

Rafael Diaz, Ph.D.

School of Cybersecurity, School of Supply Chains, Logistics, and Maritime Operations
Old Dominion University
Innovation Research Park 1, 4111 Monarch Way, VA 23529 – rdiaz@odu.edu

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

July 2023 – Present	Tenured Full Professor, Commonwealth Cyber Initiative Fellow <i>-Interdisciplinary Studies, School of Cybersecurity</i> <i>-Batten College of Engineering and Technology, Department of Engineering Management & Systems Engineering</i> Old Dominion University, Norfolk, VA
June 2023 – July 2023	Research Professor, <i>Virginia Modeling, Analysis, and Simulation Center</i> , Old Dominion University, Suffolk, VA
April 2019 – Jun 2023	Research Associate Professor, <i>Virginia Modeling, Analysis, and Simulation Center</i> , Old Dominion University, Suffolk, VA
Oct 2015 – Dec 2019	Research Affiliate, MIT- <i>Center for Transportation & Logistics</i> Massachusetts Institute of Technology, Cambridge, MA
Oct 2015 – April 2019	Professor of Supply Chains, <i>MIT-Zaragoza International Logistics</i> , Massachusetts Institute of Technology- Zaragoza Logistics Center (MIT-ZLC), Spain
Oct 2013 – Oct 2015	Research Associate Professor, <i>Virginia Modeling, Analysis, and Simulation Center</i> , Old Dominion University, Suffolk, VA
Feb 2008 – Oct 2013	Research Assistant Professor, <i>Virginia Modeling, Analysis, and Simulation Center</i> , Old Dominion University, Suffolk, VA
Aug 2007 – Feb 2008	Postdoctoral Research Associate, <i>Virginia Modeling, Analysis, and Simulation Center</i> , Old Dominion University, Suffolk, VA

ADMINISTRATIVE APPOINTMENTS

July 2023 – Present	Director of Supply Chain Cybersecurity Research Cluster, <i>Commonwealth Cyber Initiative (CCI)</i> , Norfolk, VA
Jan 2024 – Present	Interim Graduate Program Director (GPD), <i>School of Supply Chain, Logistics, and Maritime Operations</i> , Old Dominion University, Norfolk, VA
July 2022 – Present	Interim Graduate Program Director (GPD), <i>School of Cybersecurity</i> , Old Dominion University, Norfolk, VA

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- July 2022 – Present Coordinator, Graduate Certificate in Cybersecurity Risk Management Program, *School of Cybersecurity*, Old Dominion University, Norfolk, VA
- July 2023 – Present Coordinator, Graduate Certificate in Homeland Security Program, *Graduate School*, Old Dominion University, Norfolk, VA
- June 2021 – July 2023 Digital Ship Lab Co-Director, *Digital Shipbuilding Enterprise - Virginia Modeling, Analysis, and Simulation Center*, Old Dominion University, Norfolk, VA
- May 2019 – July 2023 Advanced Analytics Lab Co-Director, *Virginia Modeling, Analysis, and Simulation Center*, Old Dominion University, Norfolk, VA
- Jan 2016 – April 2019 PhD Program Director, *MIT-Zaragoza International Logistics Program*, Zaragoza Logistics Center (ZLC), Cambridge, MA - Spain

ACADEMIC LEADERSHIP AND GOVERNANCE

Chair, Promotion and Tenure Committee, Schools of Cybersecurity (SC) and Supply Chain, Logistics, and Maritime Operations (SSCLMO), Old Dominion University (2023–Present)
Leads evaluation processes for tenure-track and research faculty. Implemented revised criteria emphasizing interdisciplinary research, applied impact, and professional engagement.

Co-Author, Graduate Handbook, School of Cybersecurity (2025–Present)
Developing comprehensive academic policies governing graduate progression, faculty mentoring, student assessment, and degree compliance.

Architect of Interdisciplinary Academic Pathways, Old Dominion University (2025–Present)
Designed and integrated new pathways connecting Data Science, Cybersecurity, and Supply Chain graduate programs to leverage synergistic capabilities across ODU's Interdisciplinary Schools.

Architect of Naval Postgraduate School (NPS)–ODU Academic Pathways (2025–Present)
Led the development of an academic alignment model enabling NPS students to apply graduate coursework toward ODU master's degrees and certificates. Expanded military-to-academia pathways and strengthened strategic defense-sector partnerships.

Member - Teaching Portfolio Committee (2024–Present)
Directed revisions to evaluation processes to align faculty performance assessment with interdisciplinary research productivity, applied impact, and professional contributions.

Chair, Graduate Committee, Schools of Cybersecurity and Supply Chain, Logistics, and Maritime Operations (2023–Present)
Oversees curriculum governance, assessment, continuous improvement, and graduate student policy implementation across two interdisciplinary schools.

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Recipient, AI Teaching Fellowship, Old Dominion University (2024–2025)

Selected for university-wide initiative advancing responsible and effective integration of artificial intelligence in learning and assessment.

Member, Academic Success Collaboration Committee (2024–Present)

Contributes to university-wide strategies supporting graduate retention, academic progress, and data-informed student success systems.

Assessment Lead, Master's and Graduate Certificate Programs in Cybersecurity (2025)

Responsible for institutional assessments, student-learning outcomes, and continuous-improvement reporting for interdisciplinary cybersecurity programs.

Accreditation Lead, National Security Agency (NSA) Center of Academic Excellence (CAE) – Master's in Cybersecurity (Spring–Summer 2025)

Directed evidence documentation, curriculum alignment, and academic compliance for eligibility under the NSA CAE Cybersecurity-AI designation.

Director, Cybersecurity Bridge Master's Program (2024–Present)

Designed and implemented an interdisciplinary bridge model enabling non-STEM career changers to transition into cybersecurity graduate study.

Initiator of Direct-Entry Graduate Pathways in Cybersecurity (2024–Present)

Championed policy changes enabling direct admission of high-performing undergraduates into MS programs. Successfully transitioned 20 students in a single semester, strengthening graduate enrollment pipelines.

Co-Author Cybersecurity Faculty Handbook, Chapter: Teaching and Research Faculty Eval (2026).

PUBLICATIONS

A. JOURNAL ARTICLES PUBLISHED

1. Abdelmagid A. **Diaz, R.**, A New Cyber Risk Identification and Assessment Approach of the Maritime Cyber Risks. *Enterprise Information Systems*, 19(10). (2025).
2. Singh B. C., Foytik P., **Diaz R.**, Shetty S., "TL-ConvLSTM: A Transfer-Learning-Based Convolutional LSTM to Identify and Forecast Traffic in the NextG Environments," in *IEEE Systems Journal*. 19 (2), pp. 358-369, June 2025, doi: 10.1109/JSYST.2025.3569445.
3. Abdelmagid A. **Diaz, R.**, Evaluating Zero-Trust Architecture as a Risk Countermeasure in Advanced Technology Systems and Enterprises: The Case of Small-Medium Businesses. *Risk Analysis: An International Journal*. (2025).
4. **Diaz, R.**, K Smith, R Ungo. A Cyber Risk Management Perspective on Shipbuilding AI-Based Supply Chain Management. *Journal of Information Warfare*. (2024). Vol. 23 (4), 57-71.

