CURRICULUM VITAE

Amirpouyan (A. Pouyan) Nejadhashemi
University Research Foundation Professor
Director of the Institute of Water Research
Director of the Center for Intelligent Water Resources Engineering
Department of Biosystems and Agricultural Engineering
Department of Plant, Soil and Microbial Sciences
Michigan State University
East Lansing, MI 48824
Phone: (517) 432-7653 | E-mail: pouyan@msu.edu

Executive Summary

Research

- ***Award***: University Outstanding Faculty Mentor Award *(pages 4-6)*
- ***Award***: College of Agriculture and Natural Resources Established Researcher Award *(pages 4-6)*
- Total grant awarded: $44,285,345, *(pages 10-16)*
- My share of the awarded grants: $8,915.506, *(pages 10-16)*
- Peer-reviewed journal papers/conference proceedings: 156, *(pages 17-33)*
- Peer-reviewed Extension publications: 11, *(pages 34-35)*
- Total oral/poster presentations: 206 *(pages 35-54)*
- Invited talks: 42, *(pages 49-53)*
- h-index: 39, i-index: 102, total citation: 6577 (according to Google Scholar)
- Number of current students serving as a major advisor: 3 Postdoc/Specialist, 5 PhDs, and 3 undergraduate students *(pages 54-56)*
- As a major advisor, I have successfully guided 16 Master students to graduation *(pages 56-59)*
- As a major advisor, I have successfully guided 14 PhD students through to graduation *(pages 56-59)*
- Number of awards received by my graduate students: 47 *(pages 62-64)*

Teaching

- ***Award*** *(pages 4-6)*: College of Engineering Withrow Teaching Excellence Award

Courses Taught *(pages 16-17)*

- **Michigan State University:** Ecohydrology (BE881), Water Resources System Analysis and Modeling (BE481), Suburban/Rural Watershed Interface Modeling (BE491), Land and Water Conservation Engineering (BE481), **Kansas State University:** Advanced Watershed Modeling (BE820), and **University of Maryland:** Dynamics of Biological Systems (ENBE 482)

Institutional Service Leadership

University/College/Department Services *(pages 3-4 and 6-7)*

- Director of the Institute of Water Research
- Director of the Center for Intelligent Water Resources Engineering
- Graduate Program Director for the Department of Biosystems and Agricultural Engineering
- Chair of the Department Advisory Committee
- Chair of the Department Tenure Committee
- Co-chair of the College Agriculture and Natural Resources Advisory Committee
- Chair of the Environmental Studies and Energy review panel for the Strategic Partnership Grant

Professional Service Leadership

Editorial Board *(pages 7-8)*

- Associate Editor for the *Applied Engineering in Agriculture* and *Transactions of the ASABE*, Associate Editor for the *Journal of Hydrology: Regional Studies,* and manuscript editor for the *Environmental Modelling & Software* Journal.
- Guest editor, vice chair of publication committee, and editorial board for two major international conferences (the 1st Climate Change Adaptation and Mitigation Symposium and the Global Water Security Conference) and guest editor for the *Sustainability* Journal and *Water* Journal.

Professional Committee Leadership for International Conferences *(page 8)*

- Conference chair for the 12th International Congress on Environmental Modelling and Software (2024)
- Elected board member of the International Environmental Modelling & Software Society (iEMSs)
- Organizing committee for the 2022 iEMSs Biennial Meeting in Belgium
- Organizing committee for the 1st Climate Change Adaptation and Mitigation Symposium in the USA
- Conference committee member for the Global Water Security in India
- Chair of the local organizing committee for the 10th International Conference on Evolutionary Multi-Criterion Optimization in the USA
- Invited chair for the plenary session of the IEEE National Systems Conference in India

Invited Reviewer for Proposal Evaluation *(pages 9)*

- International: The Ministry of Science, Technology and Higher Education of the Portuguese Republic, the Netherlands Organization for Scientific Research, the National Center of Science and Technology Evaluation in Kazakhstan, National Council of Science and Technology of Mexico, and CINECA Italy
- National: The Chesapeake Bay Trust, the South-Central Sun Grant Initiative, USDA, USGS, NSF SF Hydrologic Sciences Program-CAREER Award, NSF Geosciences, USAID-NSF PEER, NSF-CDS&E

Invited National Expert to the Federal Government *(pages 9)*

- The National Science Foundation Engineering Research Visioning Alliance Thematic Task Force for Engineered Systems for Water Security
- Served as a national expert to identify gaps in current and ongoing research on nutrient fate in agricultural systems (Department of Agriculture and Rural Development, MI)
- Consulted by the U.S. State Department and USAID missions on numerous occasions on applications of big data for international development
- Served as a national expert at the Scientific Challenges to Operationalizing Payments for Agro-Ecosystem Services (USDA)
- Served as an international expert at the Agriculture, Food and Drink Forum's Congress in Turkey (USDA-Foreign Agricultural Service)

Multi-disciplinary Research Projects *(pages 10-16)*

- Secured a $25 million grant for the Global Center for Food Systems Innovation from USAID.
- Invited to join a Sino-USA joint NSF proposal development with faculty from Zhejiang and Nanjing Universities and Xinjiang Institute of Geography and Ecology of the Chinese Academy of Sciences.
- Member of a multi-disciplinary research team (Purdue University, San Jose State University, and Tulane University) awarded $2 million from the US Environmental Protection Agency to study residential and commercial water systems for efficiency, sustainability, and public health.
- Member of a multi-university (11 universities) team that was awarded a USDA grant to hold a Global Water Security for Agricultural Production and Natural Resources Conference.

Research Impacts/Contributions

- Developed one of the most comprehensive decision tools for international development (Link)
- Performed one of the first comprehensive water quality impact studies regarding the large-scale impacts of bioenergy crop productions (Link).
- Established the concept of bioassessment to study environmental justice (Link).
- Introduced a guideline for adaptation plans addressing climate change impacts on stream health (Link).
- Pioneered the best management practice auction method with a team from Kansas State that was acknowledged by EPA as an emerging tool for implementing conservation practices.

EDUCATION:

Ph.D. 2006 Biological Resources Engineering (Bioenvironmental and Water Resources Engineering)
University of Maryland, College Park, MD, USA
Ph.D. Dissertation: Improvement in Estimating Pollution Transport by Developing Streamflow Components Assessment in the GIS Environment.
Advisor: ***Dr. Adel Shirmohammadi***

M.Sc. 1997 Agricultural Engineering (Irrigation Structures Engineering)
University of Tehran, Iran
M.S. Thesis: Physical and Numerical Models for Gypsum Solution through Soils and its Effects on Soils Consolidation Process.
Advisor: ***Dr. Hassan Rahimi***

B.Sc. 1994 Agricultural Engineering (Irrigation and Reclamation Engineering)
University of Tehran, Iran

PROFESSIONAL EXPERIENCE:

10/24-present Director of the Institute of Water Research (50% Administration, 30% Research, 15% Teaching, and 5% Service)
Michigan State University, East Lansing, MI, USA
Responsibilities: Provision of programmatic direction and leadership for IWR efforts in collaboration with MSU partners as well as key stakeholders at the local, state, and federal levels.

12/20-present Director of the Center for Intelligent Water Resources Engineering (55% Research, 20% Teaching, and 25% Service)
Michigan State University, East Lansing, MI, USA
Responsibilities: Create new synergies that elevate water engineering work at MSU, lead to new partnerships and major grant opportunities, and increase the national/international profile of water programs at MSU.

09/19-present University Research Foundation Professor (55% Research, 20% Teaching, and 25% Service)
Michigan State University, East Lansing, MI, USA
Responsibilities: Lead the water resources management activities for the College of Agriculture and Natural Resources.

07/19-09/19 Professor (55% Research, 20% Teaching, and 25% Service)
Michigan State University, East Lansing, MI, USA
Responsibilities: Develop a nationally recognized research program on natural resources engineering.

07/14-06/19 Associate Professor (55% Research, 20% Teaching, and 25% Service)
Michigan State University, East Lansing, MI, USA
Responsibilities: Establish a world-renowned research group that develops new knowledge that encourages the equitable conservation and sustainable use of water resources in the context of ecosystem-based management.

