. April 7-10, 2012. San Diego, CA.
12. Reviewer, Spring Simulation Conference, 2012, 2012. April 7-10, 2012. Orlando, FL.
13. Session Chair and Reviewer, Conference on Harbor, Maritime & Multimodal Logistics Modelling and Simulation. September 12-14, 2011. Rome, Italy.
14. Session Chair, Applications of M&S in Healthcare Management. INFORMS Annual Meeting 2011. November 13-16, 2011. Charlotte, NC.
15. Session Chair, Applications of M&S in Healthcare Management. INFORMS Healthcare, June 24, 2011. Montreal, Canada.
16. Chair Session, Emerging Applications, Spring Simulation Conference 2011, April 6-9, 2011. Boston, MA.
17. Reviewer, Conference on Harbor, Maritime & Multimodal Logistics Modelling and Simulation. October 13 – 15, 2010. Fes – Morocco.
18. Session Chair, Spring Simulation Conference, 2010. April 11-15, 2010. Orlando, Florida.
19. Session Chair. INFORMS Annual Meeting 2009. Applications of M&S in Healthcare Management. October 2009. San Diego, CA.
20. Supported revision of Certified Modeling Simulation exam questions 2011 and 2012.
21. 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.

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

SELECT COMMUNITY SERVICE

1. Guest Speaker and Panelist. COVID-19 and US Roads. Permanent International Association of Road Congresses (PIARC) - World Road Association (WRA), as a representative for US Transportation Research Board (TRB). April 23, 2020
2. Guest Speaker and Panelist. Maritime COE's Forum - NATO. Maritime Industrial Base and Naval Readiness: Compound Hurricane-Pandemic Threat. May 28, 2020
3. Panel Moderator: Net Trends in Supply Chain. Fourth Global Supply Chain Research Forum 2018. Spain. May 29, 2018.
4. 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.
5. 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
6. Panel Moderator. Second Global Supply Chain Research Forum 2016. Panel: Supply Chain Digitalization. Spain. May 24, 2016.
7. 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)
8. Guest Speaker and Panelist. HRCPT Long-term housing recovery strategy workshop conducted by Dewberry. April 25, 2013. Hampton, VA.
9. Guest Speaker and Panelist Diaz R. Sea Level Rise – Eco-conference - Panelist. April 16, 2013. Norfolk, VA.
10. 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.
11. Panelist. Analyzing the flow of low-acuity patients through Primary Care Physician (PCPs) and Specialists venues to provide healthcare services to underserved populations: A Modeling and Simulation study, Access partnership, Suffolk, Virginia, Rafael Diaz, Joshua Behr, 2010.
12. 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.

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

13. Panelist. Educators Modeling and Simulation Day – Tidewater Community College (TCC) - Panelist. Summer 2009. Suffolk, VA.
14. 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.

HONORS AND AWARDS

Outstanding Research Award, ZLC - MIT Global Scale	2017
Venia Docendi , Universidad de Zaragoza, Spain	2016-2019
U.S. Citizenship (Norfolk, VA)	2014
Best Paper Award <i>The International Conference on Harbor, Maritime & Multimodal. Rome, Italy</i>	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 DEVELOPMENT

- Natural Language Processing (NLP) and Econometrics in Python. Data Camp, March 2021
- Supply Chain Analytics using PuLP from Python.
- Advanced Deep Learning with Keras. Data Camp, March 2021
- Big Data with PySpark. Data Camp, February 2021
- Fundamentals of Operations Technology (OT) and Cybersecurity. Udey Academy January 2021
- Machine Learning Scientist with Python. Data Camp, January 2021

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

- Tableau Fundamentals. Data Camp, August 2020
- Intermediate Python Data Camp. January 2020
- Internet and Computer Security: A hands-on Approach
- R for Analytics. July ODU. 2019
- Online Case Method Teaching Seminar, Harvard Business Publishing. February 2018
- Case Method Teaching Seminar, Harvard Business Publishing. Italy. February 2017
- Introduction to Python for Analytics. September – October 2017
- Data Science and Big Data Analytics: Making Data-Driven Decisions. Massachusetts Institute of Technology (MIT). October - November 2017.

GRANT FUNDED RESEARCH

1. **U.S. Department of Housing and Urban Development (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
2. **Coastal VA, Commonwealth Cyber Initiative (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
3. **National Science Foundation (NSF) (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
4. **Virginia Department of Emergency Management (VDEM) (Co-PI)** 01/01/2021-01/01/2022
Award: \$212,000
Project Title: COVID-19 Evacuation and Sheltering Risk Perception Study.
5. **TED TEXT LLC** 12/09/2020-06/09/2021
Award: \$58,650
Using Text Data: Competency Evaluation System and texting system

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

6. **Healthcare Erasmus+** 09/01/2017-04/31/2019
Award: N/A
Structuring and delivering healthcare management program at Masters and PhD level
7. **Aves Nobles – Supply Chain Innovation** 03/01/2017-12/31/2018
Award: N/A
8. **Carreras Logistics** 09/01/2016-09/01/2016
Award: N/A
9. **Clariant – Support Supply Chain Education Program** 03/01/2016-09/01/2016
Award: N/A
10. **City of Portsmouth – Sea Level Rise (Co-PI)** 08/01/2014-08/15/2015
Award: \$135,000
Analytics – The impact of SLR: Resiliency and Adaptation
11. **NCCMMS – P-516851 (PI)** 06/01/2013-06/15/2014
Award: \$37,800
Chronic Disease Management Tool Development
12. **National Institutes of Health P-311871 (Co-PI)** 10/01/2012-10/01/2014
Award: \$422,530
Policy Resistance within a Region's Healthcare System: A System Dynamics Approach
13. **VDEM (PI) P- 530101** 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
14. **Perry Endowment – P-514321 (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 disaster
15. **ODURF – P- 516851 (PI)** 06/01/2011-04/15/2012
Award: \$37,800
The Disparate Impacts of SLR on Hampton Roads' Underserved Populations.
16. **City of Hampton – P-502211 (PI)** 09/01/2009-06/30/2010
Award: \$34,600
Simulation-based Optimization Routing

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

17. **Opportunity Inc. Department of Labor** P-797901 (PI) 09/01/2009-06/30/2010
Award: \$71,500
Educating College Students in M&S Engineering
18. **Sysco Inc.** P-786351 (PI) 08/01/2008-02/01/2009
Award: \$30,000
Improving Productivity at SYSCO by Enhancing Storage Assignment
19. **EDA II** (Co-PI) 07/01/2008-07/01/2009
Award: \$100,000
Developing Business Analytics M&S Research Cluster.
20. **Commonwealth of VA** (Co-PI) 07/01/2008-11/15/2008
Award: \$250,000
Six transportation alternatives.
21. **EURPAC** (Co-PI) 02/01/2008-04/15/2008
Award: \$10,000
Econometrics Modeling - Forecasting

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 |