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5. Ungo R, **Diaz, R.**, Singh B. Developing a Framework to Evaluate the Cyber-protection of the Information Sharing across Different Types of Supply Chain Governance. *Journal of Information Warfare*. (2024). Vol. 23 (4), 72-88.
6. Smith, K., **Diaz, R.**, and Shen, Y A Quantified Hypervulnerability Approach for Assessing Resilience in Supply Chain Networks, *International Journal of Simulation and Process Modelling* (2024) vol. 21 (3), 166-178.
7. **Diaz R.**, Acero Beatriz, Behr Joshua. Logistics of Evacuating and Sheltering Medically Fragile Populations: Examining the Effects of Health Awareness. *IEEE Transaction on Engineering Management*. vol. 71, pp. 14882-14896, 2024. Impact Factor: 8.072
8. Bikash Chandra Singh, **Diaz R.**, Sachin Shetty, Evaluating the Performance of 5G NR in Indoor Environments: An Experimental Study, *Procedia Computer Science*, V. 241, 2024, pp 16-23
9. Javadnejad, Farshid, **Diaz R.**, et al. An exploratory data analysis of malware/ransomware cyberattacks: insights from an extensive cyber loss dataset. *Enterprise Information Systems* (2024): 2369952.
10. **Diaz R.**, et al. Applications of AI/ML in Maritime Cyber Supply Chains. *Procedia Computer Science* 232 (2024): 3247-3257
11. **Diaz R.** and Ardalan A. “A Simulation Framework to Innovate under Industry 4.0 Production Environments: Net-CONWIP Priority Rule in Constant Work-In-Process Systems.” *Industrial Management & Data Systems (IMDS)* 123.5 (2023): 1569-1598. Impact Factor: 5.090
12. Acero, B., **Diaz, R.**, & Behr, J. G. “Flooding Perception and its Impact on Hurricane Evacuation.” *International Journal of Disaster Risk Reduction*, (2023). 95, Impact Factor: 4.84
13. **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 Research Part E: Logistics (TRE)*. (2023). 103179. Impact Factor: 10.047.
14. **Diaz R.**, Smith Katie, Bertagna Serena, Bucci. Digital Transformation, Applications, and Vulnerabilities in Maritime and Shipbuilding Ecosystems. *Procedia Computer Science*. 217 (2023), 1396-1405. Impact Factor: 2.27
15. Yusuf, Wie, Whytlaw, Jennifer L, Hutton Nicole, Olanrewaju-Lasisi, Taiwo, Giles, Bridget, Lawsure, Behr Joshua, **Diaz R.**, McLeod George. Evacuation Behavior of Households Facing Compound Hurricane-Pandemic. *Public Administration Review* (2023). Impact Factor: 8.144
16. **Diaz R.** Sailesh Kolachana, Rodrigo Falcão Gomes, Analyzing and Prioritizing Agility in Global Pharmaceutical Supply Networks: A Simulation. *Journal of Operational Research Society (JORS)*. (2023). 74 (5), 1242-1260. Impact Factor: 3.27
17. **Diaz R.**, Behr J., Acero Beatriz, Giles Bridget, Yusuf, Juita-Elena. A Simulation-based Disaster Management Framework to Analyze Housing Recovery: Hampton Roads, U.S. *IEEE Transaction on Engineering Management* 6 (2022). 1-17 Impact Factor: 8.072
18. **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: 10.047

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19. **Diaz R.**, Chan Phan, Golenbach Daniel. A prescriptive framework to support express delivery supply chain expansions in highly urbanized environments. *Industrial Management & Data Systems*. 122 (2022), 7, 1707-1737. Impact Factor: 5.090.
20. **Diaz R.**, Strategic Digital Shipbuilding Project Portfolio Configuration and Optimization. *International Journal of Simulation and Process Modelling (IJSPM)*. (2022). 2, V18, 2,140-154 Impact Factor: 2.775
21. 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: 2.27
22. 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: 2.27
23. 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: 5.05
24. **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: 2.27
25. 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: 2.27
26. 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: 2.27
27. 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: 4.20
28. Hutton Nicole S., Mumford Steven W., Saitgalina Marina, Yusuf Juita-Elena (Wie) Behr Joshua G., **Diaz R.**, Kiefer John J. Building Nonprofit Resilience in Anticipation of Compound Hurricane-Pandemic Threat. *International Journal of Public Administration*. Ref: 201707086. Impact Factor: 1.85
29. 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: 8.072
30. **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

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31. **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: 8.072
32. **Diaz, R.**, and Erika Marsillac. Evaluating strategic remanufacturing supply chain decisions. *International Journal of Production Research* (2017) Vol. 55.9, 2522-2539. Impact Factor: 11.60
33. **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: 1.699
34. **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: 10.22
35. **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: 24872498. Impact Factor: 8.568
36. 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
37. Behr Joshua, **Diaz R.**, Muge Akpınar-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
38. 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
39. 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
40. 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
41. 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
42. **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

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43. **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
44. **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
45. 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
46. 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
47. 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
48. **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
49. **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
50. **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
51. 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
52. 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
53. 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
54. **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
55. Behr J. and **Diaz R.** Hurricane Preparedness: Community Vulnerability and Medically Fragile Populations. *The Virginia Newsletter*. (2014) Vol 90 (2): 1-10

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56. **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.
57. 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
58. **Diaz, R.**, and Andreas Tolk. "M&S optimization applications in industry and engineering, part 2." *Simulation* 89.9 (2013): 1039-1040.
59. **Diaz, R.**, and Andreas Tolk. "M&S optimization applications in industry and engineering, part 1." *Simulation* 89.3 (2013): 251-253.
60. **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.
61. 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
62. 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
63. **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
64. 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: 4.9
65. **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
66. 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
67. **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
68. **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

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69. **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
70. **Diaz R.**, and Ardalan A. An Analysis of Dual-Kanban Just-In-Time Systems in a Nonrepetitive Environment. *Production and Operations Management (POMS)*. (2010). Vol. 19, No. 2. Impact Factor: 4.965

B. JOURNAL ARTICLES -PENDING REVISIONS

1. 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.*

C. JOURNAL ARTICLES IN PROGRESS

1. Kang, Liuwang, **Diaz R.** A Data-Driven Cyber-Physical Security Vulnerability Assessment System for Autonomous Driving in Port Networks. *IEEE Internet-of-Things* (in revision).
2. Kang, Liuwang, **Diaz R.**, Smith Katie. A Cooperative Scheduling System for Autonomous Trucks for Container Shipping in Port Networks. *IEEE Transactions on Intelligent Transportation Systems* (in revision).
3. Smith, K., **Diaz, R.**, Shen. Multi-layer Network Dependency Analysis enabled by Recurrent Neural Networks. *Computers and Industrial Engineering (CAIE)*.
4. **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
5. **Diaz R.**, Spiros Lekakos, Basile Bruna, Caropresso Fernanda, Bello Pilar. Capacity Planning Optimization for a Pharmaceutical Company. *European Journal of Operational Research (EJOR)*. Impact Factor: 5.334
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. 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

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D. 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.