07/08-06/14 Assistant Professor (70% Research, 20% Teaching, and 10% Service)
Michigan State University, East Lansing, MI, USA
Responsibilities: To develop a nationally recognized research program that incorporates an ecosystem approach to water quality resource management and modeling.

06/07-06/08 Research Assistant Professor (85% Research, 15% Teaching)
Kansas State University, Manhattan, KS, USA
Responsibilities: Coordinate and execute all aspects of watershed water-quality modeling projects. Assist with extramural grant preparation. Engage stakeholders and lead the development of watershed restoration and action plan strategies to address watershed and water quality issues.

07/06-06/07 Research Associate -Watershed Modeling Specialist (100% Research)
Kansas State University, Manhattan, KS, USA
Responsibilities: Provide technical leadership for an active watershed modeling laboratory to support state and national water-quality informational needs using state-of-the-art modeling tools.

06/04-05/06 Research Assistant
Hydrology and Remote Sensing Laboratory USDA-ARS Beltsville, MD, USA
Responsibilities: Data acquisition and analysis, computer programming.

08/01-06/06 Graduate Research Assistant
University of Maryland, College Park, MD, USA.
Responsibilities: Conducting research and teaching.

05/00-08/01 Coordinator of Informatics Commission
Iranian Agricultural Engineering Research Institute (IAERI), Karaj, Iran
Responsibilities: Execution of affairs concerning the institute's computer networks.

09/98-08/01 Researcher
Iranian Agricultural Engineering Research Institute (IAERI), Karaj, Iran
Responsibilities: Performed experimental and numerical studies at various transport scales and leaching of dissolved matter in the soil.

09/98-08/01 Supervisor of Computer Department
Iranian Agricultural Engineering Research Institute (IAERI), Karaj, Iran
Responsibilities: In Charge of Technical Accounts and Statistics.

04/95-04/98 Engineer Supervisor
SAHRA-KAV Consultant Engineers, Tehran, Iran
Responsibilities: Water resources exploration and hydraulic structures design.

10/94-10/95 Project Engineer
MAHAB GHODS Consultant Engineers, Tehran, Iran
Responsibilities: Design of irrigation and drainage systems.

HONORS AND AWARDS:

- 2024 Outstanding Faculty Mentor Award, recognized by the Graduate School at Michigan State University.

- The 2024 recipient of the American Water Resources Association (AWRA) Honorary Member Award. On behalf of the American Water Resources Association Board of Directors and its members. "This award recognizes an individual who has obtained acknowledged eminence in a branch of water resources science and technology."
- Our paper titled "Identifying Water Quality Variables Most Strongly Influencing Legionella Concentrations in Building Plumbing" was selected as one of our most widely read papers in Wiely, 2024.
- The Rudolph Hering Medal and Certificate for the paper, "Opportunities and Challenges of Integrated Large-Scale PFAS Modeling: A Case Study for PFAS Modeling at a Watershed Scale," Journal of Environmental Engineering. Awarded by the ASCE's Environmental and Water Resources Institute during the Society's 2024 World Environmental & Water Resources Congress in Milwaukee, WI, May 19-22, 2024. "The medal is awarded to the author, or authors, of the paper which contains the most valuable contribution to the increase of knowledge in, and to the advancement of, the environmental branch of the engineering profession."
- MSU College of Agriculture and Natural Resources Established (Mid-Career) Researcher Award, 2024.
- The best paper award at the IEEE World Congress on Computational Intelligence (WCCI 2022) for the work titled. Large-scale Multi-objective Optimization for Water Quality in Chesapeake Bay Watershed, Padua, Italy.
- Our paper titled "Climate Change and Livestock: Impacts, Adaptation, And Mitigation" was selected as the most downloaded and cited paper in *Climate Risk Management* journal, 2020.
- Our paper titled "Developing a Risk-Based Consensus-Based Decision-Support System Model for Selection of the Desirable Urban Water Strategy: Kashafroud Watershed Study" was selected as Editor's Choice Article of *Water* journal, 2020.
- Our paper titled "A review of macroinvertebrate- and fish-based stream health modeling techniques" was identified as one of the top 10% downloaded in recent publication history by Wiley in *Ecohydrology* journal, 2020.
- By approval of the Michigan State University Provost and the Board of Trustees, I received the title of the University Research Foundation Professor in recognition of my work in the area of Water Resources Management, 2019.
- Certificate of Achievement from the ArcelorMittal manufacturing corporation for the best poster award at the 10th International Conference on Evolutionary Multi-Criterion Optimization for the work titled "Simulation Optimization of Water Usage and Crop Yield Using Precision Irrigation", 2019.
- Certificate of Appreciation from the General Chair of the 10th International Conference on Evolutionary Multi-Criterion Optimization in recognition of outstanding service as Chair of the Local Organizing Committee, 2019.
- Elected board member of the International Environmental Modelling & Software Society. This is the largest environmental modeling society in the world (2018-present).
- Certificate of Appreciation from the ASABE President and Executive Director in recognition of outstanding service as Associate Editor of the Natural Resources and Environmental Systems Technical Community, 2017.
- Our paper titled "A Review of Macroinvertebrate- and Fish-based Stream Health Indices" was identified as one of the top 15% downloaded in recent publication history by Elsevier in the *Ecohydrology & Hydrobiology* journal, 2016.
- College of Engineering the Withrow Teaching Excellence Award, Michigan State University, 2015.
- Certificate of Appreciation from the ASABE Executive Director for outstanding service to the American Society of Agricultural and Biological Engineers and to the 1st Climate Change Symposium: Adaption and Mitigation, 2015.
- USDA CSREES (Cooperative State Research, Education, and Extension Service) Partnership Award for Mission Integration, for the "Integrated Watershed Restoration and Protection Strategies (WRAPS)" Team at K-State 2009.

- Who's Who among American Teachers & Educators, 2006-2007.
- Phi Kappa Phi, A member of the National Honor Society of Phi Kappa Phi by election of the chapter at University of Maryland, USA, 2006.
- Alpha Epsilon, the Honor Society of Agricultural and Biological Engineers (ASABE), USA, 2005.
- Outstanding Graduate Student, Biological Resources Engineering Department, University of Maryland, U.S.A, 2004.
- Outstanding Research Project at the 8th National Research Day, Iran, 1999.
- One of the Top Five National Research Projects at the 12th International Khwarizmi Award (Agricultural section), Iran, 1999.
- Outstanding Research Student, Tehran University, 1998.
- Honor student and ranked first in my graduating class, M.S. Irrigation Structures Engineering, 1997.
- Admitted to M.S. course with honors (special privilege) as top ranked student in B.S. level, 1995.
- Honor student and ranked first in my graduating class, B.S. Irrigation and Reclamation Engineering, 1994.

PROFESSIONAL SOCIETY MEMBERSHIPS:

- ASABE, The American Society of Agricultural and Biological Engineers (2002-present)
- European Geosciences Union by complimentary invitation (2011-present)
- International Environmental Modelling & Software Society (2017-present)
- Honorary Member of the American Water Resources Association (2024-present)
- American Geophysical Union (2012-2013)
- BREGA Charter, Biological Resources Engineering Graduate Association (2004-2006)
- ASCE, American Society of Civil Engineers (2003-2006)
- ASCE, National Capital Section Younger Member Forum (2003-2006)
- EWRI, The Environmental & Water Resources Institute (2003-2006)

INSTITUTIONAL SERVICES:

a. University Services

- Humphrys Fellowship Award Committee – Member (2024)
- Center for PFAS Research – Lead of the Task Force Group (2023)
- Organizing Committee for the Inaugural Annual Symposium on Emerging Technologies in PFAS Remediation and Toxicity, East Lansing, USA – Member (2022)
- Environmental Science and Policy Program (ESPP) Distinguished Lecture Series (DLS) Committee, representing the College of Agriculture and Natural Resources – Representative (2015-2018)
- Strategic Partnership Grant Program at MSU, Environmental Studies and Energy Review Panel – Co-chair/Chair (2013-2015)
- Blue Ribbon Blue Panel, advising MSU on future strategies in water science – Member (2010-2011)

b. College Services

- College of Agriculture and Natural Resources - Review for Endowed Chair Performance invited by the dean of college– Evaluator (2025).
- College of Agriculture and Natural Resources - FY 2025 Michigan Alliance for Animal Agriculture (M-AAA) grants program – Evaluator (2025).
- College of Agriculture and Natural Resources - Excellence in Research Awards – Evaluator (2025)

- College of Agriculture and Natural Resources- Excellence in Research Awards – Evaluator (2024)
- Multistate/McIntire Stennis Proposals – Reviewer (2024)
- College of Agriculture and Natural Resources diversity, equity, and inclusion in Promotion and Tenure Committee – Member (2022)
- College of Engineering Promotion and Tenure Committee – Member (2020-2021)
- College of Engineering Committee on Computing Services, representing the Department of Biosystems and Agricultural Engineering – Representative (2017-present)
- College Advisory Committee, College of Agriculture and Natural Resources at MSU – Member/Co-chair/Election Officer (2014-2016)
- Engineering Research and Graduate Studies Committee, representing the Biosystems and Agricultural Engineering Department – Representative (2010-2012)

c. Departmental Services

- Faculty Search Committee for two MDARD positions – chair (2023-2024)
- Faculty Screening Committee for Dr. Younsunk Dong – chair (2024)
- Department Advisory Committee – Chair and Member (2022-2026)
- Department Seminar Committee – Member (2024-2026)
- Diversity, Equity, and Inclusion Steering Committee – Chair and Member (2020-2023)
- Award Committee – Member (2020-2022)
- Graduate Secretary Search Committee – Member (2020)
- Faculty Search Committee on Big Data Applications in Water Resources – Co-chair (2019-2020)
- Biosystems and Agricultural Engineering Graduate Student Advisory Group – Advisor (2018-2020)
- Graduate Program, Department of Biosystems and Agricultural Engineering – Director (2018-2020)
- Department Advisory Committee – Chair (2016-2020)
- Search Committee for the Fiscal Officer of MSU Biosystems and Agricultural Engineering (BAE) Department – Member (2016-2017)
- ABET-Accredited Preparation Committee for the BAE Department – Member, contributed to ABET documents, especially "Criterion 6: Faculty" (2016)
- BAE Academic Program Review document – Lead contributor (2016)
- Tenure Committee, Department of Biosystems and Agricultural Engineering – Member/Chair (2014-2016)
- Graduate Program Coordination Committee, assisting with program promotion, student recruiting, and policy recommendations to enhance the BAE graduate program – Member (2012-present)
- Agricultural Systems Modeler Search Committee – Member (2014)
- Academics Committee, addressing academic concerns for the department – Member (2012-2016)
- Crop and Soil Sciences Reading Room Committee – Member (2008-2014)
- Computer Committee, Biological Resources Engineering Department, University of Maryland – Member (2004-2006)

PROFESSIONAL SERVICES:

a. Journal Reviewer

- Biomass and Bioenergy
- Bioresources Technology
- Journal of Agricultural Science and Technology
- Journal of Environmental Management

- Journal of Environmental Modelling and Software
- Journal of Environmental Quality
- Journal of Hydroinformatics
- Journal of Hydrology
- Journal of Science of the Total Environment
- Progress in Physical Geography
- Transactions of ASABE

b. Professional Committee Leadership for International Conferences

- 12th International Congress on Environmental Modelling and Software, East Lansing, Michigan – Conference Chair (2021-2024)
- 2022 International Congress on Environmental Modelling and Software Biennial Meeting, Brussels, Belgium – Conference Organizing Committee Member (2021-2022)
- Advances in QMRA Education and Research Workshop, East Lansing, US – Executive Steering Committee Member (2021)
- 10th International Conference on Evolutionary Multi-Criterion Optimization (EMO-2019), East Lansing, USA – Chair of the Local Organizing Committee (2018-2019)
- ASABE Global Water Security Conference, Hyderabad, India – Chair for Two Technical Sessions (2018)
- World Congress on Climate Change: Impacts & Responses, Rome, Italy – Chair for a Technical Session (2018)
- ASABE Annual International Meeting – Chair for One Technical Session (2018)
- Global Water Security for Agricultural Production and Natural Resources Conference – Conference Program Committee Member (2017-2018)
- IEEE National Systems Conference, Agra, India – Invited Chair for the Plenary Session (2017)
- ASABE 1st Climate Change Adaptation and Mitigation Symposium – Symposium Organizing Committee Member (2013-2015)
- ASABE 1st Climate Change Adaptation and Mitigation Symposium – Chair for Three Technical Sessions (2015)
- ASABE Annual International Meeting – Chair for One Technical Session (2013)

c. Editorial Manager

- Journal of Hydrology: Regional Studies – Associate Editor by invitation (2024-present)
- Environmental Modelling & Software Journal – Manuscript Managing Editor and Editorial Board Member (2020-present)
- Journal of Water Productivity – Editorial Board Member by invitation (2020-present)
- Water Journal – Guest Editor on "Computational Ecohydrology" (2020-2021)
- Iranian Journal of Soil and Water Research – Editorial Board Member by invitation (2019-present)
- Natural Resources & Environmental Systems Community of ASABE – Associate Editor (2018-2020)
- ASABE Global Water Security Special Collection – Guest Editor (2018-2020)
- International Journal of Hydrology – Associate Editor by invitation (2018-present)
- Sustainability Journal – Guest Editor on "Ecosystem Approach to Water Resources Management" (2018-2019)
- Global Water Security – Conference Editorial Team Member (2017-2018)
- 1st Climate Change Adaptation and Mitigation Symposium – Guest Editor (2015-2016)
- Applied Engineering in Agriculture – Associate Editor (2008-present)
- Transactions of the ASABE – Associate Editor (2008-present)

- ASABE 1st Climate Change Adaptation and Mitigation Symposium – Co-chair of the Publication Committee (2013-2015)

d. Invited Reviewer for Proposal/Report Evaluation

- One international promotion package outside MSU (2025)
- One promotion package outside MSU (2024)
- Two promotion packages outside MSU (2023)
- Hydrologic Sciences Program-CAREER Award, National Science Foundation (2020)
- Two promotion packages outside MSU (2020)
- CINECA, a non-profit consortium of Italian universities, national research centers, and the Ministry of Universities and Research (2020)
- National Council of Science and Technology of Mexico (CONACYT), Frontier Science (2019-2020)
- Netherlands Organization for Scientific Research, Dutch National Research Agenda: Research along Routes by Consortia (NWA-ORC) (2019)
- Computational and Data-Enabled Science and Engineering (CDS&E) Program, National Science Foundation (2018)
- Partnerships for Enhanced Engagement in Research Program (USAID-NSF), National Academies of Sciences, Engineering, and Medicine (2018)
- Joint Research Assessment Committee, Ministry of Science, Technology and Higher Education of the Portuguese Republic – Review Panel (2017-present)
- National Center of Science and Technology Evaluation of Kazakhstan – Review Panel (2017-present)
- Chesapeake Bay Trust – Review Panel (2017)
- U.S. Geological Survey and the National Institutes for Water Resources (2011-2012)
- U.S. Department of Agriculture – Natural Resources Conservation Service, report on the impacts of the Conservation Effects Assessment Project (CEAP) on major U.S. river basins (2011)
- South-Central Sun Grant Initiative (2009 and 2011)
- National Science Foundation, Geosciences Panel (2010)

e. Technical Committees

- ASABE, SW-21 Hydrology Group Committee – Member (2002-present)
- ASABE, SW-05 Publications Review Committee – Associate Editor (2008-present)
- ASABE, SW-07 Nomenclature Committee – Representative of Hydrology Group Committee in SW-07 Committee (2008-2011)

f. Invited National Expert to the Federal Government

- Advised the *National Science Foundation Engineering Research Visioning Alliance Thematic Task Force* as a national water expert, shaping the technical direction for the "Engineered Systems for Water Security" visioning event (2022–2023)
- Consulted with the *U.S. State Department* and *USAID* missions on applications of big data for international development, providing expert guidance on numerous occasions (2013–2017)
- Provided expertise as a national advisor for the *USDA* initiative on "Scientific Challenges to Operationalizing Payments for Agro-Ecosystem Services" (2017)
- Represented the *USDA-Foreign Agricultural Service* as an international expert at the *Agriculture, Food and Drink Forum's Congress* in Turkey (2017)
- Identified critical research gaps on nutrient fate in agricultural systems for the *Department of Agriculture and Rural Development, MI*, contributing as a national expert (2016)

Awarded Grants:

Note: The first name listed for each grant is the principal investigator.

PI/Co-PI

1. Asher, J.**, Nejadhashemi**, **A.P.**, A. Guber, J. Rowntree, A. Zwickle, A. Kuhl, C. Galbraith, M. RafCelovsky, 2025, SHARE - Soil Health Advancement for Agricultural Resilience Enhancement, The Michigan Department of Agriculture & Rural Development (MDARD), $1,274,910.

2. Ghane, E., **A.P. Nejadhashemi**, **A.P.**, S. Marquart-Pyatt, M. Jean, 2024, Increasing the Adoption of Controlled Drainage for Crop Production And Water-Quality Protection Using An Educational Decision-Support Tool, USDA, $299,963.

3. **Nejadhashemi**, **A.P.**, J. Andresen, Y. Dong, S. Marquart-Pyatt, Y. Pokhrel, M. Sears, V. Rafiei, 2024, BRACE: Building Resilience in Agriculture through Climate-smart Practices and Socioeconomic Evaluation, The Michigan Department of Agriculture & Rural Development (MDARD), $1,291,659.

4. **Nejadhashemi**, **A.P.**, 2023, Development of a Data-driven Crop Model for Yield Prediction in Senegal, USAID, $178,597.

5. **Nejadhashemi**, **A.P.**, 2023, Center for Intelligent Water Resources Engineering, College of Agriculture and Natural Resources and AgBioResearch, $120,000.

6. **Nejadhashemi**, **A.P.**, 2023, Utilizing Machine Learning for Assessing the Effects of Climate Change and Human Actions on the Replenishment of Michigan's Groundwater, United States Geological Survey, $50,000.

7. **Nejadhashemi**, **A.P.**, 2022, Advancement of Catchment-Scale Models for Simulating PFAS Fate and Transport, United States Geological Survey, $25,000.

8. Murphy, C., **A.P. Nejadhashemi**, H. Li, 2022, Airport Environmental Mitigation Pilot Program – Water Quality Improvements, Federal Aviation Administration, $302,143.

9. Deb, K., **A.P. Nejadhashemi**, S. Miller, I. Kropp, J.S. Hernandez Suarez, 2020, Improving Prediction Variability in Hierarchical Agricultural and Industrial Systems Using Evolutionary Bilevel Optimization Methods, National Science Foundation-Science and Technology Centers, BEACON (Center for the Study of Evolution in Action), $53,125.

10. Ghane, E., **A.P. Nejadhashemi**, 2020, Accelerating the adoption of saturated buffers using an educational decision-support tool, USDA- Conservation Innovation Grants, $614,348.

11. Mitchell, J., J. Libarkin, **A.P. Nejadhashemi,** J. Rose, M. Weir, C. McCallum, 2020, QMRA IV-Quantitative Microbial Risk Assessment Interdisciplinary Vehicle: Addressing Emerging Global Health Risks, National Institute of Health, $2,309,335.

12. Ciampitti, I., **A.P. Nejadhashemi,** P. West, J. Gerber, Z. Jin, J. Neff, M. Brown, K. Grace, 2020, Digital Geospatial Farming Systems Tools Consortium: Building a new era of Predictive Agricultural Innovation to improve the livelihood of smallholder farmers, US Agency for International Development, $3,000,000.

13. Murphy, C., M. Axelrod; S. Bhattacharya; C. Carignan; K. Elliott; Q. Fan; A. Jones III; H. Li; S. Masten; J. Mitchell-Davis; **A.P. Nejadhashemi**, B. Teppen, A. Wilson, J. Wise, 2020, MSU Center for PFAS Research, MSU Strategic Partnership Grant, $350,000.

14. Asher, A., **A.P. Nejadhashemi,** E. Ghane, 2019, Accelerating Nutrient Management Adoption in the Saginaw Watershed, US Environmental Protection Agency, $999,670.

15. Deb, K., **A.P. Nejadhashemi,** 2019, Development of a Multi-objective Optimization Tool for Chesapeake Bay Watershed, US Environmental Protection Agency, $1,015,685.

16. Belton, B., **A.P. Nejadhashemi,** 2019, Harnessing Machine Learning to Estimate Aquaculture Production and Value Chain Performance in Bangladesh, The other partners are Bangladesh Agricultural University, WorldFish, and International Center for Tropical Agriculture, US Agency for International Development, $499,903.

17. Murphy, C., **A.P. Nejadhashemi,** A. Jones III, H. Li, 2019, PFAS in the Huron River Watershed: Transport and Uptake by Aquatic Organisms, Michigan Dept of Natural Resources, $267,553.

18. **Nejadhashemi, A.P.**, K. Deb, N. Aryal, I. Kropp, P. Roy, 2019, Integrating Key Water Resources, Crop Suitability, and Aquatic and Human Health Dimensions in Sustainable Biofuels Feedstock Production Using Evolutionary Multi-Objective Optimization Algorithms, National Science Foundation-Science and Technology Centers, BEACON (Center for the Study of Evolution in Action), $81,255.

19. Ghane, E., **A. P. Nejadhashemi, A.P.**, 2019 Drain-Spacing Tool, Purdue University and Michigan State University (Prime grantor NIFA), $33,600.

20. **Nejadhashemi, A.P.**, 2019 Cover Crop Decision Tool, Midwest cover crops council, $20,369.

21. Miller, S., **A.P. Nejadhashemi**, J. Mann, S. Valle de Souza, 2018. Development of a Decision Support Tool for Michigan Ecosystem Service Monitoring, US Environmental Protection Agency (Office of the Great Lakes), $98,643.

22. Cassida, K., **A.P. Nejadhashemi,** K. Dahlin, 2018, Precision Agriculture Tools for Optimizing Alfalfa Production and Marketing, U.S. Department of Agriculture, National Institute of Food and Agriculture, $299,867.

23. **Nejadhashemi, A.P.**, K. Deb, M.M. Rojas-Downing, I. Kropp, P. Roy, J. Siegford, 2018, Integrated Nutrition-Water-Nutrient Decision Support System to Optimize Sustainable Food Production and Nutrition Security based on Evolutionary Computation, National Science Foundation-Science and Technology Centers, BEACON (Center for the Study of Evolution in Action), $87,506.

24. Chaubey, I., S. Ale, G. Fox, D. Drollinger, M. Gitau, D. Haman, R.D. Harmel, S. Irmak, **A.P. Nejadhashemi**, D. Sarawat, S. Searcy, A. Swamy, J. Quansah, M.L. Wolfe, 2017. Global Water Conference, USDA Foundation Program, Project amount requested: $50,000.

25. Rose, J. B., **A. P. Nejadhashemi**, S. Martin, D. Hyndman, 2017, Identification of Agricultural Best Management Practices to Improve Water Quality at the Watershed Scale, MSU Project GREEEN, $40,000.

26. **Nejadhashemi, A.P.**, A. Srivastava, 2017, Global Modeling Initiative for Food, Energy, and Water Systems Integration, MSU AgBioResearch, $90,000.

27. Ines, A., **A. P. Nejadhashemi**, K. J. Andresen, S. Miller, L. Kelly, 2017, Improving Irrigation Water and Nutrient Use Efficiency in Michigan using Remote Sensing Techniques, MSU Project GREEEN, $35,000.

28. **Nejadhashemi, A.P.**, K. Deb, M. Abouali, P. Roy, 2017, Evolutionary Optimization of Water and Nutrient Use Efficiency for Sustainable Agricultural Intensification, National Science Foundation-Science and Technology Centers, BEACON (Center for the Study of Evolution in Action), $92,640.

29. Mitchell, J., **A. P. Nejadhashemi**, J. Rose, Joan, J. Beecher, E. Dreelin, M. Syal, T. Aw, 2016. Right Sizing Tomorrow's Water Systems for Efficiency, Sustainability, and Public Health, U. S. Environmental Protection Agency, $912,088 of the total grant amount $1,980,000. The other partners are Purdue University, San Jose State University, and Tulane University.

30. Deb, K., **A. P. Nejadhashemi**, A. Smucker, A. Guber, M. Abouali, P. Roy, 2016, Minimal Water and Nutrient Usage for Maximum Crop Yield using Multi-objective Eas and Subsurface Water Retention Technology, National Science Foundation-Science and Technology Centers, BEACON (Center for the Study of Evolution in Action), $83,949.

31. **Nejadhashemi**, **A. P.,** 2016, Quantifying Species of a Pasture Mixture Using Hyper- and Multi-Spectral Remote Sensing Methods to Estimate Pasture Yield for Livestock Production, MSU Nonrecurring Allocation, $61,434.

32. **Nejadhashemi, A. P.,** 2015, Saginaw River Sedimentation Study-SWAT Modeling in the Saginaw River Watershed, U. S. Geological Survey, $130,000.

33. Deb, K., A. Gaur, A. Guber, **A. P. Nejadhashemi**, A. Smucker, 2015, Precision Irrigation System Design for Optimal Water Usage using EMO and Subsurface Water Retention Technology (SWRT), National Science Foundation-Science and Technology Centers, BEACON (Center for the Study of Evolution in Action), $60,855.

34. Messina, M., **A. P. Nejadhashemi**, Moore, N, 2015, Biophysical Big Data Targeting. New Methods for Projecting Climate, Water, and Land use Change in Africa to Identify which Crops can be Grown in Different Places, The Global Center for Food System Innovation-USAID, $400,416.

35. **Nejadhashemi, A. P.,** N. Me-Nsope, and R. Agarwal. 2014, Food Security and Sustainable Livelihood through Solar Powered Water Pumping for Irrigation and Drinking Water Purification. The Global Center for Food System Innovation-USAID. $73,000.

36. **Nejadhashemi, A. P.,** G. B. Habron, S. Marquart-Pyatt, and A. Shortridge. 2013 Integrating Key Ecological Health and Social Dimensions in Sustainable Water Resources Management. The Water Innovation Research Grant funded by the Environmental Science & Policy Program and the Center for Water Sciences. $99,625.

37. Higbee, M., **A. P. Nejadhashemi**, 2013, Novel Hybrid BMP Auction Program to Maximize Environmental Outcomes of BMP Implementations, EPA – Great Lakes Restoration Initiative (the Great Lakes Commission), $270,000.

38. Sirvastava, A., R. Mabokela, C. Stinfield, **A. P. Nejadhashemi**, and A. Ferguson, 2012, Global Center for Food Systems Innovation, U.S. Agency for International Development, $24,919,790.

39. **Nejadhashemi, A. P.,** 2011, Evaluation of Climate Change Impacts on Water Quality and BMP Effectiveness in Saginaw Bay Watershed. The Nature Conservancy. $60,000.

40. Axelrod, M., **A. P. Nejadhashemi**, E. Evered, K. Evered, and M. Öztan, 2011, Sustainable Groundwater Management in Southeastern Anatolia, Asian Studies Center Strategic Partnership Grant, $2,097.

41. Axelrod, M., **A. P. Nejadhashemi**, E. Evered, K. Evered, M. Öztan, and D. Baylis, 2011, Sustainable Aquifer Management under Enhanced Turkey-Syria Relations, Center for Water Sciences, Environmental Science and Policy Program, MSU, $19,951.

42. Knorek, J., and **A. P. Nejadhashemi**, 2011, Targeted Efforts for Reducing Sedimentation in the Pinnebog River Watershed using BMB Auctions, U.S. Environmental Protection Agency – Great Lakes Restoration Initiative (the Great Lakes Commission), $745,373.

43. Knorek, J., and **A. P. Nejadhashemi**, 2011, Targeted Efforts for Reducing Sedimentation in the River Raisin Watershed using BMP Auctions, U.S. Environmental Protection Agency – Great Lakes Restoration Initiative (the Great Lakes Commission), $438,033.

44. **Nejadhashemi, A. P.**, 2010. FY 2010 Annual Application of State Water Research Institute Program, Runoff Reduction Credits for Low Impact Development Facilities, U.S. Geological Survey. $16,621.

45. **Nejadhashemi, A. P.,** 2010. Quantifying Benefits of Agricultural BMPs to Aquatic Ecosystems Health. The Nature Conservancy. $92,700.

46. **Nejadhashemi, A. P.** and S. Miller. 2010. Developing TMDL Implementation Plan for Coon Creek Michigan. U.S. Environmental Protection Agency. $202,628.

47. **Nejadhashemi, A. P.,** 2010. Study and Model the Effects of NRCS Conservation Practices on Stream Health. U.S. Department of Agriculture/Natural Resources Conservation Service. $60,000.

48. **Nejadhashemi, A. P.**, D. Reinhold. 2009. FY 2009 Annual Application of State Water Research Institute Program, Water Quantity and Water Quality Effects of BMPs Implementation in Urban Areas. U. S. Geological Survey. $9,234.

49. **Nejadhashemi, A. P.,** J. Bartholic, and P. Mantha. 2009. Developing Nutrient, Sediment, Flow and Temperature Estimates for Fish Community Condition Prediction Across the Agricultural Regions of Michigan and Wisconsin. U.S. Department of Agriculture/Natural Resources Conservation Service. $80,000.

50. **Nejadhashemi, A. P.,** S. Miller. 2009. Application of BMP Toolbox for the Michigan State University Stormwater Management Study. Michigan State University, Stormwater Committee. $30,000.

51. **Nejadhashemi, A. P.,** C. Smith, J. Williams, K. Mankin, B. Golden. 2008. Developing Decision Support System for Analyzing Sedimentation Reduction Strategies for Tuttle Creek Lake. USGS, Kansas Water Resources Competitive Grants Program, Kansas Water Resources Institute. $89,400.

52. **Nejadhashemi, A. P.,** K. Mankin, and B. Hargrove. 2007. Marmaton Watershed Assessment. U.S. Environmental Protection Agency 319. $40,000.

53. Devlin, D., R. Graber, J. James, D. Ladd, R. Schlender, C. Smith, K. Mankin, **A.P. Nejadhashemi**. 2008. Scientifically Targeted Locations, Social Strategies, and Market-Based Incentives to Reduce Sediment Transport from Agricultural Lands. Natural Resources Conservation Service/Conservation Innovation Grant Proposal. $450,000.

54. Smith, C., J. Leatherman, and **A. P. Nejadhashemi**. 2008. Watershed Economist and Modeler assistance with 2008 Pomona BMP Auction (Implementation Phase). Pomona Lake Watershed Restoration & Protection Strategy. Kansas Department of Health and Environment (KDHE). $39,000.

55. Leatherman, J., K.R. Mankin, D.L. Devlin, **A.P. Nejadhashemi**, and W.L Hargrove. 2008. Oologah Lake – Big Hill Lake Watershed Planning Project: Kansas Watershed Restoration and Protection Strategy. Kansas Department of Health and Environment, $46,788.

56. Leatherman, J., C. Smith, and **A.P. Nejadhashemi**. 2007. Lower Marais des Cygnes BMP Auction. Kansas Department of Health and Environment. $26,690.

57. Leatherman, J., **A.P. Nejadhashemi**, and K. Mankin. 2007. Upper and Lower Cotton Wood – Assessment and Planning Project. Upper and Lower Cotton Wood Watershed Restoration & Protection Strategy. $81,021.

58. Leatherman, J., **A.P. Nejadhashemi**, and K. Mankin. 2007. Neosho Headwaters – Assessment and Planning Project. Neosho Headwaters Watershed Restoration & Protection Strategy. $195,575.

59. Smith, C.M. and **A.P. Nejadhashemi**. "Tuttle Creek WRAPS BMP Auction – Implementation Funds." Kansas Department of Health and Environment. $20,000.

b. Collaborator/Key Personnel

60. Leatherman, J., R. Wilson, C. Smith, **A.P. Nejadhashemi**, K. Mankin, and S. Brown. Big Hill Creek Watershed Restoration & Protection Strategy (Development Phase). The Kansas Water Plan (2006-2008).

61. Leatherman, J., R. Wilson, C. Smith, **A.P. Nejadhashemi**, K. Mankin, and S. Brown. Upper Verdigris – Toronto Lake Watershed Restoration & Protection Strategy (Development Phase). The Kansas Water Plan (2006-2008).

62. Leatherman, J., R. Wilson, C. Smith, **A.P. Nejadhashemi**, K. Mankin, and S. Brown. Elk City Lake Watershed Restoration & Protection Strategy (Development Phase). The Kansas Water Plan (2006-2008).

63. Leatherman, J., J. Williams, M. Langemeier, R. Wilson, C. Smith, **A.P. Nejadhashemi**, K. Mankin, and D. Devlin. Tuttle Creek Watershed Restoration & Protection Strategy (Development Phase). U.S. Environmental Protection Agency 319 (2006-2008).

64. Leatherman, J., J. Williams, M. Langemeier, R. Wilson, C. Smith, **A.P. Nejadhashemi**, K. Mankin, and D. Devlin. Milford Lake Watershed Restoration & Protection Strategy (Development Phase). U.S. Environmental Protection Agency 319 (2006-2008).

65. **Nejadhashemi**, **A. P.,** K. Mankin, P. Barnes, and S. Brown. Pomona Lake Assessment. Kansas Department of Health and Environment (2006-2008).

66. Leatherman, J., J. Williams, M. Langemeier, R. Wilson, C. Smith, **A.P. Nejadhashemi**, K. Mankin, P. Barnes, and S. Brown. Tuttle Creek Watershed Restoration & Protection Strategy (Assessment Phase). U.S. Environmental Protection Agency 319 (2006-2008).

67. Leatherman, J., J. Williams, M. Langemeier, R. Wilson, C. Smith, **A.P. Nejadhashemi**, K. Mankin, P. Barnes, and S. Brown. Milford Lake Watershed Restoration & Protection Strategy (Assessment Phase). U.S. Environmental Protection Agency 319 (2006-2008).

68. Leatherman, J., J. Williams, M. Langemeier, R. Wilson, C. Smith, **A.P. Nejadhashemi**, K. Mankin, P. Barnes, and S. Brown. Neosho River Basin Watershed Restoration & Protection Strategy (Assessment Phase). U.S. Environmental Protection Agency 319 (2006-2008).

69. Leatherman, J., K. Mankin, R. Wilson, C. Smith, **A.P. Nejadhashemi**, and S. Brown. Fall River/Verdigris Watershed Restoration & Protection Strategy (Assessment Phase). U.S. Environmental Protection Agency 319 (2006-2008).

TEACHING AND ADVISING ACTIVITIES:

Teaching Activities:

- Ecohydrology-BE 881, 3 credits (Michigan State University, Fall 2013-present) Review and synthesize recent literature in ecohydrologic systems analysis, Identify and quantify the critical linkages between ecological processes and the hydrological cycle, Introduce to software and hydrologic modeling applications in local and regional ecohydrological assessment.

- Water Resources System Analysis and Modeling-BE 481, 3 credits (Michigan State University, Fall 2011-present) Hydrology of natural systems. Quantifying runoff, infiltration, and evapotranspiration. Geospatial data collection at watershed scale. Geographical information system application in hydrology and ecosystems engineering. Watershed modeling and applications in engineering design and decision-making.

- Suburban/Rural Watershed Interface Modeling-BE 491, 3 credits (Michigan State University, Spring 2010) Evaluate the impacts of changes in landuse and management practices. Design best management practices to address stream water quality and quantity problems.

- Land and Water Conservation Engineering-BE 481, 3 credits (Michigan State University, Fall 2008-10) Hydrology of small watersheds, flood routing, quantifying runoff, infiltration, evapotranspiration, drainage design, geographic information systems and applications in engineering projects, global positioning systems, and irrigation efficiency.

- Advanced Watershed Modeling-BAE 820, 3 credits (Kansas State University, Spring 2008) Study and evaluation of process equations used in watershed-scale, water-quality models. Use and application of watershed models.

- Dynamics of Biological Systems-ENBE 482, 1 credit (University of Maryland, 2005-2006) Study force-acceleration, work-energy, and impulse-momentum relationships applied to biological systems and whole-body organisms.

- Introduction to Internet and Intranet, (Iranian Agricultural Engineering Research Institute, 1998-2000) History of Internet, System Requirements, Client/Server, Host/Terminal, TCP/IP, IP Address, PPP-Shell, Telnet, FTP, Email, Browsers.

- Geotechnics of Hydraulic Structures (laboratory), 1 credit (University of Tehran, 1997) California Bearing Ratio of Laboratory-Compacted Soils, Unconfined Compressive Strength of Cohesive Soil, Unconsolidated-Undrained Triaxial Compression on Cohesive Soils, Direct Shear Test of Soils under Consolidated Drained Conditions, Consolidated Undrained Triaxial Compression Test for Cohesive Soils.

- Hydraulics (laboratory), 1 credit (University of Tehran, 1995-1997). Energy and Hydraulic Grade Lines in Water Pipe Systems, Energy and Hydraulic Grade Lines in Open Channels, Local Losses in Pipe Flows, Analysis of Open-Channel Flow Transitions Using the Specific Energy Diagram, Energy Loss in a Hydraulic Jump.

- Fluid Mechanics (laboratory), 1 credit (University of Tehran, 1995-1997). Measurement of Kinematic Viscosity, Stability of a Floating Body, Conservation of Mass, Momentum, and Energy in a Sluice Gate/Hydraulic Jump, Pipe Flow in Series and Parallel, Measurement of Velocity Profile and Head Loss/Friction Factor in Pipe Flow.

PUBLICATIONS:

The following notations were used in the publications and the presentation sections.

* = peer-reviewed or refereed items

1 = candidate's students or post-doctoral researchers
2 = candidate's thesis adviser
3 = lead authors

Book/Book Chapter:

1. Javidi Sabbaghian, R. [1,3], **Nejadhashemi, A. P.**, 2019, Selection of the Best Water Supply Scenario for Urban Demand based on the Risk Analysis in Decision-Making Model. *New Trends in Urban Drainage Modelling*, Ed. G. Mannina, Springer Nature Switzerland G 2019. Pp. 942-947. https://doi.org/10.1007/978-3-319-99867-1_162.

2. Messina, J. [3], Adhikari, U. [1], Carroll, J., Chikowo, R., DeVisser, M., Dodge, L., Fan, P., Langley, S., Lin, S., Me-nsope, N., Moore, N., Murray, S., Nawyn, S., **Nejadhashemi, A.,** Olson, J., Smith, A., Snapp, S. 2014. Population Growth, Climate Change and Pressure on the Land – Eastern and Southern Africa. 99 pp. ISBN 978-0- 9903005-0-2.

Peer-reviewed Journal Publications:

1. *Talha, M. [1], **A. Pouyan Nejadhashemi [3]**, K. Moller [1], 2025. Soft Computing Paradigm for Climate Change Adaptation and Mitigation in Iran, Pakistan, and Turkey: A Systematic Review, *Heliyon*, 11 e41974.

2. * Mohan, S. [1], B. Kumar, **A. P. Nejadhashemi [3]**, 2025. Integration of Machine Learning and Remote Sensing for Water Quality Monitoring and Prediction: A Review. *Sustainability*, 17(3): 998.

3. * Tirgariseraji, M. [1], **A. P. Nejadhashemi [3]**, I. Ciampitti, P. V. V. Prasad, 2025. Spatial Patterns and Determinants of Agricultural Resilience: Evidence from Senegal. *Food and Energy Security*, in press.

4. * Tirgariseraji, M. [1], **A. P. Nejadhashemi [3]**, M. Sabouhi Sabouni, Y. Jafari, T. Persson, A. Mirzabaev, A. Nikouei, K. Moller [1], N. Shahnoushi Froshani, Effectiveness of Food Policies Declining Nitrogen Fertilizer Population Pressure. *Journal of Cleaner Production*, in press.

5. *Banda, E. [1], V. Rafiei [1], Josué Kpodo [1], **A. Pouyan Nejadhashemi [3]**, G. Singh, N. N. Das, R. Kc, A. Diallo, 2024. Millet Yield Estimations in Senegal: Unveiling the Power of Regional Water Stress Analysis and Advanced Predictive Modeling, *Agricultural Water Management*, 291 (108618).

6. * Razavi, M. A., **A. P. Nejadhashemi [3]**, B. Majidi, H. S. Razavi [1], J. Kpodo [1], R. Eeswaran [1], I. Ciampitti, P. V. V. Prasad, 2024. Enhancing Crop Yield Prediction in Senegal Using Advanced Machine Learning Techniques and Synthetic Data. *Artificial Intelligence in Agriculture*, 14: 99-114.

7. * Toscano, G. [1, 3], H. Razavi [1], **A. P. Nejadhashemi**, K. Deb, L. Linker, 2024. Large-scale Multi-objective Optimization for Watershed Planning and Assessment, *IEEE Transactions on Systems, Man and Cybernetics: Systems*, 54(6): 3471-3483.

8. * Moller, K. [1], **A. P. Nejadhashemi [3]**, M. Talha [1], M. Chikafa [1], R. Eeswaran [1], N.Vieira Junior, A. J. P. Carcedo, I. Ciampitti, J.C. Bizimana, A. Diallo, P.V.V. Prasad. 2024. Unveiling the Resilience of Smallholder Farmers in Senegal Amidst Extreme Climate Conditions. *Food and Energy Security*, 2024;13:e523.

9. * Kropp, I. [(1)], **A. P. Nejadhashemi [(3)]**, K. Deb, 2024. Improved Evolutionary Operators for Sparse Large-Scale Multi-objective Optimization Problems, *IEEE Transactions on Evolutionary Computation*, 8(2): 460-473.

10. *Hamilton, K. A. [(3)], J. Harrison, J. Mitchell, M. H. Weir, M. Verhougstraete, C. N. Haas, **A. P. Nejadhashemi**, Julie Libarkin, Tiong Gim Aw, Kyle Bibby, Aaron Bivins, Joe Brown, Kara Dean, Gwyneth Dunbar, Joseph N.S. Eisenberg, M. B. Emelko, D. Gerrity, P. Gurian, E. Hartnett, M. Jahne, R. M. Jones, T. R. Julian, H. Li, Y. Li, J. MacDonald Gibson, G. Medema, J. S. Meschke, A. Mraz, H. Murphy, D. O. Oryang, E. de-Graft J. Owusu-Ansah, E. Pasek, A. K. Pradhan, M. T. P. Razzolini, M. O. Ryan, M. E. Schoen, P.W.M.H. Smeets, J. Soller, H. Solo-Gabriele, C. Williams, A. M. Wilson, A. Zimmer-Faust, J. Al-fajari, J. B. Rose, Research gaps and priorities for Quantitative Microbial Risk Assessment (QMRA). *Risk Analysis*, 2024;1–16.

11. * Tirgariseraji, M. [(1)], **A. P. Nejadhashemi [(3)]**, Y. Jafari, T. Persson, M. Sabouhi Sabounia, A. Mirzabaev, Shahnoushi Froshani, 2024. Exploring the Instability in the Food Security due to Nitrogen Fertilizer Regulatory Policy. *Food and Energy Security*, 2024;00:e549.

12. * Deb, K., **A. Pouyan Nejadhashemi [(3)]**, G. Toscano [(1)], H. Razavi [(1)], L. Linker, 2024. Leveraging innovization and transfer learning to optimize best management practices in large-scale watershed management, *Journal of Environmental Modelling and Software*, 180: 106161.

13. *Kpodo, J, [(1)], P. Kordjamshidi, **A. Pouyan Nejadhashemi [(3)]**, AgXQA: A Benchmark for Advanced Agricultural Extension Question Answering, *Computers and Electronics in Agriculture*, 225: 109349.

14. * Ghane [(3)], E., **A. P. Nejadhashemi**, I. Kropp [(1)], 2023. A Drain Spacing Tool that Estimates the Optimum Drain Spacing For Maximum Profit and Water-Quality Protection. *Journal of the ASABE,* 66(2): 397-402.

15. * Rafiei, V. [(1)], **A. P. Nejadhashemi [(3)]**. Watershed Scale PFAS Fate and Transport Model for Source Identification and Management Implications, *Water Research*, 240: 120073.

16. * Deb, K. [(3)], Z. Lu, I. Kropp [(1)], J.S. Hernandez-Suarez [(1)], R. Hussein, S. Miller, **A. P. Nejadhashemi**. 2023. Minimizing Expected Deviation in Upper-level Outcomes Due to Lower-level Decision-making in Hierarchical Multi-objective Problems, *IEEE Transactions on Evolutionary Computation*, 27(3), 505-519.

17. * Chikafa, M. [(1)], **A. P. Nejadhashemi [(3)]**, K. Moller [(1)], H. Razavi [(1)], J.C. Bizimana. 2023. Multidimensional Evaluation of the Impacts of Agricultural Interventions to Achieve Food Security in Malawi. *Food and Energy Security*, 00:e486, 1-17.

18. * Fernandez, N. [(1)], **A. Pouyan Nejadhashemi [(3)]**, C. Loveall [(1)], Large-scale Assessment of PFAS Compounds in Drinking Water Sources Using Machine Learning, *Water Research*, 120307.

19. * Moller, K. [(1)], R. Eeswaran [(1)], **A. P. Nejadhashemi [(3)]**, J.S. Hernandez-Suarez [(1)], 2023. Livestock and Aquaculture Farming in Bangladesh: Current and Future Challenges and Opportunities, *Cogent Food & Agriculture*, 9: 2241274.

20. * Shokrana, M. S. B., E. Ghane [(3)], Y. Abdalaal, **A. P. Nejadhashemi**, Predicting the Effect of Weir Management on the Discharge of a Controlled Drainage System in a Changing Climate. *Agricultural Water Management*, 289(1): 1-12.

21. * Santiago, G. N., A. J. P. Carcedo, M. E. Brown, **A. P. Nejadhashemi**, P. V. V. Prasad, I. A. Ciampitti [(3)], Data Integration Dashboard for Assessing and Planning Sustainable Intensification Agricultural Interventions: A Case Study in Senegal. *Frontiers in Sustainable Food Systems*, 7: 1208286.

22. * Kropp, I. [(1)], **A. P. Nejadhashemi [(3)]**, K. Deb, 2022. Benefits of Sparse Population Sampling in Multi-objective Evolutionary Computing for Large-Scale Sparse Optimization Problems, *Swarm and Evolutionary Computation*, 69, 101025.

23. * Rafiei, V. [(1)], **A. P. Nejadhashemi [(3)]**, S. Mushtaq, R.T. Bailey, D. An-Vo, 2022. An Improved Calibration Technique to Address High Dimensionality and Nonlinearity in Integrated Groundwater and Surface Water Models, *Environmental Modelling and Software*, 149: 105312.

24. * Julien, R., B. Saravi [(1)], **A. P. Nejadhashemi**, A. Whelton, G. Tiong, J. Mitchell [(3)], 2022. Identifying Water Quality Variables that Most Strongly Influence *Legionella* Concentrations in Building Plumbing, *AWWA Water Science*, e1267.

25. * Palmegiani, M., A. Whelton, J. Mitchell, **A. P. Nejadhashemi**, J., Lee [(3)]. 2022. New Developments in Premise Plumbing: Integrated Hydraulic and Water Quality Modeling, *AWWA Water Science*, e1280.

26. * Raschke, A. [(1)], **A. P. Nejadhashemi [(3)],** V. Rafiei [(1)], 2022. Overview of Modeling, Applications, and Knowledge Gaps for Integrated Large-Scale PFAS Modeling, *Journal of Environmental Engineering*, 148(9, 03122003.

27. * Raschke, A. [(1)], **A. P. Nejadhashemi [(3)],** V. Rafiei [(1)], N. Fernandez [(1)], A. Shabani, S. Li, 2022. Opportunities and Challenges of Integrated Large-Scale PFAS Modeling: A Case Study for PFAS Modeling at a Watershed Scale, *Journal of Environmental Engineering*, 148(9), 05022005.

28. * Rafiei, V. [(1)], **A. P. Nejadhashemi [(3)]**, S. Mushtaq, R.T. Bailey, D. An-Vo, 2022. Groundwater-Surface Water Interactions at Wetland Interface: Advancement in Catchment System Modeling, *Environmental Modelling and Software*, 152 (2022): 105407.

29. * Flood, M. T. [(3)], J. S. Hernandez-Suarez [(1)], **A. P. Nejadhashemi,** S. L. Martin, D. Hyndman, J.B. Rose, 2022. Connecting microbial, nutrient, physiochemical, and land use variables for the evaluation of water quality within mixed use watersheds, *Water Research*, 219: 118526.

30. * Kropp, I. [(1)], **A. P. Nejadhashemi [(3)]**, R. Julien, J. Mitchell, A. Whelton. 2022. Machine Learning Framework for Predicting Downstream Water End-use Events with Upstream Sensors. *Water Supply*, 22(7), 6427.

31. * Kropp, I. [(1)], **A. P. Nejadhashemi [(3)],** P. Jha, J. S. Hernandez-Suarez [(1)], 2022. Agricultural innovization: An optimization-driven solution for sustainable agricultural intensification in Michigan, *Computers and Electronics in Agriculture*, 199: 107143.

32. * Haghtalab, N., N. Moore [(3)], **A. P. Nejadhashemi**, 2022. Would forest regrowth compensate for climate change in the Amazon Basin?, *Applied Sciences*, 12(14), 7052.

33. * Rasu, E. [(1)], **A. P. Nejadhashemi [(3)]**, 2022. A. Faye, D. Min, P.V. Vara Prasad, I. A. Ciampitti. 2022. Current and Future Challenges and Opportunities for Livestock Farming in West Africa: Perspectives from the Case of Senegal, *Agronomy*, 12, 1818.

34. * Hernandez-Suarez, J.S. [(1)], **A. P. Nejadhashemi [(3)]**, 2022. Probabilistic Predictions of Ecologically Relevant Hydrologic Indices Using a Hydrological Model, *Water Resources Research*, 58(9): e2021WR031104.

35. * Hernandez-Suarez, J. H. [(1)], **A. P. Nejadhashemi [(3)]**, H. Ferriby [(1)], N. Moore, B. Belton, M. M. Haque, 2022. Performance of Sentinel-1 and 2 Imagery in Detecting Aquaculture Waterbodies in Bangladesh, *Journal of Environmental Modelling and Software*, 157, 105534.

36. * Fernandez, N. [(1,3)], L.A. Camacho, **A. P. Nejadhashemi**, 2022. Modeling Streamflow in Headwater Catchments: A Data-based Mechanistic Grounded Framework, *Journal of Hydrology: Regional Studies*, 44: 101243.

37. * Rasu, E. [(1)], **A. P. Nejadhashemi [(3)]**, F. Couto Alves, B. Saravi [(1)], 2021. Evaluating the Applicability of a Soil Moisture-based Metrics for Gauging the Resiliency of Rainfed Agricultural Systems in the Midwestern United States, *Soil & Tillage Research*, 205: 104818.

38. * Raschke, A. [(1)], J.S., Hernandez-Suarez [(1)], **A. P. Nejadhashemi** [(3)], K. Deb, 2021. Multidimensional Aspects of Sustainable Biofuel Feedstock Production, *Sustainability*, 13(3), 1424.

39. * Rasu, E. [(1)], **A. P. Nejadhashemi**, S. Miller [(3)], 2021. Evaluating the Climate Resilience in Terms of Profitability and Risk for a Long-Term Corn Soybean-Wheat Rotation under Different Treatment Systems, *Climate Risk Management*, 32: 100284.

40. * Hernandez-Suarez, J. S. [(1)], **A. P. Nejadhashemi [(3)]**, K. Deb, 2021. A Novel Multi-Objective Model Calibration Method for Ecohydrological Applications, *Environmental Modelling and Software*, 144: 105161.

41. * Rasu, E. [(1)], **A. P. Nejadhashemi [(3)]**, J. Kpodo [(1)], Z. Curtis, U. Adhikari, H. Liao, S. Li, J.S. Hernandez-Suarez [(1)], F. Couto Alves, A. Raschke [(1)], P.K., Jha, 2021. Quantification of Resilience Metrics as Affected by a Conservation Agricultural Practice at a Watershed Scale, *Agriculture, Ecosystems and Environment*, 320: 107612.

42. * Mundher Yaseen, Z. [(3)], H. Tao, M. Zounemt-Kermani; O. Kisi, T. Tiyasha, K. Chau; S. Salih; S. Shahid; V. Nourani, S. Zhu, A. Melesse, M. Elhakeem. **A. P. Nejadhashemi**, M. Ali, C. Qi, V. Singh, 2021. Artificial Intelligence Models for Suspended River Sediment Prediction: State-of-the Art, Modelling Framework Appraisal, and Proposed Future Research Directions, *Engineering Applications of Computational Fluid Mechanics*, 15(1): 1585-1612.

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3. Moller, K. [(1)], **A. P. Nejadhashemi [(3)]**, M. Tirgaris [(1)], N.Vieira Junior, A. J. P. Carcedo, I. Ciampitti, P.V.V. Prasad, A. Diallo. 2025. Innovative Framework for Assessing Agricultural Resilience Across Economic Classes in Diverse Climate Scenarios. CSBE|ASABE 2025 Annual International Meeting. Toronto, Canada (*oral presentation*).

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25. Belton, B., M.M. Haque, H. Ali, **A.P. Nejadhashemi**, R.A. Hernandez, M. Khondker, H. Ferriby [(1)]. 2022. Harnessing Machine Learning to Estimate Aquaculture's Contributions to the Economy of Southwest Bangladesh. World Aquaculture Society, Singapore, Penang, Malaysia (*oral presentation*).

26. Whelton, A. [(3)], J. Mitchell, J. Lee, J. Rose, **A. P. Nejadhashemi** [(3)], E. Dreelin, T. Aw. 2022. A Leap Forward: New Tools and Knowledge for Predicting, Finding, and Resolving Building Water System Contamination. Water Quality Technology Conference, American Water Works Association, Cincinnati, OH, USA (*oral presentation*).

27. Moller, K. [(1)], R. Eeswaran [(1)], **A. P. Nejadhashemi** [(3)], J. S. Hernandez-Suarez. 2022. Livestock Farming in Bangladesh: Current and Future Challenges and Opportunities. Third International Sustainable Agricultural Intensification and Nutrition Conference, Siem Reap, Cambodia (*oral presentation*).

28. Chikafa, M. [(1)], K. Moller [(1)], **A. P. Nejadhashemi** [(3)]. 2022. The Impact of Irrigation Interventions to Improve Food Security in Malawi. Third International Sustainable Agricultural Intensification and Nutrition Conference, Siem Reap, Cambodia (*oral presentation*).

29. Rasu, E. [(1)], **A. P. Nejadhashemi [(3)]**, A. Faye, D. Min, P.V. Vara Prasad, I. A. Ciampitti. 2022. Constraints and Opportunities for Livestock Farming in Senegal, Third International Sustainable Agricultural Intensification and Nutrition Conference, Siem Reap, Cambodia (*oral presentation*).

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34. Hernandez-Suarez, J.S. [(1)], **A. P. Nejadhashemi [(3)]**. 2021. Probabilistic Predictions of Ecologically Relevant Hydrologic Indices Using a Hydrological Model, American Geological Union Fall Meeting, New Orleans, USA (*oral presentation*).

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Chesapeake Bay Watershed, American Geological Union Fall Meeting, New Orleans, USA (*oral presentation*).

36. Rafiei, V. [(1)], **A. P. Nejadhashemi [(3)],** S. Mushtaq, D. An-Voa. 2021. Quantifying Spatiotemporal Variability of Nitrate in a Tropical Catchment of the Great Barrier Reef Through An Integrated Groundwater-Surface Water Modelling, The 24th International Congress on Modelling and Simulation (MODSIM2021), Sydney, Australia (*oral presentation*).

37. Raschke, A. [(1)], **A. P. Nejadhashemi [(3)],** S. Li. 2021. Source, Transport, and Fate of PFAS through the Huron River Watershed, Great Lakes PFAS Summit, Virtual Event, USA (*oral presentation*).

38. Palmegiani, M., J., Lee [(3)], J. Mitchell, **A. P. Nejadhashemi**, A. Whelton. 2021. New Developments in Premise Plumbing: Integrated Hydraulic and Water Quality Modeling, World Environmental & Water Resources Congress, Milwaukee, USA (*oral presentation*).

39. Palmegiani, M., J., Lee [(3)], A. Whelton, J. Mitchell, **A. P. Nejadhashemi**. 2021. New Developments in Premise Plumbing: Integrated Hydraulic and Water Quality Modeling, American Water Works Association, San Diego, USA (*oral presentation*).

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43. Whelton, A. **[(3)]**, J. Mitchell, J. Rose, T. Aw., **A. P. Nejadhashemi**, M. Salehi, J. