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Education		
<i>Aug'07–Sep'11</i>	UNIVERSITY OF MARYLAND, College Park, MD Ph.D., Applied Mathematics & Statistics, and Scientific Computation Dissertation: <i>Solving Two-Level Optimization Problems with Applications to Robust Design and Energy Markets</i>	
<i>Aug'03–May'07</i>	FRANKLIN & MARSHALL COLLEGE, Lancaster, PA A.B., Mathematics and Corruption Studies	
Appointments		
<i>Jun'23–Present</i>	PROFESSOR	
<i>Aug'20–Jun'23</i>	ASSOCIATE PROFESSOR Department of Environmental Science, American University Affiliate, Department of Mathematics and Statistics, American University	
<i>Jan'25–Present</i>	DIRECTOR AND LEAD PI	
<i>Oct'21–Aug'22</i>	NSF Sustainable Regional Systems Research Network: <i>Multiscale RECIPES for Sustainable Food Systems</i> , \$15M project funding 15 institutions, 40 senior personnel, 45 graduate students, and 14 staff	
<i>Aug'22–Aug'24</i>	CHIEF ENERGY MODELER U.S. Energy Information Administration, Department of Energy	
<i>Nov'20–Aug'22</i>	ASSOCIATE DIRECTOR Center for Environment, Community, and Equity, American University	
<i>May'15–Present</i>	RESEARCH FELLOW Department of Energy, Transportation, and Environment, German Economic Research Institute (DIW Berlin)	
<i>Jul'12–Jul'20</i>	ASSISTANT PROFESSOR Department of Civil and Systems Engineering, Johns Hopkins University Secondary Appointment: Department of Applied Mathematics and Statistics	
<i>Jul'16–Jul'20</i>	CO-DIRECTOR Center for Systems Science and Engineering, Johns Hopkins University	
<i>Sep'11–Jun'12</i>	ASSOCIATE Environmental Markets, ICF International	
<i>May'10–Jun'11</i>	CONSULTANT Development Research Group, Environment and Energy Team, The World Bank	
Honors		
<i>Dec'24</i>	U.S. ENERGY INFORMATION ADMINISTRATION, DEPARTMENT OF ENERGY, ADMINISTRATOR'S AWARD FOR OUTSTANDING TEAM ACHIEVEMENT AWARDED BY THE SENATE-APPOINTED ADMINISTRATOR OF EIA FOR IMPORTANT CONTRIBUTIONS TO THE TEAM EFFORT THAT LED TO THE PRODUCTION OF THE FIRST EXTERNAL-FACING PROTOTYPE ASSOCIATED WITH PROJECT BLUESKY, AN EFFORT TO REIMAGINE EIA'S LONG-TERM MODELING PROGRAM.	
<i>May'22</i>	AMERICAN UNIVERSITY, COLLEGE OF ARTS AND SCIENCES, DEAN'S AWARD FOR EXCEPTIONAL IMPACT AWARDED BY THE DEAN OF THE COLLEGE OF ARTS AND SCIENCES TO AN INDIVIDUAL WHO HAS MADE AN EXCEPTIONAL IMPACT THROUGH RESEARCH, TEACHING, AND SERVICE.	

June'18	JOHNS HOPKINS CATALYST AWARD AN "EXCEPTIONAL EARLY-CAREER INVESTIGATOR, ONE WHO EMBODIES THE SPIRIT OF DISCOVERY THAT DEFINES JOHNS HOPKINS UNIVERSITY."
Nov'17	PROMOTED ARTICLE, INSTITUTE FOR INDUSTRIAL & SYSTEMS ENGINEERING THE ARTICLE "NURSE STAFFING IN PERIANESTHESIA CARE UNITS USING DISCRETE EVENT SIMULATION" WAS SELECTED FOR SPECIAL PROMOTION BY THE INDUSTRIAL AND SYSTEMS ENGINEERING (ISE) MAGAZINE.
Nov'16	YOUNG RESEARCHER PRIZE, ENRE, INFORMS AWARDED ANNUALLY AT THE INFORMS ANNUAL MEETING FOR AN OUTSTANDING PAPER ON THE APPLICATION OF OR/MS TO AN IMPORTANT PROBLEM IN ENERGY, NATURAL RESOURCES, OR THE ENVIRONMENT.
Dec'15	PROMOTED ARTICLE, ELSEVIER THE ARTICLE "TRACKING GLOBAL BICYCLE OWNERSHIP PATTERNS" WAS SELECTED FOR SPECIAL PROMOTION BY ELSEVIER.
Sept'14	ALBRIGHT CHALLENGE, MIT COLLABORATIVE INITIATIVES, CAMBRIDGE, MA ONE OF 17 RISING LEADERS INVITED TO CREATE A COLLABORATIVE ENVIRONMENT FOR SOLVING PROBLEMS IN BIG DATA AND ITS INFLUX INTO HEALTHCARE.
May'10	DISTINGUISHED TEACHING AWARD CENTER FOR TEACHING EXCELLENCE, UNIVERSITY OF MARYLAND, COLLEGE PARK, MD
May'09	GOLD MEDAL IN TEACHING EXCELLENCE DEPARTMENT OF MATHEMATICS, UNIVERSITY OF MARYLAND, COLLEGE PARK, MD
Research Funding	
Oct'21-Sep'26	SRS RN: MULTISCALE RECIPES (RESILIENT, EQUITABLE, AND CIRCULAR INNOVATIONS WITH PARTNERSHIP AND EDUCATION SYNERGIES) FOR SUSTAINABLE FOOD SYSTEMS (PI) <i>National Science Foundation, SRS, CBET, \$15,000,000</i> Co-PIs: BABBITT (RIT), CHAVIS (MORGAN STATE), NEFF (JHU), ROE (OSU)
Aug'20-Jul'21	RAPID: TIME-SENSITIVE HUMAN FOREST AND MODEL FORECASTS FOR COVID-19 VACCINE AND TREATMENT TRIALS (PI) <i>National Science Foundation, SES, SBE, \$200,000</i> Co-PIs: ATANASOV (PYTHO), JOSEPH (PYTHO)
Sep'19-Feb'22	HUMAN FORESTS VERSUS RANDOM FOREST MODELS IN PREDICTION (PI) <i>National Science Foundation, SES, DRMS, \$498,741</i> Co-PIs: ATANASOV (PYTHO), JOSEPH (PYTHO)
Sep'19-Aug'21	EAGER: SSDIM: GENERATING SYNTHETIC DATA ON INTERDEPENDENT FOOD, ENERGY, AND TRANSPORTATION NETWORKS VIA STOCHASTIC, BI-LEVEL OPTIMIZATION (PI) <i>National Science Foundation, CMMI, HDBE, \$399,874</i> Co-PI: NEFF, JHU
May'19-Apr'20	WASTED FOOD AND SUSTAINABLE URBAN SYSTEMS: PRIORITIZING RESEARCH NEEDS (PI) <i>National Science Foundation, CBET, \$49,889</i> Co-PI: NEFF, JHU
Sep'18-Aug'22	R18:CONNECTED EMERGENCY CARE PATIENT SAFETY LEARNING LAB (Co-I) <i>National Institutes of Health, \$ 2,499,504</i> Co-PIs: HINSON, LEVIN, JHU
Sep'16-Aug'20	INFIEWS/T1: UNDERSTANDING MULTI-SCALE RESILIENCE OPTIONS FOR CLIMATE-VULNERABLE AFRICA (Co-PI) <i>National Science Foundation, Behavioral and Cognitive Sciences, \$2,999,021</i> PI: ZAITCHIK, JHU
May'16-Nov'17	CLINICAL TRIALS SYSTEM PROJECT PHASE II (PI) <i>MIT Collaborative Initiatives, \$264,000</i> Co-PI: IGUSA, JHU

<i>Sep'16-Aug'18</i>	R21:ESTABLISHING FEASIBILITY OF A TAXI BASED DISPATCHER COORDINATED LAYPERSON EMERGENCY MEDICAL SYSTEM FOR USE IN LOW AND MIDDLE INCOME COUNTRIES (Co-I) <i>National Institutes of Health</i> , \$388,940 PI: BHALLA, UCHICAGO
<i>Jul'15-Jun'16</i>	SUPERVISED MACHINE LEARNING FOR CLINICAL DECISION SUPPORT FOR HEART FAILURE READMISSION (Co-PI) <i>JHU Discovery Award</i> , \$100,000 PI: KORLEY, JHU, Co-PI: LEVIN, JHU
<i>Jul'15-Jun'16</i>	MODELING THE IMPACTS OF CLIMATE CHANGE ON THE GLOBAL FOOD SYSTEM (Co-PI) <i>JHU Discovery Award</i> , \$150,000 PI: PARKER, JHU, Co-PI: HOBBS, JHU, Co-PI: ZAITCHIK, JHU, Co-PI: NEFF, JHU, Co-PI HASKETT, JHU
<i>Nov'14-Apr'16</i>	CLINICAL TRIALS SYSTEM PROJECT PHASE I (Co-PI) <i>MIT Collaborative Initiatives</i> , \$869,376 PI: IGUSA, JHU
<i>Nov'15-Nov'16</i>	NATURAL GAS INFRASTRUCTURE MODELING (SOLE PI) <i>Resources for the Future</i> , \$5000
<i>Jan'15-Jun'15</i>	GENERAL ELECTRIC PACU PROJECT SUPPORT (SOLE PI) <i>Johns Hopkins Hospital</i> , \$12,108
<i>Jan'14-Dec'14</i>	SMART VACCINES: A SOFTWARE FOR PRIORITIZING NEW VACCINES (PHASE III) (Co-PI) <i>National Academy of Engineering and Institute of Medicine</i> , \$39,946 PI: LEVIN, JHU
<i>Jan'14-Dec'14</i>	GLOBAL HEALTH AND VACCINATION RESEARCH, SUPPORT FOR EVENT (Co-PI) <i>The Research Council of Norway</i> , NOK 396,000 (\$51,300) PI: EGGING, NTNU
<i>Jul'13-Jun'14</i>	MAKING BALTIMORE BICYCLE FRIENDLY THROUGH A PUBLIC HEALTH AND SYSTEMS ENGINEERING ANALYSIS (PI) <i>Environment, Energy, Sustainability and Health Institute</i> , \$25,000 Co-PI: BHALLA, JSPH, Co-PI: LOVE, JSPH
<i>Feb'13-Jan'14</i>	STAFF FORECASTING AND OPTIMIZATION (Co-PI) <i>Johns Hopkins Medicine International</i> , \$96,546 PI: LEVIN, JHU
<i>Dec'12-Jun'14</i>	PATIENT FLOW PREDICTION AND STAFF OPTIMIZATION (SOLE PI) <i>Johns Hopkins Hospital</i> , \$59,140
<i>Jan'13-Jun'13</i>	MULTI-HAZARD SCENARIO DEVELOPMENT FOR MODELING POST-DISASTER BEHAVIOR OF PHYSICAL AND HUMAN INFRASTRUCTURES (Co-PI) <i>NIH-PIONEER Subaward</i> , \$322,213 PI: MITRANI-REISER, JHU, Co-PI: DALRYMPLE, JHU, Co-PI: GUEST, JHU, Co-PI: IGUSA, JHU
<i>Dec'10-Jun'11</i>	INTERNATIONAL GREENHOUSE GAS MITIGATION POLICY WITH DYNAMIC FOSSIL-FUEL ENERGY MARKETS: IMPLICATION FOR EMERGING AND DEVELOPING COUNTRIES (Co-PI) <i>The World Bank Group</i> , \$30,000 PI: KARP, UC BERKELEY, Co-PI: STRAND, WORLD BANK
<i>May'10-Jun'10</i>	CLIMATE COST UNCERTAINTY, RETROFIT COST UNCERTAINTY, AND INFRASTRUCTURE CLOSE-DOWN: FURTHER SIMULATION WORK (SOLE PI) <i>The World Bank Group</i> , \$10,000

Publications

REFEREED
JOURNAL
PUBLICATIONS
H-Index:
33 (Google),
26 (Scopus)

- [J65] B. ZAITCHIK, S. SIDDIQUI, B. SEMANE, [Y. ZHANG](#)¹, [S. SANKARANARAYANAN](#)², [C. BAKKER](#)¹, [S. WITKIN](#)³ (2026) “PROPAGATING SHOCKS AND TRANSITIONS ACROSS NETWORKED FOOD SYSTEMS: INSIGHTS FROM MULTIPLAYER MICROECONOMIC MODELING,” *Proceedings of the National Academy of Sciences*, *Accepted*.
- [J64] [T. TIBEBU](#)¹, S. LI, M. ARROYO, [K. LESSARD](#)³, J. BOZEMAN, Y. CAI, J. GEPHART, M. KONAR, Y. LEE, X. ROMEIKO, J. TALLEY, [S. SIDDIQUI](#) (2025) “INTERACTIONS AND TRADEOFFS FOR SUSTAINABILITY, EQUITY, AND RESILIENCE IN WASTED FOOD MODELS,” *Environmental Research Communications*, (7)4: 1-13.
- [J63] [Y. ZHANG](#)¹, [S. SANKARANARAYANAN](#)², W. NIE, B. ZAITCHIK, [S. SIDDIQUI](#) (2024) “SMALL-SCALE IRRIGATION: IMPROVING FOOD SECURITY UNDER CHANGING CLIMATE AND WATER RESOURCE CONDITIONS IN ETHIOPIA,” *Journal of Water Resources Planning and Management*, 150(8): 04024028.
- [J62] M. DEVINE, [S. SIDDIQUI](#) (2023) “STRATEGIC INVESTMENT DECISIONS IN AN OLIGOPOLY WITH A COMPETITIVE FRINGE: AN EQUILIBRIUM PROBLEM WITH EQUILIBRIUM CONSTRAINTS APPROACH,” *European Journal of Operational Research*, 306(3): 1473-1494.
- [J61] [P. JUTURU](#)³, T. CONLON, [Y. ZHANG](#)¹, [C. AVRAAM](#)², [S. SIDDIQUI](#), B. SEMANE, B. ZAITCHIK (2023) “OPTIMAL GRID EXPANSION UNDER FUTURE ELECTRICITY DEMAND FOR GROUNDWATER IRRIGATION IN ETHIOPIA,” *Energy for Sustainable Development*, 72: 351-377.
- [J60] [A. SIDDIQUI](#), [S. SIDDIQUI](#) (2022) “AMBIGUITIES AND NONMONOTONICITIES UNDER PROSUMER POWER,” *TOP*, 30(3): 492-532.
- [J59] Z. KHAN, E. ABRAHAM, S. AGGARWAL, M. KHAN, R. ARGUELLO, M. BABBAR-SEBENS, J. BERESLAWSKI, J. BIELICKI, P. CAMPANA, M. CARRAZZONE, H. CASTANIER, F. CHANG, P. COLLINS, A. CONCHADO, K. DAGANI, B. DAHER, S. DEKKER, R. DELGADO, F. DIUANA, J. DOELMAN, A. ELSHORBAGY, C. FAN, R. GAUDIOSO, S. GEBRECHORKOS, H. GELI, E. GRUBERT, D. HUANG, T. HUANG, A. ILYAS, A. IVAKHNENKO, G. JEWITT, M. FERREIRA, J. JONES, E. KELLNER, E. KRUEGER, I. KUMAR, J. LAMONTAGNE, A. LANSU, S. LEE, R. LI, P. LINARES, D. MARAZZA, M. MASCARI, R. MCNAMAMAY, M. MENG, S. MEREU, F. MIRALLES-WILHELM, R. MOHTAR, AB. MUHAMMAD, A. OPEJIN, S. PANDE, S. PARKINSON, R. PAYET-BURIN, M. RAMDAS, E. RAMOS, S. RAY, P. ROBERTS, J. SAMPEDRO, K. SANDERS, M. SARAY, J. SCHMIDT, M. SHANAFIELD, [S. SIDDIQUI](#), M. SURIANO, M. TANIGUCHI, A. TRABUCCO, M. TUNINETTI, A. VINCA, B. WEESER, D. WHITE, T. WILD, K. YADAV, N. YOGESWARAN, T. YOKOHATA, Q. YUE (2022) ‘EMERGING THEMES AND FUTURE DIRECTIONS OF MULTI-SECTOR NEXUS RESEARCH AND IMPLEMENTATION,’ *Front. Environ. Sci.*, 10:918085.
- [J58] [E. MOYNIHAN](#)³, [C. AVRAAM](#)², [S. SIDDIQUI](#), R. NEFF (2022) “OPTIMIZATION BASED MODELING FOR THE FOOD SUPPLY CHAIN’S RESILIENCE TO OUTBREAKS,” *Front. Sustain. Food Syst*, 6: 887819.
- [J57] C. BABBITT, R. NEFF, B. ROE, [S. SIDDIQUI](#), C. CHAVIS, T. TRABOLD (2022) “TRANSFORMING WASTED FOOD WILL REQUIRE SYSTEMIC AND SUSTAINABLE INFRASTRUCTURE INNOVATIONS.” *Current Opinion in Environmental Sustainability*, 54, 101151.
- [J56] K. GRACE, [S. SIDDIQUI](#), B. ZAITCHIK (2021) “A FRAMEWORK FOR INTERDISCIPLINARY RESEARCH IN FOOD SYSTEMS,” *Nature Food*, 2(1), 1-3.
- [J55] [C. AVRAAM](#)², A. LAMBROU, [W. JIANG](#)², [S. SIDDIQUI](#) (2021) “ANTIMICROBIAL RESISTANCE AND LIVESTOCK TRADE FOR LOW AND MIDDLE INCOME COUNTRIES: REGIONAL ANALYSIS OF GLOBAL COORDINATION POLICIES,” *Frontiers in Sustainable Food Systems*, 5: 79.
- [J54] [C. AVRAAM](#)², [Y. ZHANG](#)¹, [S. SANKARANARAYANAN](#)², B. ZAITCHIK, [E. MOYNIHAN](#)³, [P. JUTURU](#)³, R. NEFF, [S. SIDDIQUI](#) (2021) “OPTIMIZATION-BASED SYSTEMS MODELING FOR THE FOOD-ENERGY-WATER NEXUS,” *Current Sustainable/Renewable Energy Reports*, 8: 4–16.
- [J53] G. LIN, [S. SIDDIQUI](#), J. BERNSTEIN, D. MARTINEZ, L. GARDNER, T. ALBRIGHT, T. IGUSA (2021) “EXAMINING ASSOCIATION BETWEEN COHESION AND DIVERSITY IN COLLABORATION NETWORKS OF PHARMACEUTICAL CLINICAL TRIALS WITH DRUG APPROVALS,” *Journal of the American Medical Informatics Association*, 28(1): 62-70.
- [J52] L. SARMIENTO, A. MOLAR-CRUZ, [C. AVRAAM](#)², M. BROWN, J. ROSELLÓN, [S. SIDDIQUI](#), B. S. RODRÍGUEZ (2021) “NORTH AMERICAN ENERGY SYSTEM RESPONSES TO NATURAL GAS PRICE SHOCKS,” *Energy Policy*, 156: 112378.
- [J51] M. BROWN, [S. SIDDIQUI](#), [C. AVRAAM](#)², J. BISTLINE, J. DECAROLIS, H. ESHRAGHI, S. GIAROLA, M. HANSEN, P. JOHNSTON, S. KHANAL, A. MOLAR-CRUZ (2021) “NORTH AMERICAN ENERGY SYSTEM RESPONSES TO NATURAL GAS PRICE SHOCKS,” *Energy Policy*, 149: 112046.

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- [J49] [C. AVRAAM](#)², [D. CHU](#)³, S. SIDDIQUI (2020) “NATURAL GAS INFRASTRUCTURE DEVELOPMENT IN NORTH AMERICA UNDER INTEGRATED MARKETS,” *Energy Policy*, 147: 111757.
- [J48] J. DECAROLIS, P. JARAMILLO, J. JOHNSON, D. MCCOLLUM, E. TRUTNEVYTE, D. DANIELS, G. AKIN-OLÇUM, J. BERGERSON, S. CHO, J. CHOI, M. CRAIG, A. QUEIROZ, H. ESHRAGHI, C. GALIK, T. GUTOWSKI, K. HAAPALA, B. HODGE, S. HOQUE, J. JENKINS, A. JENN, D. JOHANSSON, N. KAUFMAN, J. KIVILUOMA, Z. LIN, H. MACLEAN, E. MASANET, M. MASNADI, C. McMILLAN, D. NOCK, N. PATANKAR, D. PATINO-ECHEVERRI, G. SCHIVELY, S. SIDDIQUI, A. SMITH, A. VENKATESH, G. WAGNER, S. YEH, Y. ZHOU (2020) “LEVERAGING OPEN-SOURCE TOOLS FOR COLLABORATIVE MACRO-ENERGY SYSTEM MODELING EFFORTS,” *Joule*, 4(12), 2523-2526.
- [J47] J. STRAND, S. SIDDIQUI (2020) “VALUE OF IMPROVED INFORMATION ABOUT FOREST PROTECTION VALUES: TOWARD A BENEFIT-COST ANALYSIS OF PUBLIC-GOOD VALUATION STUDIES,” *Journal of Benefit-Cost Analysis*, 11(3), 418-440.
- [J46] [Y. ZHANG](#)¹, [J. RIERA](#)³, [K. OSTROW](#)³, S. SIDDIQUI, H. DE SILVA, S. SARKAR, L. FERNANDO, L. GARDNER (2020) “MODELING THE RELATIVE ROLE OF HUMAN MOBILITY, LAND-USE AND CLIMATE FACTORS ON DENGUE OUTBREAK EMERGENCE IN SRI LANKA,” *BMC Infectious Diseases*, 20(2020): 1-14.
- [J45] [F. FEJOO](#)¹, M. PALOPOLI, J. BERNSTEIN, S. SIDDIQUI, T. ALBRIGHT (2020) “KEY INDICATORS OF PHASE TRANSITION FOR CLINICAL TRIALS THROUGH MACHINE LEARNING,” *Drug Discovery Today*, 25(2): 414-421.
- [J44] [S. SANKARANARAYANAN](#)², [Y. ZHANG](#)¹, [J. CARNEY](#)³, Y. NIGUSSIE, B. ESAYAS, B. SIMANE, B. ZAITCHIK, S. SIDDIQUI (2020) “INTEGRATED MODELING OF FOOD-ENERGY-WATER IN ETHIOPIA,” *Frontiers in Sustainable Food Systems*, 4(4):1-14.
- [J43] J. BISTLINE, M. BROWN, S. SIDDIQUI, K. VAILLANCOURT (2020) “ELECTRIC SECTOR IMPACTS OF RENEWABLE POLICY COORDINATION: A MULTI-MODEL STUDY OF THE NORTH AMERICAN ENERGY SYSTEM,” *Energy Policy*, 145: 111707.
- [J42] H. HUNTINGTON, A. BHARGAVA, D. DANIELS, J. WEYANT, [C. AVRAAM](#)², J. BISTLINE, J. EDMONDS, S. GIAROLA, A. HAWKES, M. HANSEN, P. JOHNSTON, A. MOLAR-CRUZ, M. NADEW, S. SIDDIQUI, K. VAILLANCOURT, N. VICTOR (2020) “KEY FINDINGS FROM THE CORE NORTH AMERICAN SCENARIOS IN THE EMF34 INTERMODEL COMPARISON,” *Energy Policy*, 144: 111599.
- [J41] S. SIDDIQUI, K. VAILLANCOURT, O. BAHN, N. VICTOR, C. NICHOLS, [C. AVRAAM](#)², M. BROWN (2020) “INTEGRATED NORTH AMERICAN ENERGY MARKETS UNDER DIFFERENT FUTURES OF CROSS-BORDER ENERGY INFRASTRUCTURE,” *Energy Policy*, 144: 111658.
- [J40] Y. GUO, [W. JIANG](#)², P. LAKSHMINARAYANAN, X. HUI, P. HAN, Z. CHENG, M. BOWERS, X. HUI, I. SHPITSER, S. SIDDIQUI, R. TAYLOR, H. QUON, T. McNUTT (2020) “SPATIAL RADIATION DOSE INFLUENCE ON XEROSTOMIA RECOVERY AND ITS COMPARISON TO ACUTE INCIDENCE IN HEAD NECK CANCER PATIENTS ADVANCES IN RADIATION ONCOLOGY,” *Advances in Radiation Oncology*, 5(2): 221-230.
- [J39] [W. JIANG](#)², S. SIDDIQUI (2020) “HYPER-PARAMETER OPTIMIZATION FOR SUPPORT VECTOR MACHINES USING STOCHASTIC GRADIENT DESCENT AND DUAL COORDINATE DESCENT,” *EURO Journal of Computational Optimization*, 8(1): 85-101.
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- [J37] [W. JIANG](#)², S. SIDDIQUI, S. BARNES, [S. CABRAL](#)³, F. KORLEY, M. TOERPER, E. HAMROCK, S. LEVIN, (2019) “READMISSION RISK TRAJECTORIES FOR PATIENTS WITH HEART FAILURE USING A DYNAMIC PREDICTION APPROACH: RETROSPECTIVE STUDY,” *JMIR Medical Informatics*, 7(4): e14756.
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- [J32] P. LAKSHMINARAYANAN, [W. JIANG](#)², S. ROBERTSON, Z. CHENG, P. HAN, M. BOWERS, J. MOORE, I. SHPITSER, S. SIDDIQUI, H. QUON, R. TAYLOR, T. MCNUTT (2019) "RADIO-MORPHOLOGY: PARAMETRIC SHAPE-BASED FEATURES IN RADIOTHERAPY," *Medical Physics*, 46(2): 704-713.
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- [S32] SEMINAR (2018) “NUMERICAL MODELING FOR FOOD, ENERGY AND OTHER COMPLEX SYSTEMS,” *Weston Roundtable Series, Center for Sustainability and the Global Environment (SAGE), University of Wisconsin-Madison*, MADISON, WISCONSIN, NOVEMBER, 2018.
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- [S9] SEMINAR (2014) “MODELING POLICY DECISIONS IN ENERGY MARKETS AND HEALTH SYSTEMS USING MULTIOBJECTIVE PROGRAMS WITH EQUILIBRIUM CONSTRAINTS,” *Department of Civil and Environmental Engineering, University of Maryland*, COLLEGE PARK, MD, APRIL, 2014.
- [S8] SEMINAR (2014) “US BIOFUEL MARKET MODEL: ANALYSIS OF THE ENVIRONMENTAL PROTECTION AGENCY’S 2014 RECENT RULEMAKING ACTIVITIES,” *Office of Transportation and Air Quality, Environmental Protection Agency*, WASHINGTON, DC, MARCH, 2014.
- [S7] SEMINAR (2014) “MODELING POLICY DECISIONS IN ENERGY MARKETS USING OPTIMIZATION PROBLEMS WITH EQUILIBRIUM CONSTRAINTS,” *International Council on Clean Transportation*, WASHINGTON, DC, MARCH, 2014.
- [S6] SEMINAR (2014) “DYNAMIC CLIMATE POLICY WITH BOTH STRATEGIC AND NON-STRATEGIC AGENTS: TAXES VERSUS QUANTITIES,” *Mercator Research Institute on Global Commons and Climate Change, Technische Universität Berlin*, BERLIN, GERMANY, JANUARY, 2014.
- [S5] SEMINAR (2013) “NEW ALGORITHMS FOR SOLVING EQUILIBRIUM PROBLEMS WITH EQUILIBRIUM CONSTRAINTS,” *Energy, Transport, Environment Section, DIW Berlin*, BERLIN, GERMANY, JULY, 2013.
- [S4] SEMINAR (2012) “DECOMPOSITION METHODS FOR TWO-LEVEL OPTIMIZATION PROBLEMS WITH APPLICATIONS TO ROBUST ENGINEERING DESIGN AND NATURAL GAS MARKETS,” *Department of Applied Mathematics & Statistics, JHU*, BALTIMORE, MD, NOVEMBER, 2012.
- [S3] SEMINAR (2012) “SOLVING MPECs WITH AN APPLICATION TO THE US NATURAL GAS MARKET,” *Department of Geography and Environmental Engineering, JHU*, BALTIMORE, MD, SEPTEMBER, 2012.
- [S2] SEMINAR (2012) “SOLVING TWO-LEVEL OPTIMIZATION PROBLEMS WITH APPLICATIONS TO ROBUST ENGINEERING DESIGN AND OPERATIONS RESEARCH,” *Department of Civil Engineering, JHU*, BALTIMORE, MD, MARCH, 2012.
- [S1] SEMINAR (2011) “SOLVING TWO-LEVEL OPTIMIZATION PROBLEMS WITH ENGINEERING APPLICATIONS,” *American Air Liquide*, NEWARK, DE, MAY, 2011.
- CONFERENCE TALKS
- [C85] [M. KOUTSOPOULOS](#)^{1*}, [K. LESSARD](#)³, [A. ELLIS](#)³, H. ZHONGGUO, T. MU, X. ROMEIKO, [S. SIDDIQUI](#) (2025) “INTEGRATED MODELING FOR CIRCULAR AND RESILIENT FOOD-WATER-ENERGY-WASTE INFRASTRUCTURE,” *AGU Fall Meeting*, NEW ORLEANS, LA, DECEMBER, 2025.
- [C84] [S. SIDDIQUI](#)^{*}, A. SIDDIQUI (2025) “AMBIGUITIES AND NONMONOTONICITIES UNDER PROSUMER POWER: OPTIMAL DISTRIBUTED ENERGY RESOURCE INVESTMENT IN A DEREGULATED ELECTRICITY INDUSTRY,” *MOPTA Conference*, AZORES, PORTGAL, JUNE, 2025.
- [C83] [S. SIDDIQUI](#)^{*}, A. SIDDIQUI (2024) “AMBIGUITIES AND NONMONOTONICITIES UNDER PROSUMER POWER: OPTIMAL DISTRIBUTED ENERGY RESOURCE INVESTMENT IN A DEREGULATED ELECTRICITY INDUSTRY,” *Transatlantic Infraday Conference*, RIO DE JANEIRO, BRAZIL, NOVEMBER, 2024.
- [C82] [S. SIDDIQUI](#)^{*} (2024) “COMPILATION, INTERPRETATION, AND INTEGRATION OF WASTED FOOD WITHIN OPTIMIZATION-BASED MODELS,” *INFORMS Annual Conference*, SEATTLE, WA, OCTOBER 2024.
- [C81] [C. AVRAAM](#)^{2*}, J. BISTLINE, M. BROWN, K. VAILLANCOURT, [S. SIDDIQUI](#) (2020) “NORTH AMERICAN NATURAL GAS MARKET AND INFRASTRUCTURE DEVELOPMENTS UNDER DIFFERENT MECHANISMS OF RENEWABLE POLICY COORDINATION,” *INFORMS Annual Conference*, VIRTUAL, NOVEMBER 2020.
- [C80] [C. AVRAAM](#)^{2*}, [S. SIDDIQUI](#), E. COGAN, R. NEFF (2020) “BI-LEVEL OPTIMIZATION FOR DATA GENERATION ON FOOD, ENERGY, AND TRANSPORTATION SYSTEMS,” *INFORMS Annual Conference*, VIRTUAL, NOVEMBER 2020.
- [C79] [S. SIDDIQUI](#)^{*} (2020) “USING STATIONARY POINTS TO OBTAIN EFFICIENT SOLUTIONS TO EQUILIBRIUM PROBLEMS WITH EQUILIBRIUM CONSTRAINTS,” *INFORMS Annual Conference*, VIR-

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- TUAL, NOVEMBER 2020.
- [C78] S. SIDDQUI*, [S. SANKARANARAYANAN](#)², [Y. ZHANG](#)¹, [J. CARNEY](#)³, B. ESYAS, B. SIMANE, B. ZAITCHIK, Y. NIGUSSIE (2019) "A MULTI-SCALE FOOD MODEL TO EVALUATE REGIONALIZED IMPACTS FROM POLICY CHANGES: APPLICATION TO AN EXPORT BAN POLICY IN ETHIOPIA," *AGU Fall Meeting*, SAN FRANCISCO, US, 2019.
 - [C77] S. SIDDQUI, [Y. ZHANG](#)¹, [S. SANKARANARAYANAN](#)², [J. CARNEY](#)³, B. ESYAS, B. SIMANE, [P. JUTURU](#)³, B. ZAITCHIK (2019) "A MULTIPLAYER MICROECONOMIC FRAMEWORK FOR INTEGRATING MULTISCALE DATASETS AND MODELS IN THE FOOD-ENERGY-WATER NEXUS," *AGU Fall Meeting*, SAN FRANCISCO, US, 2019.
 - [C76] B. ZAITCHIK*, B. SIMANE, M. EGGEN, M. OZDOGAN, D.A. BIRHAN, J.E. SHORTRIDGE, S. SIDDQUI, [Y. ZHANG](#)¹ (2019) "MULTI-SCALE CLIMATE IMPACTS ON FOOD AND WATER SECURITY IN ETHIOPIA," *AGU Fall Meeting*, SAN FRANCISCO, US, 2019.
 - [C75] [Y. ZHANG](#)^{1*}, E. DONG, S. SIDDQUI, L. GARDNER (2019) "INCORPORATING CLIMATE MODELING INTO DENGUE OUTBREAK PREDICTIONS," *INFORMS Annual Conference*, SEATTLE, WA, NOVEMBER 2019.
 - [C74] S. SIDDQUI*, S. LEVIN, E. HAMROCK (2019) "READMISSION RISK TRAJECTORIES FOR HEART FAILURE PATIENTS USING A DYNAMIC PREDICTION APPROACH," *INFORMS Annual Conference*, SEATTLE, WA, NOVEMBER 2019.
 - [C73] S. SIDDQUI*, [C. AVRAAM](#)², M. BROWN (2019) "THE ROLE OF CROSS-BORDER ENERGY INFRASTRUCTURE IN RESILIENCE TO NATURAL GAS PRICE SHOCKS IN NORTH AMERICA," *INFORMS Annual Conference*, SEATTLE, WA, NOVEMBER 2019.
 - [C72] [Y. ZHANG](#)^{1*}, [P. JUTURU](#)³, [S. SANKARANARAYANAN](#)², [C. DREW](#)³, B. ZAITCHIK, S. SIDDQUI (2019) "IRRIGATION AND HYDROPOWER TRADEOFF AT THE INTERSECTION OF FOOD-ENERGY-WATER NEXUS," *INFORMS Annual Conference*, SEATTLE, WA, NOVEMBER 2019.
 - [C71] K. GHOBADI*, S. SIDDQUI, S. LEVIN, E. HAMROCK (2019) "OPTIMIZATION MODEL FOR STAFF SCHEDULING," *INFORMS Annual Conference*, SEATTLE, WA, NOVEMBER 2019.
 - [C70] [C. AVRAAM](#)^{2*}, S. SIDDQUI, E. COGAN, R. NEFF (2019) "SYNTHETIC DATA GENERATION FOR INTERDEPENDENT FOOD-ENERGY SYSTEMS," *INFORMS Annual Conference*, SEATTLE, WA, NOVEMBER 2019.
 - [C69] S. SIDDQUI*, [C. AVRAAM](#)², [F. FEJOO](#)¹, G. IYER (2019) "THE FUTURE OF NATURAL GAS INFRASTRUCTURE IN NORTH AMERICA," *INFORMS Annual Conference*, SEATTLE, WA, NOVEMBER 2019.
 - [C68] [W. JIANG](#)², [S. CABRAL](#)³, S. BARNES, F. KORLEY, M. TOERPER, E. HAMROCK, S. LEVIN, S. SIDDQUI* (2019) "MACHINE LEARNING FOR PREDICTING HEART FAILURE READMISSION," *POMS Conference*, WASHINGTON, DC, MAY, 2019.
 - [C67] S. SIDDQUI (2018) "SOLVING PROBLEMS WITH EQUILIBRIUM CONSTRAINTS WITH AN APPLICATION TO ENERGY MARKETS," *INFORMS Annual Conference*, PHOENIX, AZ, NOVEMBER 2018.
 - [C66] [Y. ZHANG](#)^{1*}, [S. SANKARANARAYANAN](#)², [J. CARNEY](#)³, W. NIE, B. ZAITCHIK, S. SIDDQUI (2018) "MODELING THE INTERSECTIONS OF FOOD ENERGY AND WATER IN CLIMATE VULNERABLE ETHIOPIA WITH AN APPLICATION TO SMALL SCALE IRRIGATION," *INFORMS Annual Conference*, PHOENIX, AZ, NOVEMBER 2018.
 - [C65] [Y. ZHANG](#)^{1*}, [J. RIERA](#)³, [K. OSTROW](#)³ S. SIDDQUI, H. DE SILVA, S. SARKAR, L. FERNANDO, L. GARDNER (2018) "MODELING THE RELATIVE ROLE OF HUMAN MOBILITY, LAND-USE AND CLIMATE FACTORS ON DENGUE OUTBREAK EMERGENCE IN SRI LANKA," *INFORMS Annual Conference*, PHOENIX, AZ, NOVEMBER 2018.
 - [C64] [C. AVRAAM](#)^{2*}, [F. FEJOO](#)¹, [R. POULTON](#)³ S. SIDDQUI (2018) "A FRAMEWORK FOR CALIBRATING TRANSPORTATION MODELS: A SPATIAL PRICE EQUILIBRIUM BASED METHOD," *INFORMS Annual Conference*, PHOENIX, AZ, NOVEMBER 2018.
 - [C63] [S. SANKARANARAYANAN](#)^{2*}, [Y. ZHANG](#)¹, [J. CARNEY](#)³ S. SIDDQUI (2018) "INTEGRATED MODELING OF FOOD-ENERGY-WATER IN ETHIOPIA," *INFORMS Annual Conference*, PHOENIX, AZ, NOVEMBER 2018.
 - [C62] [C. AVRAAM](#)^{2*}, A. LAMBROU, [W. JIANG](#)², S. SIDDQUI, A. SO (2018) "CALIBRATION OF TRANSPORTATION MODELS WITH SCARCE COST DATA: A MATHEMATICAL PROGRAM WITH EQUILIBRIUM CONSTRAINTS," *INFORMS Annual Conference*, PHOENIX, AZ, NOVEMBER 2018.
 - [C61] S. SIDDQUI* (2018) "SOLVING PROBLEMS WITH EQUILIBRIUM CONSTRAINTS WITH AN APPLICATION TO ENERGY MARKETS," *European Conference On Operational Research*, VALENCIA,

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- SPAIN, JULY 2018.
- [C60] S. SIDDIQUI^{*} (2018) "SOLVING PROBLEMS WITH EQUILIBRIUM CONSTRAINTS WITH AN APPLICATION TO ENERGY MARKETS," *International Symposium on Mathematical Programming*, BORDEAUX, FRANCE, JULY 2018.
 - [C59] S. SIDDIQUI^{*} (2018) "SOLVING PROBLEMS WITH EQUILIBRIUM CONSTRAINTS WITH AN APPLICATION TO ENERGY MARKETS," *International Workshop on Bilevel Programming*, LILLE, FRANCE, JUNE 2018.
 - [C58] F. FEIJOO^{1*}, G. IYER, C. AVRAAM², S. SIDDIQUI, L. CLARKE, M. BINSTED, S. SANKARANARAYANAN², P. PATEL, M. WISE, N. PRATES³, E. TORRES-ALFARO³ (2018) "THE FUTURE OF NATURAL GAS INFRASTRUCTURE DEVELOPMENT IN THE UNITED STATES," *INFORMS Annual Conference*, PHOENIX, AZ, NOVEMBER 2018.
 - [C57] W. JIANG^{2*}, P. LAKSHMINARAYANAN, X. HUI, P. HAN, Z. CHENG, M. BOWERS, I. SHPITSER, S. SIDDIQUI, R. TAYLOR, H. QUON, T. MCNUTT (2017) "PREDICTIVE MODELING FOR TOXICITIES IN HEAD AND NECK CANCER PATIENTS," *INFORMS Annual Conference*, HOUSTON, TX, NOVEMBER 2017.
 - [C56] S. SANKARANARAYANAN^{2*}, Y. ZHANG¹, J. CARNEY³ S. SIDDIQUI (2017) "INTEGRATED MODELING OF FOOD-ENERGY-WATER IN ETHIOPIA," *INFORMS Annual Conference*, HOUSTON, TX, NOVEMBER 2017.
 - [C55] S. SANKARANARAYANAN^{2*}, Y. ZHANG¹, J. CARNEY³ S. SIDDIQUI (2017) "INTEGRATED MODELING OF FOOD-ENERGY-WATER IN ETHIOPIA," *MOPTA Conference*, LEHIGH UNIVERSITY, PA, AUGUST, 2017.
 - [C54] S. SIDDIQUI^{*} (2017) "SOLVING PROBLEMS WITH EQUILIBRIUM CONSTRAINTS WITH AN APPLICATION TO ENERGY MARKETS," *INFORMS Annual Conference*, HOUSTON, TX, NOVEMBER 2017.
 - [C53] W. JIANG^{2*}, S. SIDDIQUI (2017) "HYPER-PARAMETER OPTIMIZATION FOR SUPPORT VECTOR MACHINE AS A BILEVEL PROBLEM," *MOPTA Conference*, LEHIGH UNIVERSITY, PA, AUGUST, 2017.
 - [C52] C. BAKKER¹, B. ZAITCHIK, S. SIDDIQUI^{*}, B. HOBBS, E. BROADDUS, R. NEFF, J. HASKETT, C. PARKER (2016) "A MULTI-SCALE ENERGY FOOD SYSTEMS MODELING FRAMEWORK FOR CLIMATE ADAPTATION," *AGU Fall Meeting*, SAN FRANCISCO, CA, NOVEMBER, 2016.
 - [C51] F. FEIJOO¹, J. BERNSTEIN, S. SIDDIQUI (2016) "PREDICTING LIKELIHOOD OF DRUG APPROVAL FROM CLINICAL TRIALS," *INFORMS Annual Conference*, NASHVILLE, TN, NOVEMBER 2016.
 - [C50] S. SANKARANARAYANAN^{2*}, F. FEIJOO¹, S. SIDDIQUI (2016) "FIRST ORDER APPROXIMATION METHODS FOR ESTIMATING DECISION COVARIANCE IN STOCHASTIC OPTIMIZATION," *INFORMS Annual Conference*, NASHVILLE, TN, NOVEMBER 2016.
 - [C49] W. JIANG^{2*}, S. CABRAL³, D. MARTINEZ, S. BARNES, F. KORLEY, L. BAROUCH, M. TOERPER, E. HAMROCK, S. LEVIN, S. SIDDIQUI (2016) "MACHINE LEARNING FOR PREDICTING HEART FAILURE READMISSION," *INFORMS Annual Conference*, NASHVILLE, TN, NOVEMBER 2016.
 - [C48] D. HUPPMANN¹, S. SIDDIQUI^{*} (2016) "AN EXACT SOLUTION METHOD FOR BINARY EQUILIBRIUM PROBLEMS WITH COMPENSATION AND THE POWER MARKET UPLIFT PROBLEM," *ENRE Awards Session, INFORMS Annual Conference*, NASHVILLE, TN, NOVEMBER 2016.
 - [C47] F. FEIJOO^{1*}, S. SIDDIQUI (2016) "THE NORTH AMERICAN NATURAL GAS MODEL: ANALYSIS OF LONG TERM NATURAL GAS EXHAUSTION," *INFORMS Annual Conference*, NASHVILLE, TN, NOVEMBER 2016.
 - [C46] C. BAKKER¹, B. ZAITCHIK, S. SIDDIQUI^{*}, B. HOBBS, E. BROADDUS, R. NEFF, J. HASKETT, C. PARKER (2016) "MIXED COMPLEMENTARITY MODELING IN FOOD SYSTEMS," *INFORMS Annual Conference*, NASHVILLE, TN, NOVEMBER 2016.
 - [C45] S. SANKARANARAYANAN^{2*}, F. FEIJOO¹, S. SIDDIQUI (2016) "SENSITIVITY AND COVARIANCE IN A LARGE-SCALE STOCHASTIC COMPLEMENTARITY PROBLEM USING FIRST ORDER APPROXIMATION," *Transatlantic Infraday, FERC*, WASHINGTON, DC, NOVEMBER, 2016.
 - [C44] S. SIDDIQUI^{*} (2016) "DETERMINING ENERGY AND CLIMATE MARKET POLICY USING MULTI-OBJECTIVE PROGRAMS WITH EQUILIBRIUM CONSTRAINTS," *Berlin Conference on Energy and Electricity Economics*, BERLIN, GERMANY, OCTOBER 2016.
 - [C43] W. JIANG^{2*}, S. CABRAL³, S. BARNES, F. KORLEY, M. TOERPER, E. HAMROCK, S. LEVIN, S. SIDDIQUI (2016) "MACHINE LEARNING FOR PREDICTING HEART FAILURE READMISSION," *MOPTA Conference*, LEHIGH UNIVERSITY, PA, AUGUST, 2016.

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- [C42] [S. SANKARANARAYANAN](#)^{2*}, [F. FEIJOO](#)¹, S. SIDDIQUI (2016) “COVARIANCE OF THE DECISION VECTOR IN STOCHASTIC COMPLEMENTARITY PROBLEM USING FIRST-ORDER APPROXIMATION,” *MOPTA Conference*, LEHIGH UNIVERSITY, PA, AUGUST, 2016.
- [C41] J. STRAND, [S. SIDDIQUI](#)^{*} (2016) “VALUE OF IMPROVED INFORMATION ABOUT FOREST PROTECTION VALUES, WITH APPLICATION TO RAINFOREST VALUATION,” *European Association of Environmental and Resource Economics Conference*, ZURICH, SWITZERLAND, JUNE, 2016.
- [C40] [D. HUPPMANN](#)¹, [S. SIDDIQUI](#)^{*} (2016) “AN EXACT SOLUTION METHOD FOR BINARY EQUILIBRIUM PROBLEMS WITH COMPENSATION AND THE POWER MARKET UPLIFT PROBLEM,” *INFORMS Optimization Society Conference*, PRINCETON, NJ, MARCH 2016.
- [C39] [S. SIDDIQUI](#), A. CHRISTENSEN (2015) “VOLUMES FOR THE RENEWABLE FUEL STANDARD USING MULTIOBJECTIVE PROGRAMS WITH EQUILIBRIUM CONSTRAINTS,” *INFORMS Annual Conference*, PHILADELPHIA, PA, NOVEMBER 2015.
- [C38] [D. HUPPMANN](#)^{1*}, [S. SIDDIQUI](#) (2015) “AN EXACT SOLUTION METHOD FOR BINARY EQUILIBRIUM PROBLEMS WITH COMPENSATION AND THE POWER MARKET UPLIFT PROBLEM,” *INFORMS Annual Conference*, PHILADELPHIA, PA, NOVEMBER 2015.
- [C37] [O. OKE](#)^{2*}, [D. HUPPMANN](#)^{1*}, [M. MARSHALL](#)³, [R. POULTON](#)³, S. SIDDIQUI (2015) “A CRUDE OIL MARKET MODEL FOR THE UNITED STATES,” *INFORMS Annual Conference*, PHILADELPHIA, PA, NOVEMBER 2015.
- [C36] [D. HUPPMANN](#)^{1*}, S. SIDDIQUI (2015) “THE TRADE-OFF BETWEEN MARKET EFFICIENCY AND COMPENSATION PAYMENTS IN UNIT COMMITMENT PROBLEMS,” *INFORMS Annual Conference*, PHILADELPHIA, PA, NOVEMBER 2015.
- [C35] [F. FEIJOO](#)^{1*}, [D. HUPPMANN](#)¹, [L. SAKIYAMA](#)³, S. SIDDIQUI (2015) “A NATURAL GAS MODEL FOR NORTH AMERICA: IMPACT OF CROSS-BORDER FLOWS OF NATURAL GAS WITH MEXICO,” *INFORMS Annual Conference*, PHILADELPHIA, PA, NOVEMBER 2015.
- [C34] [W. JIANG](#)^{2*}, [S. CABRAL](#)³, S. BARNES, F. KORLEY, M. TOERPER, E. HAMROCK, S. LEVIN, [S. SIDDIQUI](#) (2015) “MACHINE LEARNING FOR CLINICAL DECISION SUPPORT FOR HEART FAILURE(HF) READMISSION,” *INFORMS Annual Conference*, PHILADELPHIA, PA, NOVEMBER 2015.
- [C33] [O. OKE](#)^{2*}, [D. HUPPMANN](#)¹, [M. MARSHALL](#)³, S. SIDDIQUI (2015) “ANALYZING UNITED STATES CRUDE OIL FLOWS,” *Transatlantic Infraday*, *FERC*, WASHINGTON, DC, NOVEMBER, 2015.
- [C32] [W. JIANG](#)^{2*}, S. SEARLE, [S. SIDDIQUI](#) (2015) “POLICY ANALYSIS OF GLOBAL WOODCHIP TRADE USING A SPATIAL EQUILIBRIUM MODEL,” *Transatlantic Infraday*, *FERC*, WASHINGTON, DC, NOVEMBER, 2015.
- [C31] [F. FEIJOO](#)^{1*}, [D. HUPPMANN](#)¹, S. SIDDIQUI (2015) “A NATURAL GAS MODEL FOR NORTH AMERICA: IMPACT OF CROSS-BORDER FLOWS OF NATURAL GAS WITH MEXICO,” *Transatlantic Infraday*, *FERC*, WASHINGTON, DC, NOVEMBER, 2015.
- [C30] [O. OKE](#)^{2*}, [D. HUPPMANN](#)¹, [M. MARSHALL](#)³, S. SIDDIQUI (2015) “AN OIL MARKET MODEL FOR THE UNITED STATES,” *MOPTA Conference*, LEHIGH UNIVERSITY, PA, JULY, 2015.
- [C29] [W. JIANG](#)^{2*}, S. SEARLE, [S. SIDDIQUI](#) (2015) “POLICY ANALYSIS OF GLOBAL WOODCHIP TRADE USING A SPATIAL EQUILIBRIUM MODEL,” *MOPTA Conference*, LEHIGH UNIVERSITY, PA, JULY, 2015.
- [C28] S. BARNES*, M. TOERPER, E. HAMROCK, [S. SIDDIQUI](#), S. LEVIN (2015) “APPLICATION OF SUPERVISED MACHINE LEARNING METHODS TO PREDICT DAILY HOSPITAL DISCHARGES,” *INFORMS Healthcare Conference*, NASHVILLE, TN, JULY, 2015.
- [C27] [S. SIDDIQUI](#), A. CHRISTENSEN (2015) “ENERGY AND CLIMATE MARKET POLICY USING MULTIOBJECTIVE PROGRAMS WITH EQUILIBRIUM CONSTRAINTS,” *22nd International Symposium on Mathematical Programming*, *International Society on Mathematical Programming*, PITTSBURGH, PA, JULY, 2015.
- [C26] [D. HUPPMANN](#)^{1*}, S. SIDDIQUI (2015) “EXACT SOLUTIONS TO BINARY NASH GAMES AND AN APPLICATION TO THE POWER MARKET UPLIFT PROBLEM,” *Technical Conference on Increasing Market and Planning Efficiency through Improved Software*, *Federal Energy Regulatory Commission*, WASHINGTON, DC, JUNE 2015.
- [C25] [O. OKE](#)^{2*}, [D. HUPPMANN](#)¹, [M. MARSHALL](#)³, S. SIDDIQUI (2015) “A DYNAMIC EQUILIBRIUM MODEL OF THE US CRUDE OIL MARKET,” *22nd International Symposium on Mathematical Programming*, *International Society on Mathematical Programming*, PITTSBURGH, PA, JULY, 2015.
- [C24] S. BARNES*, M. TOERPER, E. HAMROCK, [S. SIDDIQUI](#), S. LEVIN (2014) “APPLICATION OF SUPERVISED MACHINE LEARNING METHODS TO PREDICT DAILY HOSPITAL DISCHARGES,” *IN-*

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- FORMS Annual Conference*, SAN FRANCISCO, CA, NOVEMBER, 2014.
- [C23] S. SIDDIQUI*, R. GREENBERG, C. PIO RODA, S. LEVIN (2014) "A MULTIOBJECTIVE OPTIMIZATION TECHNIQUE FOR CRNA STAFFING," *INFORMS Annual Conference*, SAN FRANCISCO, CA, NOVEMBER, 2014.
- [C22] O. OKE^{2*}, K. BHALLA, D. LOVE, S. SIDDIQUI (2014) "GLOBAL BICYCLING TRENDS," *INFORMS Annual Conference*, SAN FRANCISCO, CA, NOVEMBER, 2014.
- [C21] S. SIDDIQUI*, A. CHRISTENSEN (2014) "A MULTIOBJECTIVE PROGRAM WITH EQUILIBRIUM CONSTRAINTS TO DETERMINE VOLUME REQUIREMENTS FOR THE RFS," *INFORMS Annual Conference*, SAN FRANCISCO, CA, NOVEMBER, 2014.
- [C20] O. OKE^{2*}, K. BHALLA, D. LOVE, S. SIDDIQUI (2014) "TRACKING GLOBAL BICYCLE AVAILABILITY," *INFORMS Data Mining and Analytics Workshop*, SAN FRANCISCO, CA, NOVEMBER, 2014.
- [C19] S. SIDDIQUI*, A. CHRISTENSEN (2014) "EQUILIBRIUM MODEL OF THE BIOFUEL MARKET TO DETERMINE OPTIMAL VOLUMES FOR THE RENEWABLE FUEL STANDARD," *Transatlantic Infraday*, FERC, WASHINGTON, DC, NOVEMBER, 2014.
- [C18] S. SIDDIQUI*, A. CHRISTENSEN (2014) "US BIOFUEL MARKET MODEL: ANALYSIS OF THE ENVIRONMENTAL PROTECTION AGENCY'S 2014 RECENT RULEMAKING ACTIVITIES," *MOPTA Conference*, LEHIGH UNIVERSITY, PA, AUGUST, 2014.
- [C17] O. OKE^{2*}, S. SIDDIQUI (2014) "MULTIOBJECTIVE OPTIMIZATION FOR AUTOMATIC SCHEMATIC MAP DRAWING," *MOPTA Conference*, LEHIGH UNIVERSITY, PA, AUGUST, 2014.
- [C16] S. SIDDIQUI*, A. CHRISTENSEN (2014) "US BIOFUEL MARKET MODEL: ANALYSIS OF THE ENVIRONMENTAL PROTECTION AGENCY'S 2014 RECENT RULEMAKING ACTIVITIES," *Conference of the International Federation of Operational Research Societies*, BARCELONA, SPAIN, JULY, 2014.
- [C15] L. KARP, S. SIDDIQUI*, J. STRAND (2014) "DYNAMIC CLIMATE POLICY WITH BOTH STRATEGIC AND NON-STRATEGIC AGENTS: TAXES VERSUS QUANTITIES," *World Congress of Environmental and Resource Economics*, ISTANBUL, TURKEY, JUNE 2014.
- [C14] S. SIDDIQUI, O. OKE² (2013) "MODELING POLICY DECISIONS IN ENERGY AND TRANSPORTATION NETWORKS USING MULTIOBJECTIVE PROGRAMS WITH EQUILIBRIUM CONSTRAINTS," *Transatlantic Infraday*, FERC, WASHINGTON, DC, NOVEMBER, 2013.
- [C13] O. OKE^{2*}, S. SIDDIQUI (2013) "A MIXED-INTEGER PROGRAMMING TOOL FOR CREATING EFFECTIVE SCHEMATIC URBAN TRANSIT MAPS," *INFORMS Annual Conference*, MINNEAPOLIS, MN, OCTOBER, 2013.
- [C12] A. CHRISTENSEN*, S. SIDDIQUI (2013) "DYNAMICS OF RENEWABLE IDENTIFICATION NUMBERS USED FOR COMPLIANCE WITH THE RENEWABLE FUEL STANDARD," *INFORMS Annual Conference*, MINNEAPOLIS, MN, OCTOBER, 2013.
- [C11] S. SIDDIQUI (2013) "IMPROVING THE NORMAL BOUNDARY INTERSECTION (NBI) METHOD FOR GENERATION OF PARETO FRONTIERS IN NONCONVEX MULTI-OBJECTIVE OPTIMIZATION PROBLEMS," *26th European Conference on Operational Research*, ROME, ITALY, JULY, 2013.
- [C10] S. LEVIN*, S. SIDDIQUI, M. TOERPER, J. APPELBAUM, E. FLANAGAN, E. KASPER (2013) "CARDIAC CATHETERIZATION LAB INPATIENT FORECAST," *26th European Conference on Operational Research*, ROME, ITALY, JULY, 2013.
- [C9] S. SIDDIQUI*, S. AZARM, S. GABRIEL (2013) "ON IMPROVING NORMAL BOUNDARY INTERSECTION METHOD FOR GENERATION OF PARETO FRONTIER," *World Congress on Structural and Multidisciplinary Optimization*, ORLANDO, FL, MAY, 2013.
- [C8] S. SIDDIQUI (2013) "A DECOMPOSITION METHOD FOR SOLVING EQUILIBRIUM PROGRAMS WITH EQUILIBRIUM CONSTRAINTS," *10th International Conference on Computational Management*, MONTREAL, QC, MAY, 2013.
- [C7] S. SIDDIQUI (2012) "AN EFFICIENT ALGORITHM FOR SOLVING EQUILIBRIUM PROGRAMS WITH EQUILIBRIUM CONSTRAINTS," *Transatlantic Infraday, Resources for the Future*, WASHINGTON, DC, NOVEMBER, 2012.
- [C6] S. SIDDIQUI (2012) "A DECOMPOSITION METHOD FOR SOLVING EQUILIBRIUM PROGRAMS WITH EQUILIBRIUM CONSTRAINTS," *INFORMS Annual Conference*, PHOENIX, AZ, OCTOBER, 2012.
- [C5] S. SIDDIQUI*, S. GABRIEL (2011) "USING SCHUR'S DECOMPOSITION AND SOS TYPE 1 VARIABLES TO MODEL SHALE GAS MARKET DYNAMICS IN THE US," *INFORMS Annual Conference*, CHARLOTTE, NC, NOVEMBER, 2011.
- [C4] S. SIDDIQUI (2011) "USING SCHUR'S DECOMPOSITION AND SOS TYPE 1 VARIABLES TO SOLVE

* Presenting Author ¹PostDoc Advisee ²PhD Advisee ³Undergraduate Advisee

MPECs and EPECs,” *INFORMS Northeast Conference*, AMHERST, MA, MAY, 2011.

- [C3] S. SIDDQUI*, S. GABRIEL (2010) “USING SOS TYPE 2 VARIABLES TO SOLVE MATHEMATICAL PROGRAMS WITH EQUILIBRIUM CONSTRAINTS,” *INFORMS Annual Conference*, AUSTIN, TX, NOVEMBER, 2010.
- [C2] S. SIDDQUI*, S. GABRIEL, H. AVETISYAN (2010) “MODELING SHALE GAS PRODUCTION IN THE US AS A MATHEMATICAL PROGRAM WITH EQUILIBRIUM CONSTRAINTS,” *Transatlantic Infraday, Resources for the Future*, WASHINGTON, DC, NOVEMBER, 2010.
- [C1] H. AVETISYAN, S. SIDDQUI (2009) “NATURAL GAS PIPELINE PROJECTS IN EUROPE,” *Transatlantic Infraday, Resources for the Future*, WASHINGTON, DC, NOVEMBER, 2009.

Research Advisor Post-DOC

- [1] DANIEL HUPPMANN, *Department of Civil Engineering, JHU*, 2015 – CURRENTLY RESEARCH SCHOLAR AT IIASA, AUSTRIA
- [2] FELIPE FEIJOO, *Department of Civil Engineering, JHU*, 2015-2016 – CURRENTLY ASSOCIATE PROFESSOR AT PUCV, CHILE
- [3] MEHDI MADANI, *Department of Civil Engineering, JHU*, 2017-2018 – CURRENTLY CONSULTANT AT N-SIDE, BELGIUM
- [4] YING ZHANG, *Department of Civil Engineering, JHU*, 2017-2019 – CURRENTLY RESEARCH SCHOLAR AT JGCRI, PNNL
- [5] TIRUWORK TIBEBU, *Department of Environmental Science, AU*, 2022-2024 – CURRENTLY ASSISTANT RESEARCH PROFESSOR AT UMD
- [6] MARIANA KOUTSOPOULOS, *Department of Environmental Science, AU*, 2025-Present

Post-DOC (Co-ADVISED)

- [1] CRAIG BAKKER, *DOGEE* (Co-ADVISED WITH C. PARKER), 2015-2016 – CURRENTLY STAFF POST-DOC, PNNL

PhD

- [1] OLUFOLAJIMI OKE, *Department of Civil Engineering, JHU*, (PhD, SPRING 2016) – CURRENTLY ASSISTANT PROFESSOR AT NORTHEASTERN UNIVERSITY
- [2] WEI JIANG, *Department of Civil Engineering, JHU*, (PhD, SUMMER 2018) – CURRENTLY RESEARCH SCIENTIST AT AMAZON
- [3] SRIRAM SANKARANARAYANAN, *Department of Civil Engineering*, (PhD, FALL 2018) – CURRENTLY ASSISTANT PROFESSOR AT IIM AHMEDABAD
- [4] CHARALAMPOS AVRAAM, *Department of Civil Engineering, JHU*, (PhD, SUMMER 2021) – CURRENTLY RESEARCHER AT NREL

PhD (Co-ADVISED)

- [1] SALEH SATTI, *Department of Earth and Planetary Sciences, JHU* (Co-ADVISED WITH B. ZAITCHIK), (PhD, SUMMER 2016) – CURRENTLY AT CONSTELLATION ENERGY

PhD (VISITING)

- [1] TOM BRIJS, *University of Leuven (KU Leuven)*, (PhD, SUMMER 2017) – CURRENTLY SENIOR ASSOCIATE, BOSTON CONSULTING GROUP
- [2] MICHAEL ANGELO, *University of Hawaii*, EXPECTED SPRING 2019
- [3] DAWUD ANSARI, *DIW Berlin*, (PhD, FALL 2020) – CURRENTLY VISITING SCHOLAR, DIW BERLIN
- [4] PAUL NEETZOW, *TU-Berlin*, (PhD, FALL 2020) – CURRENTLY ENVIRONMENTAL ECONOMIST AT BMWI

MASTERS

- [1] ASHLEY FELDMAN, *Department of Civil Engineering, JHU*, CLASS OF 2015
- [2] LISSY LANGER, *Visiting Student, DIW Berlin*, CLASS OF 2015
- [3] DEVIN CONLEY, *Department of Mechanical Engineering, JHU*, CLASS OF 2017
- [4] DAVID WILLIAMSON, *Department of Civil Engineering, JHU*, CLASS OF 2018
- [5] SMILE INDIAS, *MICA Center for Social Design*, CLASS OF 2017
- [6] PATRICIA NATALIE, *MICA Center for Social Design*, CLASS OF 2017
- [7] JEFFERSON RIERA, *Environmental Health and Engineering, JHU*, CLASS OF 2018
- [8] VALERIA FUENTES, *MICA Center for Social Design*, CLASS OF 2018
- [9] ADRIAN AU, *Department of Mechanical Engineering, JHU*, CLASS OF 2019
- [10] ANUSHKA JAJODIA, *MICA Center for Social Design*, CLASS OF 2019

* Presenting Author ¹PostDoc Advisee ²PhD Advisee ³Undergraduate Advisee

- [11] PRATHIBHA JUTURU, *Environmental Health and Engineering, JHU*, CLASS OF 2020
- [12] DREA RACHEL, *Kogod School of Business, AU*, CLASS OF 2022
- [13] FAHIM KARIM, *Kogod School of Business, AU*, CLASS OF 2022
- [14] BLAKE STEINMETZ, *Environmental Science, AU*, CLASS OF 2021
- [15] ELLI RUGGIERO, *Environmental Science, AU*, CLASS OF 2022
- [16] HANNAH NISONSON, *Environmental Science, AU*, CLASS OF 2022
- [17] LAM-ANH LE, *Kogod School of Business, AU*, CLASS OF 2022
- [18] EMAN MOHAMED, *Kogod School of Business, AU*, CLASS OF 2022
- [19] JOHNSON ODEJIDE, *Kogod School of Business, AU*, CLASS OF 2023
- [20] MARGARET NELSON, *Environmental Science, AU*, CLASS OF 2026

MPH

- [1] JANICE DE VITO, *School of Public Health*, CLASS OF 2014
- [2] EMMA MOYNIHAN, *School of Public Health*, CLASS OF 2018

UNDERGRADUATE

- [1] MOLLY VAN DOREN, *Department of Civil Engineering, JHU*, CLASS OF 2014
- [2] MAX MARSHALL, *Department of Civil Engineering, JHU*, CLASS OF 2016
- [3] DANIEL TAKASH, *Applied Mathematics & Statistics, JHU*, CLASS OF 2016
- [4] PACO TANTUICO, *Department of Civil Engineering, JHU*, CLASS OF 2016
- [5] RICHARD POULTON, *Department of Civil Engineering, JHU*, CLASS OF 2017
- [6] STEPHANIE CABRAL, *Applied Mathematics & Statistics, JHU*, CLASS OF 2016
- [7] COLIN FRIEDMAN, *Department of Mechanical Engineering, JHU*, CLASS OF 2016
- [8] CARTER BURNS, *Department of Economics, JHU*, CLASS OF 2016
- [9] ERIN TODARO, *Department of Civil Engineering, JHU*, CLASS OF 2018
- [10] RAEGAN HENSLEY, *Department of Civil Engineering, JHU*, CLASS OF 2017
- [11] EVELYN TORRES-ALFARO, *Department of Civil Engineering, JHU*, CLASS OF 2017
- [12] JOHN STANTON, *International Studies, JHU*, CLASS OF 2017
- [13] BENJAMIN SOKOL, *Department Civil Engineering, JHU*, CLASS OF 2019
- [14] JESS CARNEY, *Applied Mathematics & Statistics, JHU*, CLASS OF 2018
- [15] KAYLA OSTROW, *Department of Civil Engineering, JHU*, CLASS OF 2021
- [16] NAOMI MEISELMAN, *Department of Civil Engineering, JHU*, CLASS OF 2021
- [17] CARSON DREW, *Department of Civil Engineering, JHU*, CLASS OF 2021
- [18] RACHEL NEIMAN, *Department of Civil Engineering, JHU*, CLASS OF 2019
- [19] DANIEL CHU, *Department of Computer Science, JHU*, CLASS OF 2022
- [20] STEVEN WITKIN, *Applied Mathematics & Statistics, JHU*, CLASS OF 2021
- [21] LIANA GARCIA, *Department of Environmental Science, AU*, CLASS OF 2024
- [22] AMANDA CONWAY, *Mathematics & Statistics, AU*, CLASS OF 2023
- [23] NITYA AGGARWAL, *Department of Environmental Science, AU*, CLASS OF 2023
- [24] HANNAH VANWAGNER, *Department of Environmental Science, AU*, CLASS OF 2023
- [25] KYLIE BILL, *Department of Environmental Science, AU*, CLASS OF 2024
- [26] KAYAH REYERSON, *Department of Environmental Science, AU*, CLASS OF 2024
- [27] KENDALL WITTERS, *Department of Environmental Science, AU*, CLASS OF 2025
- [28] LILY MARZANO, *Department of Environmental Science, AU*, CLASS OF 2023
- [29] MADDIE YOUNG, *Department of Environmental Science, AU*, CLASS OF 2025
- [30] CAROLINE ARNETTE, *Department of Health Studies, AU*, CLASS OF 2023
- [31] COLLIN COIL, *Department of Health Studies, AU*, CLASS OF 2023
- [32] PARTHAV EASWAR, *Department of Environmental Science, AU*, CLASS OF 2023
- [33] LILY LONDON, *Department of Health Studies, AU*, CLASS OF 2023
- [34] JO SPURGEON, *Department of Health Studies, AU*, CLASS OF 2023
- [35] ETHAN ZEIGLER, *Department of Environmental Science, AU*, CLASS OF 2025
- [36] MARILYN QUACOE, *Department of Biology, AU*, CLASS OF 2024
- [37] EMILY ASSEF, *Department of Environmental Science, AU*, CLASS OF 2025
- [38] EMMA HUDSON, *Department of Environmental Science, AU*, CLASS OF 2025
- [39] NDA KOUAKOU, *Department of Environmental Science, AU*, CLASS OF 2025
- [40] KATIE LESSARD, *Department of Environmental Science, AU*, CLASS OF 2026
- [41] ALEXIS ELLIS, *Department of Environmental Science, AU*, CLASS OF 2027
- [42] MATTHEW BRIDGES, *Department of Environmental Science, AU*, CLASS OF 2027
- [43] CLAIRE MANSHEIM, *Department of Environmental Science, AU*, CLASS OF 2027

- [43] ELLIOT GERLACH, *Department of Environmental Science, AU*, CLASS OF 2027
- [44] MYA SYMEONIDES, *Department of Environmental Science, AU*, CLASS OF 2028
- [45] REBECCA RUDOLPH, *Department of Environmental Science, AU*, CLASS OF 2028
- [46] ALDANA BRANDONI, *SIS, AU*, CLASS OF 2027

- UNDERGRADUATE (VISITING)
- [1] LARISSA SAKIYAMA, *Cornell University*, CLASS OF 2017
 - [2] NATHALIA PRATES, *The Ohio State University*, CLASS OF 2018
 - [3] KAREN VASQUEZ, *University of Kansas*, CLASS OF 2020
 - [4] ERIC HAGERMAN, *Howard University*, CLASS OF 2021

- HIGH SCHOOL
- [1] NAMPOINA RANDRIANARIVELO, *Bryn Mawr School*, CLASS OF 2018
 - [2] RORY JOHNSON, *Bryn Mawr School*, CLASS OF 2018
 - [3] TENEE BLACKET, *Baltimore Polytechnic Institute*, CLASS OF 2015
 - [4] CLAIRE BLAUDEAU, *Bryn Mawr School*, CLASS OF 2019
 - [5] NILES EGAN, *Montgomery Blair High School*, CLASS OF 2019
 - [6] JORDAN KING, *Bryn Mawr School*, CLASS OF 2020
 - [7] RENEE HONG, *New Jersey High School*, CLASS OF 2023

- ADVISEE HONORS
- NITYA AGGARWAL, LIANA GARCIA, HANNAH NISONSON, AND KAYAH REYERSON, *Mathias Research Conference Student Award for Best Presentation*, SPRING 2022
- CHARALAMPOS AVRAAM, *Leventis Fellowship (JHU)*, FALL 2019 - SPRING 2021
- OLUFOLAJIMI OKE, *Croft Fellowship (E²SHI, JHU)*, FALL 2015 - SPRING 2016
- DANIEL TAKASH, *Provost Undergraduate Research Award (PURA)*, JHU, FALL 2015
- OLUFOLAJIMI OKE, *HEART Instructor (JHU)*, FALL 2015
- MAX MARSHALL, *Summer Research, WINDINSPIRE (JHU)*, SUMMER 2015
- OLUFOLAJIMI OKE, *Teaching and Research Fellow (CER, JHU)*, SPRING 2015
- OLUFOLAJIMI OKE, *Global Center on Childhood Obesity Fellow (JHU)*, FALL 2013

Teaching

- UNDERGRADUATE COURSES
- ENVS 160 BIODIVERSITY AND ECOSYSTEMS, *American University*. FALL 2024 (32 STUDENTS), FALL 2021 (32 STUDENTS), SPRING 2021 (25 STUDENTS), FALL 2020 (28 STUDENTS)
- ENVS 260 ENERGY AND POLLUTION, *American University*. SPRING 2026 (28 STUDENTS)
- 560.442 EQUILIBRIUM MODELING IN SYSTEMS ENGINEERING, *Johns Hopkins University*. FALL 2012 (8 STUDENTS), SPRING 2016 (39 STUDENTS), SPRING 2017 (16 STUDENTS), FALL 2017 (8 STUDENTS)
- 560.348 PROBABILITY AND STATISTICS FOR ENGINEERS, *Johns Hopkins University*. SPRING 2013 (54 STUDENTS), SPRING 2014 (85 STUDENTS), SPRING 2015 (97 STUDENTS), SPRING 2016 (103 STUDENTS), SPRING 2019 (59 STUDENTS), SPRING 2020 (38 STUDENTS)
- MATH111 INTRODUCTION TO PROBABILITY, *University of Maryland, College Park*. FALL 2007 (33,31 STUDENTS), FALL 2008 (30,32 STUDENTS), SPRING 2009 (31,29 STUDENTS)
- MATH111 ELEMENTARY CALCULUS I, *University of Maryland, College Park*. FALL 2009 (28,34,29,30 STUDENTS)
- GRADUATE COURSES
- ENVS 596 FOOD SYSTEMS, *American University*. SPRING 2025 (10 STUDENTS)
- ENVS 505 ENERGY, *American University*. SPRING 2026 (16 STUDENTS), SPRING 2025 (19 STUDENTS), SPRING 2022 (24 STUDENTS), SPRING 2021 (17 STUDENTS)
- 560.775 BILEVEL OPTIMIZATION IN ENERGY, *Johns Hopkins University*. SPRING 2020 (11 STUDENTS)
- 560.740 OPTIMIZATION AND LEARNING, *Johns Hopkins University*. SPRING 2019 (14 STUDENTS)
- SYSTEMS MODELING FOR ETHIOPIA, WATER IGERT PROGRAM FIELD WORK IN ETHIOPIA *Johns Hopkins University*. SUMMER 2017 (17 STUDENTS)
- 560.608 MULTILEVEL AND MULTIOBJECTIVE OPTIMIZATION IN SYSTEMS, *Johns Hopkins University*. FALL 2016 (18 STUDENTS), SPRING 2018 (4 STUDENTS)

	OPERATIONS RESEARCH 4, <i>TU-Berlin and DIW Berlin, Germany</i>. FALL 2015 (17 STUDENTS), FALL 2016 (19 STUDENTS), FALL 2017 (18 STUDENTS), FALL 2018 (18 STUDENTS) OPERATIONS RESEARCH 3, <i>TU-Berlin and DIW Berlin, Germany</i>. SUMMER 2013 (7 STUDENTS), SUMMER 2014 (13 STUDENTS), SUMMER 2017 (17 STUDENTS) OPERATIONS RESEARCH 2, <i>TU-Berlin and DIW Berlin, Germany</i>. WINTER 2014 (23 STUDENTS)
SHORT COURSES	OPTIMIZATION AND EQUILIBRIUM MODELING IN ENVIRONMENTAL SYSTEMS, <i>American University</i>. SPRING 2022 (12 STUDENTS), FALL 2022 (11 STUDENTS) ADVANCED COMPLEMENTARITY MODELING METHODS, <i>King Abdullah Petroleum Studies and Research Center, Riyadh, Saudi Arabia</i>. SUMMER 2016 (14 STUDENTS) OPTIMIZATION AND EQUILIBRIUM MODELING IN SYSTEMS ENGINEERING, <i>Johns Hopkins University</i>. FALL 2013 (9 STUDENTS), FALL 2014 (16 STUDENTS), FALL 2015 (15 STUDENTS) EQUILIBRIUM PROBLEMS WITH EQUILIBRIUM CONSTRAINTS, <i>TU-Berlin and DIW, Berlin, Germany</i>. SUMMER 2013 (12 STUDENTS) ADVANCED STATISTICS, <i>Maryland Leadership Institute</i>. SUMMER 2009 (9 STUDENTS), SUMMER 2010 (19 STUDENTS), SUMMER 2011 (14 STUDENTS)
External Service & Activities	
LEADERSHIP	ADVISORY NEIGHBORHOOD COMMISSIONER. SINGLE MEMBER DISTRICT 3C05, DISTRICT OF COLUMBIA (2021-2024) COMMITTEE ON ENERGY STATISTICS. AMERICAN STATISTICAL ASSOCIATION (2021-2022) STEERING COMMITTEE. MACRO ENERGY SYSTEMS COMMUNITY (2020-2022) CHAIR. COMMITTEE FOR NATURAL RESOURCES BEST PAPER AWARD, ENERGY NATURAL RESOURCES AND THE ENVIRONMENT SECTION (2021), INFORMS SECRETARY/TREASURER. ENERGY NATURAL RESOURCES AND THE ENVIRONMENT SECTION (2016-2018), INFORMS CO-CHAIR, SMART CITY AND URBAN DEVELOPMENT. INVITED CLUSTER (2018), INFORMS CHAIR, ENERGY CLUSTER. ENERGY NATURAL RESOURCES AND THE ENVIRONMENT SECTION (2016), INFORMS VICE CHAIR. LINEAR AND CONIC OPTIMIZATION, INFORMS OPTIMIZATION SOCIETY (2015-2017), INFORMS CHAIR. COMMITTEE FOR BEST STUDENT PAPER AWARD, ENERGY NATURAL RESOURCES AND THE ENVIRONMENT SECTION (2015), INFORMS
CONFERENCE LEADERSHIP	CONFERENCE CHAIR, <i>10th Annual Transatlantic Infraday Conference</i>, FEDERAL ENERGY REGULATORY COMMISSION, WASHINGTON, DC, NOVEMBER 2016
ADVISORY COUNCIL	MEMBER, <i>ReFED Advisory Council</i>, 2021 - 2022
EDITORIAL BOARD	GUEST EDITOR, <i>Optimization Letters, Special Issue on Optimization in Natural Resources, Environment and Sustainability</i>, SPRINGER, JANUARY 2020 - PRESENT ASSOCIATE EDITOR, <i>Energy Systems</i>, SPRINGER, MARCH 2017 - PRESENT ASSOCIATE EDITOR, <i>Optimization & Engineering</i>, SPRINGER, JANUARY 2016 - PRESENT
WORKSHOPS	WORKSHOP LEAD, POLICY-DRIVEN RESEARCH, <i>Macroenergy Systems Workshop</i>, SUMMER 2022 INFRASTRUCTURE GROUP LEAD, <i>Energy Modeling Forum 34</i>, 2017-2019 CO-ORGANIZER, <i>Workshop on Global Vaccination</i>, BERLIN, GERMANY, JUNE 12-13, 2014
COMMITTEE WORK	NOMINATING COMMITTEE, ENRE SECTION, <i>INFORMS</i>, FALL 2024 DISSERTATION COMMITTEE, LISSY LANGER, <i>Department of Economics, TU-Berlin</i>, DECEMBER 2017

	DISSERTATION COMMITTEE, FLORIAN PERROTON, <i>Department of Economics, Université Paris Nanterre, France</i> , DECEMBER 2017
	EXTERNAL REVIEW COMMITTEE, <i>Young Scientists Summer Program, IIASA, VIENNA, AUSTRIA</i> , OCTOBER 2017, FALL 2021
	DISSERTATION COMMITTEE, ROMAN MENDELEVITCH, <i>Department of Economics, TU-Berlin</i> , OCTOBER 2016
	PAPER COMMITTEE, <i>MOPTA Annual Conference</i> , BETHLEHEM, PA, AUGUST 2014
	DISSERTATION COMMITTEE, DANIEL HUPPMANN, <i>Department of Economics, TU-Berlin</i> , JULY 2014
OUTREACH	STEM ACHIEVEMENT IN BALTIMORE ELEMENTARY SCHOOLS. DEPARTMENTAL COORDINATOR, AUGUST 2016 - JULY 2017; FACULTY VOLUNTEER, AUGUST 2014 - JULY 2016
	ENGINEERING INNOVATION SUMMER PROGRAM. GUEST LECTURER AND ACTIVITY COORDINATOR FOR GAME THEORY. SUMMER 2013, SUMMER 2014, SUMMER 2015, SUMMER 2016, SUMMER 2018
CONFERENCE ORGANIZATION	SESSION CHAIR, <i>INFORMS Annual Conference</i> , 2014-2021
	REVIEW COMMITTEE, <i>European Association of Environmental and Resource Economists Annual Conference</i> , 2020
	SESSION CHAIR, <i>IFORS Conference</i> , BARCELONA, SPAIN, JULY 2014
	SESSION CHAIR, <i>Transatlantic Infraday Conference</i> , WASHINGTON, DC, NOVEMBER 2010, 2012, 2013, 2014
PROPOSAL REVIEWER	<i>Department of Energy</i> <i>Sloan Foundation</i> <i>EPSCOR, National Science Foundation</i> <i>CBET, National Science Foundation</i> <i>SBIR, National Science Foundation</i> <i>INFEWS, National Science Foundation</i> <i>CMMI, National Science Foundation</i>
MEDIA	<i>CNN, Interviewed by Michael Holmes about Infrastructure Resilience in 2021</i>
MEMBER	<i>The Institute for Operations Research and the Management Sciences (INFORMS)</i> , 2010-PRESENT
	<i>Society for Industrial and Applied Mathematics (SIAM)</i> , 2007-PRESENT
	<i>American Mathematical Society (AMS)</i> , 2005-PRESENT
University Service	
UNIVERSITY SERVICE	CHAIR, <i>Science Promotion and Tenure Committee, American University</i> , 2025-PRESENT
	MEMBER, <i>Biomedical and Environmental Health Sciences PhD Committee, American University</i> , 2025-PRESENT
	COMMITTEE ON SCHOLARSHIP, <i>Faculty Senate, American University</i> , 2022-2024
	ASSOCIATE DIRECTOR, <i>Center for Environment, Community, and Equity, American University</i> , 2021-2022
	FACULTY GROUP ON CULTURE OF RESEARCH AT AU, <i>Provost's Office, American University</i> , 2020-PRESENT
	DIVERSITY CHAMPION, <i>Civil Engineering Representative, Whiting School of Engineering</i> , 2017-2019
	FACULTY SEARCH COMMITTEE (DIVERSITY ADVOCATE), <i>Malone Center for Engineering in Healthcare</i> , 2016-2017
	UNDERGRADUATE CURRICULUM COMMITTEE, <i>Environmental Health and Engineering</i> , 2016-2017
	FACULTY MARSHAL, COMMENCEMENT, <i>Johns Hopkins University</i> , 2016
	FUTURE OF TECHNOLOGY IN EDUCATION AT HOMEWOOD COMMITTEE, <i>Johns Hopkins University</i> , 2015

	MEDICAL SCHOOL APPLICANTS COMMITTEE, <i>Johns Hopkins University</i> , 2014
SYMPOSIA & WORKSHOPS	POSTER SESSION JUDGE, <i>Mathias Student Research Conference, American University</i>, MARCH, 2025, 2026 PANELIST JUDGE, <i>Mathias Student Research Conference, American University</i>, MARCH, 2025, 2026 WORKSHOP LEAD, <i>Faculty Collaborative Research Design Workshop, CECE</i>, FALL 2022 INVITED PANELIST, <i>All American Weekend, American University</i>, ONLINE, SEPTEMBER, 2021 INVITED PANELIST, <i>New Faculty Orientation for American University</i>, ONLINE, AUGUST, 2021 PANEL MEMBER, <i>Designing Healthy Communities: Collaborative Research Opportunities, Bloomberg American Health Initiative</i>, BALTIMORE, MD, AUGUST, 2017 PANEL MEMBER, <i>Best Practices in University Teaching Workshop, Center for Educational Resources</i>, BALTIMORE, MD, JANUARY, 2017, 2018 PANEL MODERATOR, <i>Systems Engineering Approaches to Improved Care Delivery, Inaugural Johns Hopkins Research Symposium on Engineering in Healthcare</i>, BALTIMORE, MD, NOVEMBER, 2016 ORGANIZER, <i>Systems Institute Symposium</i>, BALTIMORE, MD, OCTOBER 2014
INVITED LECTURES	<i>Lunch Plenary Panel, AU Research Day, American University</i>. SPRING, 2026 <i>Sustainability Symposium, American University</i>. SPRING, 2026 <i>Engaged Scholarship in a Changing World Fireside Chat, AU President's Office, American University</i>. FALL, 2025 <i>Co-creation of Knowledge in the Sciences - a panel discussion, American University</i>. FALL, 2025 <i>Panel Discussion, Societal Outcomes. Actionable Research: Symposium and Luncheon, American University</i>. SPRING, 2025 <i>Faculty Lecture, CAS Advisory Board, American University</i>. SPRING, 2022 <i>Keynote Lecture, Ann Ferren Conference, American University</i>. SPRING, 2022 <i>New Faculty Orientation, American University</i>. FALL, 2021 <i>Department of Mathematics and Statistics Seminar, American University</i>. SPRING, 2021 <i>Center for Environment, Community, and Equity, American University</i>. FALL, 2020 <i>Department of Environmental Science Seminar, American University</i>. FALL, 2020; FALL, 2021 <i>Center for Educational Resources, Faculty Lunch and Learn</i>. FALL, 2017 <i>Environmental Health and Engineering, Systems Seminar</i>. SPRING, 2017 <i>Hopkins Engineering Sampler Seminar</i>. FALL, 2014, 2015, 2016 <i>Second Annual Green Research Sustainability Symposium</i>. APRIL, 2014 <i>Students for Environmental Action Debate on Nuclear Energy</i>. DECEMBER, 2013
REVIEWER	<i>Center for Global Health Pilot Grant, JHSPH</i> , NOVEMBER 2014
DEPARTMENTAL SERVICE	UNDERGRADUATE COMMITTEE, <i>Department of Environmental Science</i>, 2025-PRESENT DIVERSITY, EQUITY, INCLUSION COMMITTEE, <i>Department of Environmental Science</i>, 2020-PRESENT DEPARTMENTAL ASSESSMENT (CHAIR), <i>Department of Environmental Science</i>, 2020-PRESENT DIRECTOR OF GRADUATE STUDIES, <i>Department of Civil Engineering</i>, 2018-2019 FACULTY SEARCH COMMITTEE (DIVERSITY ADVOCATE), <i>Department of Civil Engineering</i>, 2015-2018 SYSTEMS LEAD, GRADUATE STUDIES, <i>Department of Civil Engineering</i>, 2016-2020 GRADUATE TA AND SERVICE AWARDS, <i>Department of Civil Engineering</i>, 2015-2018 EXTERNAL AFFAIRS, <i>Department of Civil Engineering</i>, 2016-2019 UNDERGRADUATE STUDIES, <i>Department of Civil Engineering</i>, 2012-2018 STUDENT RECRUITMENT (COORDINATOR), <i>Department of Civil Engineering</i>, 2012-2018
DISSERTATION AND THESIS COMMITTEE	ANDREW GAYNOR, <i>PhD, Civil Engineering, JHU</i> OLUFOLAJIMI OKE, <i>PhD, Civil Engineering, JHU</i>

NAN ZHOU, *PhD, Economics, JHU*
ANYA CASTILLO, *PhD, DOGEE, JHU*
YUELING LOH, *PhD, Applied Mathematics & Statistics, JHU*
SALEH SATTI, *PhD, EPS, JHU*
SAAMRAT KASINA, *PhD, DOGEE, JHU*
IZZY MELENDEZ, *PhD, DOGEE, JHU*
DAN HUDSON, *PhD, Public Health, JHU*
MEGAN BOSTON, *PhD, Civil Engineering, JHU*
WEI JIANG, *PhD, Civil Engineering, JHU*
ROBIN HYTOWITZ, *PhD, EHE, JHU*
JIAXIN ZHANG, *PhD, Civil Engineering, JHU*
SRIRAM SANKARANARAYANAN, *PhD, Civil Engineering, JHU*
EVANGELINA SPYROU, *PhD, EHE, JHU*
CHARALAMPOS AVRAAM, *PhD, Civil Engineering, JHU*
STEPHANIE BRADDOCK, *MS, Environmental Science, AU*
MAYA HALL, *MS, Environmental Science, AU*
ADEBIMPE RASAK-USMAN, *MS, Environmental Science, AU*

ACADEMIC
ADVISOR

Learning by Leading Program, AU. INAUGURAL FACULTY ADVISOR FOR LEARNING BY LEADING PROGRAM
Honors Program, AU. FACULTY ADVISOR FOR AN HONORS GROUP IN SPRING 2022, 2026
CanabClub, AU. FACULTY ADVISOR FOR A STUDENT GROUP SINCE SPRING 2022
Environmental Science and Studies Class of 2026. ADVISOR FOR THE 40 UNDERGRADUATE STUDENTS IN THE 2026 CLASS, AU
Civil Engineering Class of 2017. ADVISOR FOR THE 17 UNDERGRADUATE STUDENTS IN THE 2017 CLASS, JHU