

**Joshua G. Behr, PhD**  
**Curriculum Vitae**  
*Spring 2020*

Virginia Modeling, Analysis and Simulation Center  
Old Dominion University  
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## **EDUCATION**

Ph.D., Political Science, University of New Orleans, May 2001  
Primary Fields: Urban and Minority Politics, American Politics/Institutions,  
Public Policy, Research Methods.

M.A., Political Science, California State University, Fullerton, 1992.  
Primary Fields: Latin American Politics and Public Administration.

A.B., Political Science, California State University, Fullerton, 1989.

## **LEADERSHIP**

Associate Vice President, Strategic Initiatives, Old Dominion University, Fall 2019-present.

Program Manager, Institute Coastal Adaptation and Resilience (ICAR), Social Science & Policy,  
2017-present

Director, Advanced Analytics Laboratory (AAL), Virginia Modeling Analysis and Simulation  
Center, 2015-2018

## **ENDOWMENTS & FELLOWSHIPS**

Endowed Fellow, Bruce and Lilly Bradley Distinguished Research Fellow in Coastal Resilience,  
2018-present

City of Norfolk Resilience Fellow, 2019-present

## **APPOINTMENTS & BOARDS**

1. Governor's Appointee as the State's representative to the Scientific and Technical Advisory Committee (STAC) for the EPA-funded Chesapeake Bay Program and Executive Council, 2014-2020 term.
2. Board member, Access Partnership, 2008-present.

## **ACADEMIC APPOINTMENTS**

1. Associate Professor & Research Scientist, Virginia Modeling, Analysis and Simulation Center (VMASC) at Old Dominion University, Suffolk, VA. 2008-present.
2. Associate Professor, Eastern Virginia Medical School (EVMS), School of Health Professions, Norfolk, VA. 2009-present. GIS in Healthcare, Modeling and Simulation in Healthcare.

3. Associate Professor (TENURED), Political Science, Old Dominion University, 2008-2010. Tenured in 2008. American Government, Research Design, Research Methods, Race and Public Policy, State and Local Government.
4. Assistant Professor, Political Science, Old Dominion University, 2001-2007. American Government, Research Design, Research Methods, Race and Public Policy, State and Local Government.
5. Assistant Professor, Political Science, Southwestern Oklahoma State University, 2000-2001. American Government, Political Parties, Public Administration, Voting Behavior, State and Local Government, and Urban and Minority Politics
6. Adjunct Instructor, Political Science, University of New Orleans, 1999-2000. Taught American Government.
7. Adjunct Instructor, Political Science, Metropolitan College, University of New Orleans, Fall 1999. Taught American Government to St. Tammany Parish Sheriff Department Instructor of Record, Political Science, University of New Orleans, 1995-1999. Taught American Government.
8. Adjunct Instructor, Political Science, Delgado Community College, Fall 1997. Taught American Government

### **CHAIRS & SERIES EDITOR**

1. NIH Chair, ZRG1 HDM W (58): Systems Science and Health in the Behavioral and Social Sciences
2. NIH Chair, ZRG1 HDM W (55): Modeling Social Behavior
3. Series Editor for Wiley Press Series in Modeling and Simulation, covering five M&S domains.

### **UNIVERSITY PRESS BOOK PUBLICATION**

Race, Ethnicity, and the Politics of City Redistricting: An Explanation for the Presence of Minority-Opportunity Districts and the Election of Hispanics and Blacks to City Councils. State University of New York Press (SUNY). Spring 2004.

- Review by American Library Association, January 2005. ALA issues a 'recommend purchase' to member libraries.
- Review in Urban Geographer, Vol. 26, No. 2, February 2005.

### **BOOK CHAPTERS**

1. "A simulation framework for evaluating the effectiveness of chronic disease management interventions in Health Economics and Healthcare Reform." Breakthroughs in Research and Practice: Breakthroughs in Research and Practice (2017): 455. With Diaz
2. "Business Process Modeling." Handbook of Real-World Applications in Modeling and Simulation 2 (2012): 207. With Diaz and Tulpule
3. "Discrete-event Simulation." Modeling and Simulation Fundamentals: Theoretical Underpinnings and Practical Domains. Wiley Press. 2010. With Diaz.

### **SELECTED RECENT TECHNICAL REPORTS**

1. NSF CONVERGE. (May-June 2020) Evacuation and Sheltering of Vulnerable Populations in a Hurricane-Pandemic: Vulnerable Populations & Planning Considerations for the 2020 Hurricane Season, Six-report Series. Leads: J Behr and W. Yusuf.
2. Commonwealth Center for Recurrent Flooding and Resilience (CCRFR), Adaptive Codes & Practices Reports, forthcoming 2019. J. Behr and C. Considine.
3. Unsolicited. (2018) The 'New Normal' of Flooding in Portsmouth, Virginia: Perspectives, Experiences, and Adaptive Responses of Residents and Business Owners in Low to

Moderate-Income Communities. Council, D., M. Covi, W. Yusuf, J. Behr and M. Brown.

4. City of Portsmouth. (2015) Adaption Response to Recurrent Flooding: Portsmouth Comprehensive Planning Support, Report 1 (aka Adaptive Capacity Report and Community Vulnerability Report). J. Behr, R. Diaz, and B. Giles.
5. Hampton Roads Regional Catastrophic Planning Team (HRRCPT) and VA Department of Emergency Management (VDEM) (2013): 1. Behavioral Study Report; 2. Refuge of Last Resort, Identification and Capacity Study; 3. Sheltering, Identification and Capacity Study; 4. Housing Report. J. Behr, R. Diaz, and B. Giles.
6. Sentara Health Systems. (2008) Emergency Department Utilization Reports. J. Behr
7. Major regional Hampton Roads Quality of Life Reports, multiple early years, precursor for Life in Hampton Roads efforts.

## **JOURNAL PUBLICATIONS**

1. Behr, Joshua G., and Carol Considine. "Parcel Buyout and Greenspace Acquisition as Adaptation Policy in Response to Storm Risk and Recurrent Flooding in a Coastal Port City." *Coastal Management 2019: Joining forces to shape our future coasts*. ICE Publishing, 2019. 517-533
2. Diaz, Rafael and Joshua G. Behr. "Supply Chain Modeling in the Aftermath of a Disaster." *IEEE Transactions on Engineering Management* (2020): Print ISSN: 0018-9391 Online ISSN: 1558-0040 Digital Object Identifier: 10.1109/TEM.2019.2950047
3. McLeod, George M., Thomas R. Allen, and Joshua G. Behr. "Geospatial Risk Assessment of Marine Terminal Infrastructure to Storm Surge Inundation and Sea Level Rise." *Transportation Research Record* (2018): 0361198118774234.
4. Behr, Joshua G., and Rafael Diaz. "Emergency Department Frequent Utilization for Non-Emergent Presentments: Results from a Regional Urban Trauma Center Study." *PloS one* 11.1 (2016): e0147116.
5. Behr, Joshua G., Rafael Diaz, and Muge Akpinar-Elci. "Health Service Utilization and Poor Health Reporting in Asthma Patients." *International Journal of Environmental Research and Public Health* 13.7 (2016): 645.
6. Behr, Joshua G., Rafael Diaz, and Molly Mitchell. "Building Resiliency in Response to Sea Level Rise and Recurrent Flooding: Comprehensive Planning in Hampton Roads." *The Virginian Newsletter* Vol. 92 No. 1 (2016)
7. Ng, ManWo, Rafael Diaz, and Joshua Behr. "Inter-and intra-regional evacuation behavior during Hurricane Irene." *Travel Behaviour and Society* 3 (2016): 21-28.
8. Diaz, Rafael, Joshua G. Behr, and ManWo Ng. "Quantifying the economic and demographic impact of transportation infrastructure investments: A simulation study." *Simulation* 92.4 (2016): 377-393.
9. Behr, Joshua G., Rafael Diaz, Barry Knapp, and Cynthia Kratzke. "Framework for classifying compliance and medical immediacy among low-acuity presentations at an urban trauma center." *International journal of emergency medicine* 8, no. 1 (2015): 1-9.
10. Akpinar-Elci, Muge, Francis E. Martin, Joshua G. Behr, and Rafael Diaz. "Saharan dust, climate variability, and asthma in Grenada, the Caribbean." *International journal of biometeorology* 59, no. 11 (2015): 1667-1671.
11. Diaz, Rafael, Joshua G. Behr, and Bruce S. Britton. "Estimating cost adjustments required to accomplish target savings in chronic disease management interventions: a simulation study." *Simulation* (2015): 0037549715584618.
12. Diaz, Rafael, Sameer Kumar, and Joshua Behr. "Housing recovery in the aftermath of a catastrophe: Material resources perspective." *Computers & Industrial Engineering* 81 (2015): 130-13

13. Ng, ManWo, Rafael Diaz, 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* 77 (2015): 215-226.
14. Kumar, Sameer, Rafael Diaz, Joshua G. Behr, and Ange-Lionel Toba. "Modeling the effects of labor on housing reconstruction: A system perspective." *International Journal of Disaster Risk Reduction* 12 (2015): 154-162.
15. Liu, Hua, Joshua G. Behr, and Rafael Diaz. "Population vulnerability to storm surge flooding in coastal Virginia, USA." *Integrated environmental assessment and management* 12, no. 3 (2016): 500-509.
16. Diaz, Rafael, Joshua Behr, Sameer Kumar, and Bruce Britton. "Modeling chronic disease patient flows diverted from emergency departments to patient-centered medical homes." *IIE transactions on healthcare systems engineering* 5, no. 4 (2015): 268-285.
17. Diaz, Rafael, Mariana Szklo-Coxe, Joshua G. Behr, and Ange-Lionel Toba. "Modeling the Transition from Adverse to Healthy Sleep Behaviors among School Age Children: A Simulation Approach." *International Journal of Information Systems and Social Change (IJSSC)* 6, no. 2 (2015): 1-15.
18. Diaz, Rafael, Joshua G. Behr, Rafael Landaeta, Francesco Longo, and Letizia Nicoletti. "Modeling Energy Portfolio Scoring: A Simulation Framework." *International Journal of Business Analytics (IJBAN)* 2, no. 4 (2015): 1-22.
19. Diaz, Rafael, Joshua G. Behr, and Bruce S. Britton. "Estimating cost adjustments required to accomplish target savings in chronic disease management interventions: a simulation study." *Simulation* (2015): 0037549715584618.
20. Kumar, Sameer, Rafael Diaz, Joshua G. Behr, and Ange-Lionel Toba. "Modeling the effects of labor on housing reconstruction: A system perspective." *International Journal of Disaster Risk Reduction* 12 (2015): 154-162.
21. Behr, Joshua G., and Rafael Diaz "Hurricane Preparedness: Community Vulnerability and Medically Fragile Populations." *The Virginian Newsletter*. Vol. 90 No. 2 (2014).
22. Behr, Joshua G., and Rafael Diaz. "Modeling and simulation standards development, adoption and conformity in the attainment of system values: A framework for the tension between two process ideals." *Simulation* 90, no. 5 (2014): 591-605.
23. 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 (IJSSS)* 6 no. 4 (2014).
24. Diaz, Rafael, and Joshua G. Behr. "Analyzing the effects of serially-correlated demands on costs and service levels: a lost-sale case inventory system." *International Journal of Applied Management Science* 6.4 (2014): 285-303.
25. Ng, ManWo, Joshua Behr, and Rafael Diaz. "Unraveling the evacuation behavior of the medically fragile population: findings from hurricane Irene." *Transportation research part A: policy and practice* 64 (2014): 122-134.
26. Behr, Joshua G., and Rafael Diaz. "Disparate health implications stemming from the propensity of elderly and medically fragile populations to shelter in place during severe storm events." *Journal of Public Health Management and Practice* 19 (2013): S55-S62.
27. Diaz, Rafael, Joshua G. Behr, Francesco Longo, and Hua Liu. "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 (IJPHIM)* 1, no. 1 (2013): 12-28.
28. Diaz, Rafael, Joshua G. Behr, ManWo Ng, Anna Jeng, and Bridget Giles. "The effects of transit corridor developments on the healthcare access of medically fragile vulnerable populations." *International Journal of Privacy and Health Information Management (IJPHIM)* 1, no. 2 (2013): 57-75.

29. Diaz, Rafael, Joshua G. Behr, Francesco Longo, and Hua Liu. "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 (IJP HIM)* 1, no. 1 (2013): 12-28.
30. Diaz, Rafael, Joshua G. Behr, and Mandar Tulpule. "A system dynamics model for simulating ambulatory health care demands." *Simulation in Healthcare* 7, no. 4 (2012): 243-250.
31. Richman, Jesse, and Joshua G. Behr. "Cross-pressure and the Propensity to Vote within Politically Active Churches." *Virginia Social Science Journal*, Vol. 47, no. 12 (2012): 1:28
32. Ezell, Barry C., Joshua Behr, and Andrew Collins. "Identifying Factors that Influence Terrorist Decisions and Target Selection." *Management* 9, no. 1 (2012): 8.
33. Behr, Joshua, Rafael Diaz, Mandar Tulpule, Francesco Longo, and Antonio Cimino. "Modeling and simulating the economic and demographic impact of transport infrastructure investment." In *Proceedings of the 2011 Emerging M&S Applications in Industry and Academia Symposium*, pp. 46-53. Society for Computer Simulation International, 2011.
34. Behr, Joshua G., and Rafael Diaz. "A system dynamics approach to modeling the sensitivity of inappropriate emergency department utilization." In *International Conference on Social Computing, Behavioral Modeling, and Prediction*, pp. 52-61. Springer Berlin Heidelberg, 2010.
35. Behr, Joshua G. "Modeling the rally event in presidential politics: Toward conceptual and methodological clarity." *The Social Science Journal* 43, no. 4 (2006): 701-716.
36. Behr, Joshua G. "The Polls: Searching for Determinism: A Comparative Assessment of First Term Approval Volatility, Buoyancy, and Polarization." *Presidential Studies Quarterly* 33, no. 3 (2003): 649-668.
37. Behr, Joshua G. "Black and female municipal employment: A substantive benefit of minority political incorporation?" *Journal of Urban Affairs* 22, no. 3 (2000): 243-264.

## **UNDER REVIEW**

1. Behr J., Diaz R., Lawsure K. Road Network and Sustainability: Assessing the Public Health Risks of Congestion in Urban Environments. *Transportation Reviews*.
2. Yusuf, J., M. Covi, J.G. Nicula, B. St. John III, M.M. Jordan, M. Covi, C. Considine and J. Behr. The Hampton Roads Intergovernmental Planning Pilot Project: Understanding the Path to Developing an Institutional Arrangement for Regional Adaptation to Sea Level Rise (Under review at *American Review of Public Administration*).
3. Diaz R., Behr J., Landaeta R. Evaluating Project Portfolio Adjustments: An Optimization Framework using Neural Networks and Mathematical Programming. *European Journal of Operational Research (EJOR)*.

## **POPULAR PRESS**

1. "Improving with M&S: Business Modeling and Simulation Allows Supply Management Professional to Test and Improve Processes," invited article for *Inside Supply Management* magazine, with R. Diaz, August 2011.

## **MEDIA & PRESS COVERAGE**

Dr. Behr has appeared on television many, many times, from WVEC to WTKR to Fox. He has done radio broadcasts in major US markets and locally (WHRO).. He has work has been reported by AP and appeared in numerous news outlets and online papers. His work has been featured on major non-profit sites and trade magazines such as Virginia Business Magazine. He has performed interviews for BBC, NPR, WorldDaily, and other world news organizations in Europe, Asia, and Canada. As well, he has frequently appeared in the Virginian Pilot and the Daily Press. He also publishes several Op-Ed pieces.

## **CONFERENCES PRESENTATIONS & PROCEEDINGS**

1. Behr J., Diaz R., Giles B., and McLeod G. Policy Implications and Measurement of Variation in Repair/Rebuild Recovery Times across Population Groups. Social Coast Forum, Charleston, NC 2018.
2. Yusuf, W., J.G. Nicula, M.M Jordan, M. Covi, C. Considine and J. Behr. 2019. Towards a Multi-sectoral Partnership Approach to Planning for Resilience: Lessons Learned from a Whole-of-Government and Whole-of-Community Resilience Planning Experiment. Paper to be presented at the 2019 Frontiers in Resilience Symposium.
3. 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.
4. McLeod George, Behr Joshua, Diaz R. GIS for Storm Flood Population Vulnerability Analysis. CoastGIS Conference 2015.
5. 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.
6. Behr Joshua, Diaz R. "Sheltering and Facilitating Housing Stock Recovery Following a Catastrophic Storm" presented on Thursday, March 31th. Virginia Emergency Management Symposium. Virginia Department of Emergency Management and the Virginia Emergency Management Association. Newport News, VA. March 30 2016.
7. 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.
8. Diaz R. and Behr Joshua. Evacuation rational of vulnerable populations: Moderators and Mediators. Healthcare Organizations Emergency Preparedness Seminars (HOEPS). April 2015. VA.
9. 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.
10. McLeod George, Behr Joshua, Diaz R. GIS for Storm Flood Population Vulnerability Analysis. CoastGIS 2015 conference. 23 April, 2015 South Africa.
11. Ernest David, Behr Joshua, Diaz R. Social Capital or Social Vulnerability? Assessing Competing Determinants of Community Resilience and Recovery from Natural Disasters. Annual meeting of the Midwest Political Science Association (MPSA), Chicago, IL, April 17, 2015.
12. Diaz R., Behr Joshua. Modeling Chronic Disease Patient Flows within a Medical Group. Decision Science Conference (DSI) Conference, 2014. November 22-26, 2014. Tampa, Florida.
13. Diaz R., Behr Joshua. Modeling Chronic Disease Patient Flows. Production and Operation Management Society (POMS) Conference, 2013. May 9-11, 2014. Atlanta, Georgia.
14. Diaz R.. Exploring the Effects of Serially-Correlated Demand Acting over a Stochastic

- Inventory System. Production and Operation Management Society (POMS) Conference, 2013. May 9-11, 2014. Atlanta, Georgia.
15. 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.
  16. 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.
  17. Longo Francesco, Nicoletti Letizia, Diaz R., Behr Joshua. Health Care Facility Improvement through Simulation. IWISH 2013. Athens, Greece.
  18. 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.
  19. Diaz R., Behr Joshua. A supply chain perspective in rebuilding housing stocks after natural disasters. Production and Operation Management Society (POMS) Conference, 2013. May 3-11, 2013. Denver, Colorado.
  20. Diaz Rafael, 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. Athens, Greece.
  21. Diaz Rafael, Behr Joshua, Sameer Kumar, Toba Ange-Lionel, Longo Francesco Analyzing the Impact of Public Health Interventions on Ambulatory Healthcare Capacities. IWISH 2013. Athens, Greece.
  22. Diaz Rafael, 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.
  23. Diaz Rafael, 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.
  24. Behr Joshua, Diaz Rafael. Severe Storm Event Mitigation and Recovery Forecasting Tool. Dynamics of Preparedness. University of Pittsburgh, MIDAS Center of Excellence. October 22-24, 2012. Pittsburg, PA.
  25. Diaz, R., J. Behr, A. Jeng, H. Liu, and F. Longo. 2012. 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, March, Orlando, FL.
  26. Diaz, R., M. Szklo-Coxe, and J. Behr. 2012. Using modeling and simulation in analyzing Sleep Behavior Issues: A state of the art overview. Spring Simulation Conference, March, Orlando, FL.
  27. Diaz, R., M. Szklo-Coxe, and J. Behr. 2012. Using modeling and simulation in analyzing Sleep Behavior Issues: A state of the art overview. Spring Simulation Conference, March, Orlando, FL.
  28. Mandar, T., R. Diaz, and J. Behr. 2011. Towards Modeling the Population Dynamics in the United States. ModSim World, October, Virginia Beach, VA.
  29. Behr, J. and Diaz, R. 2011. System Dynamics Model for Testing Healthcare Interventions Targeting Treatment Utilization. INFORMS Healthcare, June, Montreal, Canada.
  30. Diaz, R., J. Behr Joshua, and M. Tulpule. 2011. 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, November, Charlotte, NC.

31. Diaz, R., J. Behr, and M. 2011. Tulpule. Simulation-based optimization for improving chronic healthcare management interventions. The 23rd European Modeling & Simulation Symposium, September, Rome, Italy. BEST PAPER AWARD
32. Diaz, R., M. Tulpule, and J. Behr. 2011. Modeling the Empty Container Flow: Identifying Primary Influencing Factors through Scenario Analysis. The International Conference on Harbor, Maritime & Multimodal Logistics Modeling and Simulation, September, Rome, Italy.
33. Behr J., R. Diaz, M. Tulpule, F. Longo, and A. Cimino. 2011. Modeling and Simulating the Economic and Demographic Impact of Transport Infrastructure Investment. Spring Simulation Conference, April, Boston, MA.
34. Diaz, R., M. Tulpule, J. Behr, F. Longo, and A. Cimino. 2011. Energy Portfolio Simulation Considering Environmental and Public Health Impacts. Spring Simulation Conference Boston, April, Boston, MA.
35. Diaz, R., J. Behr Joshua, and M. Tulpule. 2011. 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, November, Charlotte, NC.
36. Behr, J., R. Diaz, M. Tulpule, and B. Ezell. 2011. 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 Public Health, INFORMS, November, Charlotte, NC.
37. Diaz, R., J. Behr Joshua, A. Jeng, and M. Tulpule. 2011. 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. ModSim World, October, Virginia Beach, VA.
38. Behr, Joshua G., and Rafael Diaz. 2010. Modeling & Simulating Public Health Stemming from the Evolution in the Electric Energy Portfolio of Southeastern Virginia." Published in *Energy Engineering, Economics, and Policy* International Multi-Conference on Engineering and Technological Innovation, July, Orlando, FL
39. Diaz R. and J. Behr. 2010. The Ebb and Flow of Patients with Non-urgent Conditions across Treatment Venues: System Dynamics Model and Sensitivity Analysis of Interventions Inclusive of Health Reform. Modeling for Public Health Action: From Epidemiology to Operations, December, Atlanta, GA.
40. Diaz R., J. Behr, and M. Tulpule. 2010. A System Dynamics (SD) approach to analyze trade-offs and conditional effects at play within the demand-supply emergency departments. ModSim World, October, Hampton, VA.
41. Behr, J. and R. Diaz. 2009. A System Dynamics Approach to Modeling the Sensitivity of Inappropriate Emergency Department Utilization. INFORMS, October, San Diego, CA.
42. Behr, J. and R. Diaz. 2009. 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, Philadelphia, PA.
43. Behr, J. 2009. Civic Engagement and Intimate Partner Violence. American Public Health Association, November, Philadelphia, PA.
44. Behr, J. 2007. Healthcare Access, Literacy and Empowerment. Midwest Political Science Association, April, Chicago, IL.
45. Behr, J. 2007. Mobilization Politics: Why the Religious Left Trumps the Religious Right. Kentucky State Political Science Association, March, Lexington, KY.
46. Behr, J. 2005. Populations Covered by the Voting Rights Act. Southwestern Political Science Association, March, New Orleans, LA.
47. Behr, J. 2005. Chair and discussant. Parties and Interest Groups. Southwestern Political Science Association, March, New Orleans, LA.



48. Behr, J. 2005. Perceptions of Quality of Life: The Racial Chasm in Hampton Roads. Virginia Social Science Association, March, Richmond, VA.
49. Behr, J. 2004. Chair. The 2004 Election in Perspective. Virginia Political Science Association, December, Norfolk, VA.
50. Behr, J. 2004. Segregation and Urban Policy: A Comparative Analysis of Trends. American Political Science Association, September, Chicago, IL.
51. Behr, J. 2003. Discussant. Virginia Politics: Did the Election Change Anything? Virginia Political Science Association, November, Newport News, VA.
52. Behr, J. 2003. First Term Presidential Approval. American Political Science Association, August, Philadelphia, PA.
53. Behr, J. 2002. A Measure of Spatial Auto-Correlation. American Political Science Association, August, Boston, MA.
54. Behr, J. 2001. The Political Tenability of Racial Gerrymanders: An Analysis of Local Governments in the Redistricting Process. Midwest Political Science Association, April, Chicago, IL.
55. Behr, J. 2000. Residential Segregation and the Consideration of Race as a Criterion in the Districting Process. Regional Research Conference, University of Central Oklahoma, October, Edmond, OK.
56. Behr, J. 1998. Municipal Redistricting Criteria. Southwestern Political Science Association, February, New Orleans, LA  
Behr, J. 1997. Presidential Popularity: The Impact of a Domestic Crisis. Southern Political Science Association, November, Norfolk, VA.
57. Behr, J. 1997. An Explanation of House Support for the President: The Role of Ideological Congruence. Louisiana Political Science Association, March, Lafayette, LA.
58. Behr, J. 1997. Implications of Descriptive Representation: A Longitudinal Study of Public Employment Patterns in New Orleans. Western Poli Sci Association, March, Tucson, AZ.

## **BOOK REVIEWS**

1. Review of Campaign Warriors: Political Consultants in Elections by Thurber and Nelson (Brookings 2000). Found in the American Review of Politics, Spring 2001.
2. Review of The New White Nationalism in America: Its Challenge to Integration by Carol M. Swain (Cambridge 2002). Found in the American Review of Politics, Fall 2003.

## **GRANTS**

1. Hampton Roads Community Foundation (\$500,000), "Recover Hampton Roads," 2020-2025, Joshua G. Behr Principal Investigator.
2. Bradly Endowment (\$500,000), "Advancing Resilience in Hampton Roads," 201-2024, Joshua G. Behr Principal Investigator.
3. Office of Naval Research (\$1,500,000), "Computational Framework for Assessing Absorptive Capacity," 2019-2021, Joshua G. Behr Co-Principal Investigator.
4. National Science Foundation (NSF) (\$100,000) CoPe Coastlines and People, "Identification and Prioritization of Recurrent Flooding Research Foci" 2019-2020, Joshua G. Behr Co-Principal Investigator.
5. National Oceanic and Atmospheric Administration (NOAA) (\$296,000), "Measuring the Economic Impact of Recurrent Flooding on Workforce Productivity and Property: Testing the Return on Investment for Potential Adaptation Strategies to Inform Comprehensive Planning Practices and Enhance Regional Coastal Resilience," 2019-201, Joshua G. Behr Principal Investigator.

6. Commonwealth Center for Recurrent Flooding and Resilience (CCRFR) (\$22,000), "Hurricane Florence Evacuation Behavior and Medically Fragile Populations," 2018-2019, Joshua G. Behr, Principal Investigator.
7. State of Virginia, CCRFR, (\$80,000), "Quantifying Benefits of Resilient Building Codes and Green Space Practices: Wellness and Public Health," 2018, Joshua G. Behr, Principal Investigator.
8. Arcadis (\$15,000), "City of Portsmouth Arcadis Tasks 1-2," 2018-2019, Joshua G. Behr, Principal Investigator.
3. Port of Virginia (\$68,273), "Assessing Risk and Optimizing Timing of Deployment of Structural Assets Building Resiliency at Norfolk International Terminal," 2017, Joshua G. Behr, Principal Investigator.
4. Resilience Center of Excellence, University North Carolina Chapel Hill, Department of Homeland Security, "Stakeholder Engagement in Coastal Resilience Planning," (\$157,000), 2016-2018, Joshua G. Behr, Co-Principal Investigator.
5. City of Portsmouth (\$200,000), "Adaption Response to Recurrent Flooding: Portsmouth Comprehensive Planning Support," 2015, Joshua G. Behr, Principal Investigator
6. Department of Housing and Urban Development (\$350,000), "Modeling Housing Stock Recovery for Medically Fragile and Vulnerably Populations," 2015-2017, Joshua G. Behr, Principal Investigator.
7. Hampton Roads Regional Catastrophic Planning Team (\$400,000), 2013-2015, Joshua G. Behr, Principal Investigator.
8. National Institutes of Health, National Health, Lung and Blood Institute (\$420,000), 2013-2015, Joshua G. Behr, Principal Investigator.
9. Perry Endowment (\$124,000), "Identifying and Mapping Needs of Medically Fragile Communities," Spring 2011, Joshua G. Behr, Principal Investigator.
10. Old Dominion University Seed Funding (\$40,000), Spring 2011, "The Impact of Sea Level Rise on Underserved Populations" Joshua G. Behr, Principal Investigator.
11. Battelle National Biodefense Institute (\$50,000), "Risk Analysis Workshop," Fall 2010, Joshua G. Behr, Co-Principal Investigator.
12. Modeling and Simulation Coordinating Office M&SCO (\$800,000), "Modeling and Simulation Standards," Fall 2010, Joshua G. Behr, Co-Principal Investigator.
13. Joint Forces Command Joint Urban Operations Office (\$540,000), "Urban Operations Training," Spring 2010, Joshua G. Behr, Principal Investigator.
14. Joint Allied Threat Awareness System (JATA) (\$400,000), "Vulnerability Assessment Modeling," Spring 2010, Joshua G. Behr, Co-Principal Investigator.
15. Battelle National Biodefense Institute (\$169,000), "Vulnerability Assessment Modeling," Spring 2010, Joshua G. Behr, Co-Principal Investigator.
16. City of Hampton (\$35,000), "Hampton Routing Optimization," Spring 2010, Joshua G. Behr, Co-Principal Investigator.
17. Joint Forces Command (\$148,000), "Insurgency/Counterinsurgency Modeling," Fall 2009, Joshua G. Behr, Co-Principal Investigator.
18. Sentara Health Foundation (\$141,000), "Evaluation Emergency Department Utilization, Sentara Norfolk General Hospital," Fall 2006-Spring 2008, Joshua G. Behr, Principal Investigator.
19. Old Dominion University Multi-Institutional Seed Grant (\$92,000), "Health Matters: Determinants of Health Disparities in Hampton Roads," Fall 2005-Spring 2006, Joshua G. Behr, Principal Investigator.

20. The Norfolk Foundation, Sentara Health Foundation, & Hampton Roads Partnership (\$27,000) "Greater Hampton Roads Quality of Life" Fall 2005-Spring 2006, Joshua G. Behr, Principal Investigator.
21. The Norfolk Foundation, Sentara Health Foundation, & Hampton Roads Partnership (\$30,000) "Greater Hampton Roads Quality of Life" Fall 2004-Spring 2005, Joshua G. Behr, Principal Investigator.
22. The Norfolk Foundation, Sentara Health Foundation, & Hampton Roads Partnership (\$40,000) "Greater Hampton Roads Quality of Life" Fall 2003-Spring 2004, Joshua G. Behr, Principal Investigator.
23. Old Dominion University Research Fellowship (\$6,000) "Measures of Residential Segregation" Summer 2003.

## **RECENT GRANTS APPLIED FOR**

1. Behr, J. (PI), C. Considine (Co-PI). 2019. A Framework for Identifying Critical Infrastructure and Testing Sensitivity to Compound Threats within the Hampton Roads DoD Maritime System. Submitted to SERDP. \$597,000.
2. Considine, C. (PI), J. Behr (Co-PI). 2019. Developing and Testing a Collaborative Framework among DoD Facilities, State, and Local Governments to Build a Resilience Network. Submitted to SERDP. \$350,000.
3. Behr, J. (PI), C. Considine (PI), J. Yusuf (Co-PI) and H. Yang (Co-PI). 2018. 2018 Hurricane Season: Hurricane Florence Emergency Evacuation Behavior Data Gathering Medically Fragile and Vulnerable Populations. Submitted to the National Science Foundation. \$187,256.
4. Behr, J. (PI), W. Yusuf (Co-PI), M. Covi (Co-PI), G. McLeod (Co-PI). 2018. The Economic Impact of Recurrent Flooding on Workforce Productivity and Property Damage: Determining the Return on Investment for Selected Adaptive Interventions. Submitted in response to COCA SARP. \$296,000.
5. Behr, J. (PI), Considine (Co-PI). 2018. Hampton Roads Sanitation District. Environmental Service. \$116,421.
6. Behr, J. (PI), M. Erten-Unal (Co-PI), C. Considine (Co-PI) and J. Yusuf (Co-PI). 2018. City of Portsmouth Engineering Assistance – Arcadis. Sub-contract proposal to Arcadis Engineering, submitted to the City of Portsmouth. \$738,267.
7. Behr, J. (PI), M. Erten-Unal (Co-PI), C. Considine (Co-PI) and J. Yusuf (Co-PI). 2018. City of Portsmouth Engineering Assistance – Dewberry. Sub-contract proposal to Dewberry, submitted to the City of Portsmouth. \$738,267.
8. Behr, J. (PI), M. Erten-Unal (Co-PI), C. Considine (Co-PI) and J. Yusuf (Co-PI). 2018. City of Portsmouth Engineering Assistance – BCE. Sub-contract proposal to BCE, submitted to the City of Portsmouth. \$738,267.
9. Gheorghe, A. (PI), J. Behr (Co-PI), C. Keating (Co-PI). 2018. CRISP 2.0 Type 1: Blockchain Informed Archetype for Socitechnical Resilience in Interdependent Critical Infrastructure. \$405,330.
10. Padilla, J. (PI), J. Behr (Co-PI), E. Frydenlund (Co-PI). 2018. Computational Framework for Assessing Absorptive Capacity. Department of Defense. \$1,490,996

11. Behr, J. (PI), S.M. Becker (Co-PI), M. Covi (Co-PI), R. Diaz (Co-PI), D. Earnest (Co-PI), B. Giles (Co-PI), E. Steinhilber (Co-PI), R. Toll (Co-PI), G. McLeod (Co-PI), and J. Yusuf (Co-PI). 2017. The Economic Impact of Recurrent Flooding on Workforce Productivity and Property: Testing the Return on Investment of Potential Adaptation Strategies to Inform Comprehensive Planning Practices and Enhance Regional Coastal Resilience. Submitted to the National Oceanic and Atmospheric Administration. \$1,445,445.
12. Behr, J. (PI), Freydenlund (Co-PI). 2017. Strategic Planning Support for a Hunger-free Community. Foodbank Southeast Virginia. \$106,200.
13. Behr, J. (PI), Giles (Co-PI), Ezell (Co-PI). 2017. Maritime System Critical Infrastructure Dependency Tool. Virginia Department of Emergency Management. \$450,000.
14. Behr, J. (PI), Diaz, Earnest, Covi, Yusuf, Giles (Co-PI), Becker (Co-PI). 2016. Newport News Services for Community Survey and Analysis. \$316,000.
15. Behr, J. (PI), McLeod (Co-PI). 2016. HUD Housing Analysis Seminar. Submitted to US Department of Housing and Urban Development. \$28,500.
16. Behr, J. (PI), 2016. Restoring the Lost Branch of the Elizabeth River. Partnered with Elizabeth River Project, submitted to National Fish and Wildlife Foundation. \$15,573.
17. Considine, C. (PI) J. Behr (Co-PI), T. Allen (Co-PI), M. Covi (Co-PI). 2016. Socio-economic Resilience Monitoring of Lafayette Watershed Living Shoreline Restoration Projects: Villa Circle, Lavallette Shoreline and Lindenwood/Barraud Park, Norfolk, Virginia. \$358,125.
18. Yusuf, J. (PI), J. Behr (Co-PI), C. Considine (Co-PI), C. Pinto (Co-PI). 2016. Optimizing Hospital Medical Surge Capacity During Extreme Climate Events: Alternate Care System Proof of Concept. \$448,128.
19. Sosonkina, M. (PI), Behr, J.G.(Co-PI), T. Ezer (Co-PI), J. Yusuf (Co-PI), C. Considine (Co-PI) and M. Covi. 2016. BD Spokes: SPOKE: SOUTH: A Focused Approach to Incorporate BD Capabilities into Coastal Hazards and Risks. Submitted to National Science Foundation. \$210,000.
20. Yusuf, J. (PI), J. Behr (Co-PI), C. Considine (Co-PI), M. Covi (Co-PI), B. St. John III (Co-PI), L. Usher (Co-PI). 2015. Virginia Case Study for the Assessment of Adaptive Response to Flooding among Tourism Lodging Stakeholders: The Action-oriented Stakeholder Engagement for a Resilient Tomorrow (ASERT) Project, submitted to the Mid-Atlantic Sea Grant. \$139,928.
21. Behr, J. (PI), S.M. Becker (Co-PI), M. Covi (Co-PI), R. Diaz (Co-PI), D.C. Earnest (Co-PI), B. Giles (Co-PI), G. McLeod (Co-PI), J. Yusuf (Co-PI), E. Steinhilber (Co-PI), R. Toll (Co-PI). 2014. Measuring the Economic Impact of Recurrent Flooding on Workforce Productivity and Property: Testing the Return on Investment of Potential Adaptation Strategies to Inform Comprehensive Planning Practices and Enhance Regional Coastal Resilience. Submitted to NOAA. \$1,500,000.
22. Plag, H-P (PI), J. Behr (Co-PI), J. Yusuf (Co-PI), A. Gheorghe (Co-PI), C. Pinto (Co-PI), S. Diallo (Co-PI), S. Becker (Co-PI), G. Beck (Co-PI), M. McShane (Co-PI), R. Diaz (Co-PI). 2014. Center for Community Resilience. Sub-contract proposal to Stevens Institute of Technology, submitted to National Institute of Standards and Testing. \$2,414,136.
23. Yusuf, J. (PI), H-P Plag (Co-PI), J. Behr (Co-PI), D. Earnest (Co-PI), C. Pinto (Co-PI). 2014. Decisions about Risks and Impacts in Response to an Abrupt Change Early Warning System. Submitted to the National Science Foundation. \$390, 843.

24. Plag, H. (PI), J. Yusuf (Co-PI), J. Behr (Co-PI), M. Nelson (Co-PI) and J. Padilla (Co-PI). 2014. Collaborative Research: Integrated Knowledge Base and Virtual Stakeholder Table for Participatory Governance of Sustainable Communities. Submitted to the NSF CyberSEES Program. \$666,760.

## **HONORS & AWARDS**

1. Recipient of the Andrew Bradbury Award from the Institution of Civil Engineers, Coastal Management 2019.
2. Recipient of the American Political Science Association's 2000 Byron Jackson Dissertation Research Award. Presented at the APSA annual conference Washington D.C., September 1, 2000.
3. Recipient of the Southwestern Political Science Association's 2001 Ted Robinson Dissertation Award. Presented at the SWPSA annual conference Fort Worth, TX, March 15-18, 2001.
4. Recipient of the Southern Political Science Association's 2004 Artinian Award for Professional Development. Presented at the SPSA annual conference New Orleans, LA, January 8-10, 2004.
5. Recipient of the American Political Science Association's 2004 Norton Long Scholar Award. Presented at the APSA annual conference Chicago, IL, September 2, 2004.

## **SELECTED UNIVERSITY SERVICE**

1. Presenter and speaker in support of ODU's First Year Experience (convocation and orientation day) related to importance of undergraduate research.
2. Draft and coordinate Congressional Bill
3. Various hiring committees.
4. Mentor summer intern visiting ODU from Mississippi, through the DHS/UNC project.
5. Virginia Maritime Association quarterly board meetings
6. Judging, Army Corps of Engineers Silverjacket storm scenario exercise
7. Support vamsc technical exchanges
8. MIT Solvathon
9. ODU RC Strategic Doing team
10. Support the National Level Exercise (NLE)

## **DISSERTATION & THESES COMMITTEES**

1. Doctoral committee "Clinton's Foreign Policy and the Politics of Intervention: Cases of Ethnic Cleansing and Democratic Governance" by Daneta Billau. October 2, 2002.
2. Committee member on master's defense, "Getting Past the Violence: Northern Ireland's Struggle for Peace and Reconciliation" by Lisa G. Fox. June 21, 2004.
3. Committee member for doctoral dissertation, "Generals and Pinstripes" by Wyman Shuler III. January 25, 2008.
4. Committee member for doctoral dissertation, "A GIS Analysis of the Environmental Variables Related to Rift Valley Fever Outbreaks" by Jacqueline Jackson. May, 2010.
5. Committee member for doctoral dissertation, "Obesity, Altitude, and Built Environment" by Sariyam Tiraphat, May 4, 2012.

6. Committee member for doctoral dissertation, "Reassessing the Relationship between Flood Risk Perceptions and Adaptive Behavior" by Donta Council, Spring 2019.
7. Committee member for doctoral dissertation, "Social Vulnerability and Hurricane Evacuation Behavior in Hampton Roads, VA: Emergency management Stakeholders' Perceptions of Low-to-moderate Income Households in Social Construction Paradigm" by Mechelle Smith, June 2020.