E. BOOK SERIES

1. **Diaz R.** *Introduction to Homeland Security Supply Chains – A Cybersecurity Perspective – Wiley (Expected 2025) - Proposal*
2. Behr J. **Diaz R.** (2015) *Wiley Series in Modeling and Simulation – Founder Editors*. Wiley.

F. 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

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Innovation Research Park 1, 4111 Monarch Way, VA 23529 – rdiaz@odu.edu

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 Lekakos 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. AI to guide panicky public during disasters (2025). [Link](#)
2. Support VT Dock-to-Door Annual Meeting with Industry and Partners (ODU Webb Center) [Link](#)
3. Panel moderator: Maritime Security Regimes Roundtable - 2025 (MSR RT-25), Oct 28. Slover Library. [Link](#)
4. Industry Engagement: TASC (Tidewater Association of Service Contractors) and TGIC (Tidewater Government-Industry Council)
5. Keynote Speaker: Artificial Intelligence Series - Building AI-Ready Employees. January 8, 2025. [Link](#)
6. Institute for Supply Chain Management (ISM).
7. Keynote Speaker: Supply Chains at a Crossroads: Cybersecurity and AI in the Age of Disruption. 2025 – VA Beach
8. Ten Faculty Selected as Artificial Intelligence (AI) Teaching Fellows as the Division of Academic Affairs Expands Course Offerings on the Subject. October 2024. [Link](#)
9. Water System Infrastructure - Innovative Experiential Learning Model to Enhance Career Interest in Cyber-Water. July 2024. [Link](#)

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Old Dominion University
Innovation Research Park 1, 4111 Monarch Way, VA 23529 – rdiaz@odu.edu

10. ODU and COVA CCI hire additional cybersecurity faculty. <https://covacci.org/cova-cci-news/new-faculty/> August 15, 2023.
11. ODU Researchers Receive Grants to Address Maritime Cybersecurity Needs. <https://www.odu.edu/article/odu-researchers-receive-grants-to-address-maritime-cybersecurity-needs>, April 3, 2023
12. 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](#)
13. 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](#)
14. ODU. Researchers Offer Strategies to Address Pandemic-Related Hesitancy to Evacuate or Seek Shelter During Storms. September 10, 2021
15. ODU-led Cybersecurity Projects Granted Funding (Shipbuilding and repair). News @ ODU, and [ODU-led Cybersecurity Projects Granted Funding - News Break](#), July 19, 2021
16. 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
17. Pediatric Asthma – Another Negative Outcome of Recurrent Flooding, ODU. Researchers Find. News @ O.D.U., June 11, 2021
18. A rising tide – ODU. aims to lift all boats in global maritime industry. Virginia Business. April 29, 2021. <https://www.virginiabusiness.com/article/a-rising-tide-2/> .
19. ODU. Researchers Lead Local Resilience Partnership Aimed at Helping Displaced Vulnerable Populations During Disaster Events. News @ ODU, March 05, 2021.
20. 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
21. First Science Pub Focuses on Hurricane Sheltering and Evacuating During the Pandemic « News @ ODU, September 25, 2020
22. Old Dominion University Partners With Hampton Roads Community Foundation to Speed Severe Weather Recovery. News @ ODU, February 28,

Rafael Diaz, Ph.D.

School of Cybersecurity, School of Supply Chains, Logistics, and Maritime Operations
Old Dominion University
Innovation Research Park 1, 4111 Monarch Way, VA 23529 – rdiaz@odu.edu

23. ODU. Researchers Help Prepare for a World with Simultaneous Pandemic and Hurricanes. News @ O.D.U., May 14, 2020
https://www.odu.edu/news/2020/2/odu_hrcf_collaborati#.YolZj-7MI2w
24. ODU. Hosts Presentation for Top FEMA Officials. News @ ODU. August 14, 2020
25. Growing storm threat requires year-round readiness – The Virginian-Pilot (pilotonline.com)
<https://www.pilotonline.com/opinion/vp-ed-column-behr-steinhilber-1020-201910202rrpcrtb2zbxfbjtfo6ppgmd7e-story.html>
26. The Logistics team of the Airbus delegation in Getafe visits Zaragoza Logistics Center and ITAINNOVA (europapress.es). February 27, 2019
27. Supply Chain Innovation - Rafael Diaz profesor del MIT Zaragoza - ZLC. Pre PILOT 2018 - YouTube. May 24, 2018
28. IBERCAJA collaborates with ZLC in the celebration of the debate forum on Log - Corporate Website | Ibercaja Bank. (09-05-2018)
29. 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](#)
30. 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
31. HUD. Officials Huddle with VMASC Researchers on Vulnerability Project. News @ ODU. August 27, 2015
32. ODU. Researchers' Vulnerability Studies Attract Federal HUD. Grant. News @ ODU. May 21, 2015
33. ODU. Hosts White House-Sponsored Event on Sea Level Rise Preparedness, Mitigation. News @ ODU. December 02, 2014
34. New Tool Developed By ODU. Researchers Aimed at Encouraging Residents to Evacuate Before Big Storms. News @ ODU. July 02, 2014
35. Behr, Joshua and Diaz, Rafael, "Researching Storms to Prepare for the Next One" (2013). News Items. 22. https://digitalcommons.odu.edu/odurc_news/22
36. ODU. Profs to Talk About Perceptions, Behavior of Local Residents in Response to Hurricane Threat. News @ ODU. January 28, 2013

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School of Cybersecurity, School of Supply Chains, Logistics, and Maritime Operations
Old Dominion University
Innovation Research Park 1, 4111 Monarch Way, VA 23529 – rdiaz@odu.edu

37. VMASC Researchers' Study Looks at Region's Vulnerabilities Following a Major Storm. News @ ODU. May 30, 2013
38. VMASC profs to talk about perceptions behavior of local residents in response to hurricane threat. News @ ODU. March 2013
39. NIH Funds Study of Regional Health Care Systems by ODU. Researchers. News @ ODU. November 26, 2012
40. NIH funds VMASC study of Regional Health care systems. News @ ODU.

PEER-REVIEWED CONFERENCE PROCEEDINGS

1. Ungo, R. **Diaz R.** Application of Large Language Models (LLMs) to improve handling of disruptions and exceptions in maritime transportation. Transportation Research Board (TRB). July 2025.
2. Ungo, R. **Diaz R.** and A. Pagano 65th Transportation Research Forum, Two-way relationship between warehousing and distribution centers and maritime logistics clusters. April 2025.
3. **Diaz R.**, Ungo Ricardo, Katie Smith, Haghnegahdara Lida, Singha Bikash, PhuongTran . Applications of AI /ML in Maritime Cyber Supply Chains. ISM 2023, Portugal.
4. **Diaz, R.**, Smith, K., Shen Yuzhong. Digital Transformation, Applications, and Vulnerabilities in Maritime and Shipbuilding Ecosystems. ISM 2022.
5. 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
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. ISM 2021
7. Smith, K., **Diaz, R.**, Shen Yuzhong. Development of a framework to support informed shipbuilding based on supply chain disruptions. ISM 2021.
8. 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.
9. 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.

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Old Dominion University
Innovation Research Park 1, 4111 Monarch Way, VA 23529 – rdiaz@odu.edu

10. **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.
11. 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.
12. 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.
13. 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
14. **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.
15. 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.
16. **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.
17. 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.
18. 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.
19. Behr Joshua, **Diaz R.**, Giles Bridget, McLeod George. Policy implications and measurements of variation in recovery times across population groups. Social Coast Forum 2018
20. 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.

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Old Dominion University
Innovation Research Park 1, 4111 Monarch Way, VA 23529 – rdiaz@odu.edu

21. McLeod George, Behr Joshua, **Diaz R.** GIS for Storm Flood Population Vulnerability Analysis. CoastGIS Conference 2015.
22. 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
23. **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.
24. **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.
25. Longo Francesco, Nicoletti Letizia, **Diaz R.**, Behr Joshua. Health Care Facility Improvement through Simulation. IWISH 2013. Athens, Greece.
26. **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.
27. 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.
28. **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.
29. **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.
30. 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.
31. **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.
32. **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.

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Old Dominion University
Innovation Research Park 1, 4111 Monarch Way, VA 23529 – rdiaz@odu.edu

33. 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.
34. 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.
35. **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.
36. **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.
37. 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.
38. **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.
39. 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.
40. **Diaz R.**, Tulpule M., Longo Francesco, Cimino Antonio. Monte Carlo Applications in Onetime Decisions Projects. The International Conference on Harbor, Maritime & Multimodal Logistics Modelling and Simulation. October 13 – 15, 2010. Fes – Morocco.
41. 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.
42. 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.
43. 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.
44. Behr Joshua, **Diaz R.** A System Dynamics Approach to Modeling the Sensitivity of Inappropriate Emergency Department Utilization. 2010 International Conference on Social

Rafael Diaz, Ph.D.

School of Cybersecurity, School of Supply Chains, Logistics, and Maritime Operations
Old Dominion University
Innovation Research Park 1, 4111 Monarch Way, VA 23529 – rdiaz@odu.edu

Computing, Behavioral Modeling, & Prediction (SBP10). March 29, 2010. National Institutes of Health. Washington DC.

45. **Diaz R.** Using Optimization Coupled with Simulation to Construct Layout Solutions. Spring Simulation Conference, 2010. April 11-15, 2010. Orlando, Florida.
46. 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.
47. 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.
48. 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., Smith K. Examining the Role of AI in Protecting Maritime Supply Chains from Cyberattacks, POMS Annual Conference 2023. Orlando, FL. May 21 - 25, 2023
2. **Diaz R.**, Behr J., Smith K. Acero B. Modeling the Mobility and Coordination for Housing Recovery After a Catastrophic Event. POMS Annual Conference 2023. Orlando, FL. May 21 - 25, 2023
3. **Diaz R.**, Kang L., Wilson Gregory. "An Experiential Learning Approach to Building a Cyber Range: A Maritime Supply Chain Focus." 22nd Annual Security Conference. Las Vegas, NV. May 9-11, 2023.
4. **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.
5. **Diaz R.**, Smith, K., "Digital Port Supply Chains: A Sustainable and Resilient Perspective" 2022 Online POMS Annual Conference. April 21 - 25, 2022.
6. **Diaz R.**, Smith, K., "Developing an Artificial Intelligence Approach to Assess Supply Chain Disruptions" 2022 Online POMS Annual Conference. April 21 -25, 2022.
7. Behr J., **Diaz R.** Recover Hampton Roads. Texas A&M's Preparedness, Response, Innovation, Mitigation, and Recovery (PRIMR), 2021
8. Behr Joshua, **Diaz R.** Recover Hampton Roads: A University-Foundation Partnership with Norfolk and Portsmouth. Society for Applied Anthropology (SfAA), 2021
9. Behr Joshua, **Diaz R.** CIMA Management Platform. Virginia State Voluntary Organizations Active in Disasters (VOAD), 2021

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School of Cybersecurity, School of Supply Chains, Logistics, and Maritime Operations
Old Dominion University
Innovation Research Park 1, 4111 Monarch Way, VA 23529 – rdiaz@odu.edu

10. **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
11. 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.
12. **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.
13. **Diaz R.**, Behr J., Acero B. "Coastal Housing Recovery for Vulnerable Populations in a PostDisaster Environment: Supply Chain Analytics Perspective." Production and Operation Management Society (POMS) Conference 2021. Online. April 30 to May 5, 2021.
14. **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.
15. 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.
16. **Diaz, R.**, Smith, K., "Assessing Risk of Shipbuilding and Repair Sub-Tier Suppliers." Decision Science Conference (DSI) Conference 2020. Online
17. 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.
18. **Diaz R.**, Ardalan. Net-CONWIP: Improving pull-based control systems. Decision Science Conference (DSI), 2017. November 22-26, 2017.
19. 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.
20. **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.
21. 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.
22. **Diaz R.** and Behr Joshua. Evacuation rational of vulnerable populations: Moderators and Mediators. Healthcare Organizations Emergency Preparedness Seminars (HOEPS). April 2015. VA.

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School of Cybersecurity, School of Supply Chains, Logistics, and Maritime Operations
Old Dominion University
Innovation Research Park 1, 4111 Monarch Way, VA 23529 – rdiaz@odu.edu

23. 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.
24. **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.
25. **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.
26. 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.
27. **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.
28. **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.
29. **Diaz R.**, Behr Joshua. A supply chain perspective in rebuilding housing stocks after natural disasters. Production and Operation Management Society (POMS) Conference, 2013. May 31, 2013. Denver, Colorado.
30. 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. Pittsburgh, PA.
31. **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.
32. 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.
33. **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.
34. **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.

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School of Cybersecurity, School of Supply Chains, Logistics, and Maritime Operations
Old Dominion University
Innovation Research Park 1, 4111 Monarch Way, VA 23529 – rdiaz@odu.edu

35. 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.
36. **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.
37. **Diaz R.**, Ardalan A. CONWIP and Net-CONWIP: A Simulation Study. International Conference OR. Complex Systems. September. 1- 3, 2010. Munich, Germany.
38. 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.
39. **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.
40. 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.
41. **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.
42. **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.
43. 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.
44. **Diaz R.** Analyzing Inventory Models with Markovian Auto-correlated Demand Via Simulation Optimization. INFORMS Annual Meeting. October 14, 2008. Washington DC.
45. 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.
46. **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.
47. **Diaz R.** A Simulation Optimization Approach to Solve Stochastic Inventory Problems with Autocorrelated Demand. INFORMS Annual Meeting. November 4-7, 2007. Seattle, WA.

Rafael Diaz, Ph.D.

School of Cybersecurity, School of Supply Chains, Logistics, and Maritime Operations
Old Dominion University
Innovation Research Park 1, 4111 Monarch Way, VA 23529 – rdiaz@odu.edu

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 the pandemic. Ongoing.
2. **Diaz R.**, Kang Liuwang. 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. **Diaz R.** and Behr J. Modeling the Mobility and Coordination of Material, Labor, and Displaced Populations - Part II– HUD Final Report. 2022.
6. Behr and **Diaz**. COVID-19. COVID-19 Evacuation and Sheltering Risk Perception Study. 2020
7. **Diaz R.** Healthcare Logistics Education and Learning Pathway. HELP Project. Semi-annual report. 2018.
8. Behr and **Diaz**. Modeling the Mobility and Coordination of Material, Labor, and Displaced Populations Part I – HUD Final Report. 2017
9. **Diaz R.** Supply Chain Capacity Network Analysis. Carreras Logistics. 2016
10. **Diaz R.** and Lekkakos Spiros. Clariant – Support Supply Chain Education Program Approach. 2016.
11. Behr and **Diaz R.** Asthma Project. City of Portsmouth (2015).
12. Behr and **Diaz R.** Policy Resistance within a Region's Healthcare System: A System Dynamics Approach (2014)
13. **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).
14. **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.
15. **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.

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Innovation Research Park 1, 4111 Monarch Way, VA 23529 – rdiaz@odu.edu

16. **Diaz R.** and Behr W. Optimization of Refuse Collection Routing for the City of Hampton VA. Hampton VA. October 2011.
17. **Diaz R.** and Talley W. Educating College Students in M&S. Opportunity Inc. June 2010.
18. **Diaz R.** Improving Productivity at SYSCO by Enhancing Storage Assignment and FamilyBased Grouping. May 2009.
19. Talley W. and **Diaz R.** Modeling the Economic Impacts of Six Transportation Alternatives for the Hampton Roads Region. November 2008.
20. Sokolowski J., & **Diaz R.** Mathematical characterization of a forecasting model for the Anheuser-Busch products. RN V07-005. March 2008.
21. Sokolowski J., Banks C., Armstrong R., Gaskins R., & **Diaz R.** Population dynamics investigative research to support Marine Corps Studies System Irregular Warfare. RN V06002. November 2006.
22. **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.

GRANT FUNDED RESEARCH

1. **National Science Foundation (NSF)(Co-PI)** 11/01/2026-07/15/2028
Total Award: \$2.02 Million, ODU-Part: \$280,000
Project Title: SCC-IRG: Resilient Sheltering Decision Support for Emergency Evacuations.
2. **IRAD – ODU** 07/01/2026-07/15/2027
Award: \$100,000
Project Title: Exploring Microplastics & Endocrine Disrupting Chemicals as Emerging Issues for CB Health – Digital Twin Modeling
3. **HRCF (PI)** 06/01/2025-04/15/2026
Award: \$351,000
Project Title: Recovery HR – Complement
4. **Coastal VA, Commonwealth Cyber Initiative (Co-PI)** 01/01/2025-01/01/2026
Award: \$70,000
Project Title: Cyber-Attack Resilient Distributed and Explainable AI with Zero Trust Architecture
5. **State Council of Higher Education for Virginia (SCHEV) (PI)** 02/06/2023-06/30/2025
Award: \$75,000
Project Title: COVAConnectAI: Leading Coastal Virginia in AI Education and Integration through Design Thinking

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6. **Commonwealth Cyber Initiative (PI)** 07/01/2024-07/01/2025
Award: \$100,000
Project Title: Water System Infrastructure - Innovative Experiential Learning Model to Enhance Career Interest in Cyber-Water
7. **Coastal VA, Commonwealth Cyber Initiative (Co-PI)** 01/01/2024-01/01/2025
Award: \$50,000
Project Title: CPS: A Trusted Decision-Making System for Autonomous Driving in Supply Networks with Untrusted Components
8. **Coastal VA, Commonwealth Cyber Initiative (PI)** 01/01/2023-08/01/2024
Award: \$38,000
Project Title: Machine-learning enabled Dependency Network Analysis for Quantifying Risks and Ripple Effects Steaming from Cybersecurity Non-Compliance Issues (CMMC)
9. **National Science Foundation (NSF)(Co-PI)** 07/01/2023-08/01/2024
Award: \$200,000
Project Title: CyberCops – SFS –Cyber Leaders, Creation of Bridge Program (C-BENT)
10. **National Science Foundation (NSF)(Co-PI)** 05/01/2023-12/01/2023
Award: \$50,000
Project Title: NSF I-CORPS – National Level
11. **National Science Foundation (NSF)(Co-PI)** 09/30/2022-01/26/2028
Award: \$3,901,000
Project Title: CyberCops – Scholarship for Service – Preparing Future Cybersecurity Leaders
12. **Go Virginia (PI)** 08/02/2021-06/15/2023
Award: \$1.450,000
Project Title: Cybersecurity Job Creation System (CJCS)
13. **Visiting Fellowship (PI)** 04/02/2023-08/15/2023
Award: 4,200 Euros
Morgan Advanced Studies Institute (MASI) - Swansea University
LegalTech for Supply Chain Cybersecurity Digital Twin – Autonomous Ships
Project Title: Interdisciplinary grant proposal to the bilateral EPSRC-NSF (UK -USA)
14. **ODU Graduate School (Co-PI)** 07/2022-01/2023
Award: \$38,000
Project Title: Cybersecurity in Shipbuilding Industry: Data Science + Risk

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- 15. VMASC Internal Research and Development (PI)** 07/01/2022-01/01/2024
Award: \$64,000
Project Title: Exploring the Applications of Supply Chain Management, AI, and Cybersecurity to Maritime Synchronomodality and Offshore Winds Energy (OSW)
- 16. National Science Foundation (NSF)(Co-PI)** 09/30/2021-09/30/2023
Award: \$199,900
Project Title: Supplemental Funding - SCC-CIVIC-FA Track B Convergence, Inventory, Matching, and Assignment (CIMA) to Optimize Post-event Housing Repair for Displaced Vulnerable Populations
- 17. Department of Education** 10/01/2022-12/31/2023
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 (**PI**)
Overall PI: Jessica Johnson; Sub-Project PI: Rafael Diaz, Co-PI: K. Smith
- 18. Coastal VA, Commonwealth Cyber Initiative (PI)** 07/01/2021-07/01/2024
Award: \$300,000 (50% matching)
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)
- 19. US 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
- 20. Hampton Roads Community Foundation (HRCF) (Co-PI)** 01/30/2020- 01/30/2025
Award: \$150,000
Project Title: Recover Hampton Roads, 2020-2025
- 21. National Science Foundation (NSF) (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
- 22. VMASC Internal Research and Development (Co-PI)** 06/01/2021-05/31/2022
Award: 73,001
DSB M&S Development and Lab Support.

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- 23. Coastal VA, Commonwealth Cyber Initiative (PI)** 01/01/2021-01/01/2022
Award: \$400,000 (50% matching)
Project Title: Virginia State Investments in Port of Virginia: A Simulation-based Framework Identifying, Assessing, and Mitigating Systemic Cybersecurity at the Operational Technology Layer. Co-PIs: S. Shen (UVA)
- 24. National Science Foundation (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
- 25. Virginia Department of Emergency Management (PI)** 01/01/2021-01/01/2022
Award: \$212,000
Project Title: COVID-19 Evacuation and Sheltering Risk Perception Study.
- 26. TED TEXT LLC (PI)** 12/09/2020-06/09/2021
Award: \$58,650
Using Text Data: Competency Evaluation System and texting system
- 27. Healthcare Erasmus+ (PI)** 09/01/2017-04/31/2019
Award: N/A
Structuring and delivering healthcare management programs at Masters and Ph.D. level
- 28. Aves Nobles – Supply Chain Innovation (PI)** 03/01/2017-12/31/2018
Award: N/A
- 29. Carreras Logistics (PI)** 01/01/2016-09/01/2016
Award: N/A
- 30. Clariant – Support Supply Chain Education Program (PI)** 03/01/2016-09/01/2016
Award: N/A
- 31. 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
- 32. US Department of Housing and Urban Development (Co-PI)** 12/01/2015-12/01/2017
Award: \$414,000
Project Title: Modeling the Mobility and Coordination of Material and Labor,
- 33. National Center for Collaboration in M&S (PI)** 06/01/2013-06/15/2014
Award: \$37,800
Chronic Disease Management Tool Development

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Old Dominion University
Innovation Research Park 1, 4111 Monarch Way, VA 23529 – rdiaz@odu.edu

- 34. National Institutes of Health (Co-PI)** 10/01/2012-10/01/2014
Award: \$422,530
Policy Resistance within a Region's Healthcare System: A System Dynamics Approach
- 35. VDEM (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
- 36. Perry Endowment (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
- 37. ODURF – Seed Grant (PI)** 06/01/2011-04/15/2012
Award: \$37,800
The Disparate Impacts of SLR on Hampton Roads' Underserved Populations.
- 38. City of Hampton (PI)** 09/01/2009-06/30/2010
Award: \$34,600
Simulation-based Optimization Routing
- 39. Opportunity Inc. Department of Labor (PI)** 09/01/2009-06/30/2010
Award: \$71,500
Educating College Students in M&S Engineering
- 40. Sysco Inc. (PI)** 08/01/2008-02/01/2009
Award: \$30,000
Improving Productivity at SYSCO by Enhancing Storage Assignment
- 41. EDA II (Co-PI)** 07/01/2008-07/01/2009
Award: \$100,000
Developing Business Analytics M&S Research Cluster.
- 42. Commonwealth of VA (Co-PI)** 07/01/2008-11/15/2008
Award: \$250,000
Six transportation alternatives.
- 43. EURPAC (PI)** 02/01/2008-04/15/2008
Award: \$10,000
Econometrics Modeling – Forecasting. PI: J. Sokolowski

Rafael Diaz, Ph.D.

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Old Dominion University
Innovation Research Park 1, 4111 Monarch Way, VA 23529 – rdiaz@odu.edu

UNIVERSITY SERVICE

1. Member of Continuing Education Advisory Committee. Fall 2023 – Present
2. Member of ODUGlobal Policy and Practice Committee (GPPC). Fall 2023 – Present
3. Member of Diversity, Equity, and Inclusivity – School of Cybersecurity. Fall 2023 – Present
4. Chair Annual Evaluation Committee (Lecturers and Research Faculty), Interdisciplinary Studies - Fall 2023 – Present
5. Co-Chair Curriculum Revision, School of Cybersecurity. Fall 2023 – Present
6. Restructuring Cyber Risk Management Program (Undergraduate and Graduate Certificates).
7. Representing Schools of Data Science and Cybersecurity - Promotion and Tenure Committee. Fall 2023 – Present
8. Member Graduate Administrators’ Council. Fall 2022 - Present
9. Member Academic Committee Revising Maritime Programs. Spring/Summer 2023
10. Chair Search Committee – 3 Cybersecurity Lecturers, Spring/Summer 2023
11. Member Search Committee – 2 Research Assistant Professors (CCI)- Cluster Research
12. Member Academic Committee Revising Maritime Programs. Spring/Summer 2022 ○ Subcommittee: Maritime content as part of potential new degree and certificate programs
13. Chair Search Committee - VMASC Data Analysts, Spring/Summer 2022
14. Chair MODSIM Conference – Transportation, Business, and Industry track, Spring 2022
15. Member of Associate Vice-President of Maritime Initiative Search Committee, Spring 2022
16. Chair Search Committee - VMASC Senior Project Scientist Search Committee –Back-End Developer, Summer 2021
17. Chair Search Committee - VMASC Project Scientist Search Committee –Front-End Developer, Summer 2021
18. Chair Search Committee - VMASC Associate Research Search Committee –Cybersecurity Shipbuilding – Network Ripple Effects, Summer 2021
19. Member of UVA Search Committee – PostDoc Associate –Cybersecurity Port of VA, CyberPhysical Space Research, Summer 2021
20. Chair Search Committee - VMASC – PostDoc Associate –Supplier and sub-tier supplier network and Cyber-Physical Space Research, Spring 2021
21. Member of Business and Technology Partner – National Shipbuilding Research Program (NSRP) – Fall 2020 to Present.
22. Maritime Initiative Leadership – Strategic Sub-Committee – ODU. – Fall 2021 to Present.
23. Maritime Initiative Leadership Group – ODU. – Fall 2020 to Present.

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Old Dominion University
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24. Maritime Industrial Base Ecosystem (MIBE) - Academic Member – ODU. – 2019 to Present.
25. Latino Mentorship Program – ODU. –2020 to Present.
26. Latino Student Support – ODU – 2019 to Present.
27. Latino Employee Association- Member – ODU– 2019 to Present.
28. PhD Summer Academy Director – MIT Zaragoza – Summer 2018.
29. PhD student selection process (Rounds I and II) – MIT Zaragoza – Spring 2017, Spring 2018.
30. MS student selection process (Rounds I, II, and III)– MIT Zaragoza – Spring 2017, Spring 2018.
31. MS, student selection process – MIT Zaragoza – Winter 2016 (Source: MIT Sloan Business School).
32. MS student selection process – MIT Zaragoza – Fall 2016 (Source: CTL Micromaster).
33. Member of the faculty search committee – MIT Zaragoza – Fall 2016.
34. Member of the faculty search committee – MIT Zaragoza – Spring-Summer 2016.
35. PhD/M.S student selection process – MIT Zaragoza – Spring 2016.
36. PhD/M.S. student selection process – MIT Zaragoza – Fall 2015.
37. Member of VMASC Senior Project Scientist Search Committee –Transportation focus, Spring 2014.
38. Organizer and Acting Co-Director, VMASC -Advanced Analytic Lab, Fall 2013.
39. Member and organizer VMASC - M&S Capstone General application 2013.
40. Member of VMASC Software Developer Search Committee, Spring 2012.
41. Member and organizer VMASC - M&S Capstone General application 2012.
42. Member and organizer VMASC -M&S Capstone Application track 2011.
43. Member of VMASC Senior Project Scientists Search Committee, Spring 2010.
44. Member of the Department of Modeling, Simulation, and Visualization Engineering Faculty Search Committee –Healthcare focus, Spring 2010.
45. Member and organizer VMASC - M&S Capstone Application track 2010.
46. Member of VMASC Faculty Search Committee – Operations Research focus, Spring 2009.
47. Member and organizer VMASC - M&S Capstone Application track 2009.
48. Member of VMASC Faculty Search Committee –Healthcare focus, Spring 2008.
49. 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)

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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. Guest Speaker – ENMA 751/851 – Complex Systems – (July 2025)
2. Institute of Supply Chain Management – Hampton Roads Chapter - Keynote Speaker (May 2025), Virginia Beach, VA
3. Chair Sessions, Emerging Applications - Productions and Operations Management (2020 – 2023)
4. Productions and Operations Management (2010 – Present)
5. Decision Science Institute (2008– Present)
6. INFORMS (2008– Present)
7. Reviewer, Decision Science Conference, 2017.
(Sessions 1: Modeling Manufacturing System; Session 2: Global Supply Chain)

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8. Reviewer, Spring Simulation Conference, 2014 and 2015.
9. Symposium Chair: Enterprise Applications, Spring Simulation Conference 2013, April 8- 11, 2013, San Diego, CA.
10. Reviewer, Best Symposium Enterprise Applications Paper Award, Spring Simulation Conference, 2013, April 8- 11, 2013, San Diego, CA.
11. Reviewer. 2013 International Conference on Social Computing, Behavioral Modeling, & Prediction (SBP13)." April 3 - 5, 2013. Washington, DC.
12. Reviewer and Panelist National Science Foundation (NSF) -NSF-P121701 Health Care and Supply Chains. Summer 2012. Washington, DC.
13. Reviewer, European Modeling and Simulation Symposium 2012 (EMMS and IWISH). Sep 17- 20. Vienna, Austria.
14. Symposium Chair: Enterprise Applications. Spring Simulation Conference, 2012. April 7-10, 2012. San Diego, CA.
15. Reviewer, Spring Simulation Conference, 2012, 2012. April 7-10, 2012. Orlando, FL.
16. Session Chair and Reviewer, Conference on Harbor, Maritime & Multimodal Logistics Modelling and Simulation. September 12-14, 2011. Rome, Italy.
17. Session Chair, Applications of M&S in Healthcare Management. INFORMS Annual Meeting 2011. November 13-16, 2011. Charlotte, NC.
18. Session Chair, Applications of M&S in Healthcare Management. INFORMS Healthcare, June 24, 2011. Montreal, Canada.
19. Chair Session, Emerging Applications, Spring Simulation Conference 2011, April 6-9, 2011. Boston, MA.
20. Reviewer, Conference on Harbor, Maritime & Multimodal Logistics Modelling and Simulation. October 13 – 15, 2010. Fes – Morocco.
21. Session Chair, Spring Simulation Conference, 2010. April 11-15, 2010. Orlando, Florida.
22. Session Chair. INFORMS Annual Meeting 2009. Applications of M&S in Healthcare Management. October 2009. San Diego, CA.
23. Supported revision of Certified Modeling Simulation exam questions 2011 and 2012.
24. 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 (CK11006). Summer 2011.

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SELECTED COMMUNITY SERVICE

1. Moderator. Maritime Round Tables 2025 – Maritime Security - NATO. Norfolk, October 29, 2025
2. Moderator. AI Summit 2024 – SCHEV Sponsor– George Mason University (GMU). May 21, 2025
3. ODU Innovation Summit – AI tools for educators (with Kate Maxlow, Vertex Education)
4. Panelist. Teaching with AI. ODU - Monday Meet Ups. March 3, 2025.
5. Panelist. Career Mentor Panel for International Faculty and Staff hosted by ODU Asian Caucus November 7, 2024
6. Guest Speaker and Panelist. Artificial Intelligence (AI) in cybersecurity, entrepreneurship and supply chains. March 27, 2024.
7. Guest Speaker. Trends in Shipbuilding Supply Chains and Cybersecurity. USMMA. June 22, 2022.
8. Academic Moderator in conjunction with Industry Moderator. Digital Transformation. Department of the Navy (DON)) IT Conference 2022. May 23-26, 2022.
9. Guest Speaker - The Daily Work of Justice - Flooding – William & Mary. March 2022
10. Moderator. COVID-19 Convergence II. September 2021
11. Guest Speaker. ODU REYES (Remote Experience for Young Engineers and Scientists) - Planning for Hurricane Recovery in Hampton Roads: The CIMA Platform – Summer 2021.
12. Moderator. COVID-19 Convergence I . June 23, 2020
13. Guest Speaker and Panelist. Maritime COE's Forum - NATO. Maritime Industrial Base and Naval Readiness: Compound Hurricane-Pandemic Threat. May 28, 2020
14. Panel Moderator: Net Trends in Supply Chain. Fourth Global Supply Chain Research Forum 2018. Spain. May 29, 2018.
15. 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.
16. 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
17. Panel Moderator. Second Global Supply Chain Research Forum 2016. Panel: Supply Chain Digitalization. Spain. May 24, 2016.

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18. 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)
19. Guest Speaker and Panelist. HRCPT Long-term housing recovery strategy workshop conducted by Dewberry. April 25, 2013. Hampton, VA.
20. Guest Speaker and Panelist Diaz R. Sea Level Rise – Eco-conference - Panelist. April 16, 2013. Norfolk, VA.
21. 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.
22. 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.
23. 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.
24. Panelist. Educators Modeling and Simulation Day – Tidewater Community College (TCC) - Panelist. Summer 2009. Suffolk, VA.
25. 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 MENTORING IMPACT

Dr. Diaz's teaching focuses on analytical depth, real-world application, and experiential learning in cybersecurity, homeland security, supply chains, and AI. He consistently receives strong teaching evaluations (4.7–4.9/5.0) and has mentored 20+ students across undergraduate and graduate programs.

His courses integrate simulations, applied case studies, learning labs, and industry frameworks (e.g., NIST, CMMC), enabling students to connect theory with practice in complex, multidisciplinary environments.

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Selected student feedback:

“Dr. Diaz pushes students to think beyond the material and clearly explain how concepts connect.”

— Graduate Student

“I wanted to take a moment to thank you for putting together such an informative, thoughtful course. I have taken a lot of classes over the years and it’s amazing what a difference planning can make. I believe it was in my student feedback, but I especially like how you incorporated multiple levels of Bloom’s taxonomy and different learning modalities. I wish more online courses were like yours.”

— Graduate Student

“The simulations and applied projects were directly relevant to my professional work.”

— Graduate Student

“The course was one of the most practical I have taken. The examples and projects helped me understand how cybersecurity issues directly impact supply chains and critical infrastructure.”

— Graduate Student

“...I sincerely appreciate your guidance and comments. Your encouragement, engaging feedback and high-quality course materials have made this course one of my best experiences so far.”

— Graduate Student

A. OLD DOMINION UNIVERSITY

1. AI Methods and Models. Fall 2025
2. Introduction to Homeland Cybersecurity and Logistics: A Supply Chain Perspective. Fall 2021 - Spring 2026
3. Cybersecurity Independent Study CYSE 697, Master’s Project CYSE 698, Fall 2022, Spring 2025
4. Independent Study: Serious Game Designing. Summer 2022
5. Logistics and Supply Chains. Fall 2021, Spring 2015, Fall 2013, Summer 2013
6. Supply Chain and Logistics. Fall 2014

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7. Operations Management. Spring 2014, Fall 2013
8. Management Science / Operations Research. Spring 2013
9. Supply Chain and Reverse Logistics. Spring 2010
10. Business Productivity Software. Spring 2001, Summer 2001, Fall 2001, Spring 2002, Summer 2002, Fall 2003

B. OLD DOMINION UNIVERSITY – EXECUTIVE EDUCATION

11. Introduction to System Dynamics Simulation. Fall 2012
12. Modeling and Simulation for Healthcare Management. Spring 2011

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

13. Strategic Supply Chain Innovation and Sustainability. Spring 2018

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

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

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E. FRAUNHOFER INSTITUTE – UNIVERSITY DORTMUND, GERMANY

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

F. MIT ZARAGOZA – EXECUTIVE EDUCATION

24. Introduction to Business Analytics and Digital Transformation (Airbus). March 2019

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

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

27. Network Design (Asia Group). Summer 2016

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

CURRICULUM INNOVATION AND DEVELOPMENT

1. Led the Assessment of the Bridge Program - MS in Cybersecurity. Spring 2025.
2. Co-designed the AI in Cybersecurity Curriculum revision for the BS/MS in Cybersecurity. Spring 2025.
3. Developed and launched AI Methods course, an 8-module accelerated course integrating experiential learning and critical thinking. Spring 2025.
4. Designed two Cybersecurity Risk Analysis courses: Cyber Risk Management FedRAMP, and Cyber Risk Management Cybersecurity Maturity Model Certification (CMMC). Spring – Fall 2024.
5. Co-designed the curriculum for the new School of Supply Chain, Logistics, and Maritime Operations, aligning it with industry needs and accreditation requirements. Spring - Fall 2024
6. Led the design of the Bridge Master's Program in Cybersecurity, incorporating interdisciplinary applications for students from non-technical backgrounds. Summer 2023.
7. Led the Assessment of the MS in Cybersecurity and created new rubrics for the capstone course while standardizing course content across the MS program. Summer 2023.

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8. Co-designed the revision of the Cyber Risk Management curriculum for the Graduate Certificate and MS concentration in Cybersecurity Risk Management. Summer 2023.

SELECTED ADVISING

1. Waldon Christian. Spring 2024-Fall 2025. D.Eng. Cybersecurity. Dissertation Advisor
2. Ahmed Abdelmagid. Cyber Risk Management – Analyzing and Evaluating Cyber Risks for Small, Medium-Sized Enterprises. Sub-tier Supply Chain Perspectives (Summer 2023- Spring 2025). PhD Advising.
3. Prof. Brendan Baylor, and Kelly Morse, Sound Map for a Changing Landscape. ODU Blue Connections (2023 – 2024).
4. Prof. Sharon Davis et al. Responsible Fashion Supply Chain. ODU Blue Connections (2023 – 2024).
5. Katherine Smith. Adaptive Risk Network Dependency Analysis of Complex, Cyclic, and Acyclic Hierarchical Analytics – PhD Dissertation. ODU (2020- 2022).
6. Leonardo Gomes. Building Ambidextrous Supply chain Strategies into Food & Beverage manufacturing operations – PhD Dissertation. Aves Nobles and MIT-ZLC (2017- 2019).
7. Fernanda Caropresso, Bruna Basil, Pilar Bello. Strategic Capacity Network Optimization. ***Outstanding Master's Thesis Award*** - MIT-ZLOG program (2017-2018).
8. 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).
9. Byron Garcia, Ricardo Cabral. Strategic Distribution Network Analysis of Engine Spare Parts Operations (2017-2018) MIT-ZLC.
10. Ted Lynch and Scott Conner. Resiliency and Sourcing Strategy in the Semiconductor Industry (2017-2018) MIT-ZLC.
11. 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**
10. Snehashish Sridhar and Ruben Sifuentes. An IoT approach to Minimizing Bullwhip Effects. Accenture (2016-2017) MIT-ZLC.
11. Lina Romero Ludovico Bernard. Thesis: Analyzing Sourcing Networks for a Coffee Retailer. (2015-2016) MIT-ZLC.
12. 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.

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13. 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
 - 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
- 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

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- Natural Language Processing (NLP.)
 - Econometrics. Data Camp, March
 - 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
Outstanding Research Award, MIT-Global Scale	2017
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

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Dissertation Fellowship, Old Dominion University	2006-2007
Modeling and Simulation Fellowship, Old Dominion University	2003-2006

PROFESSIONAL AND CONSULTING EXPERIENCE

Zim American-Israeli (Shipping) , 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) – Logistics Internship	1993-1994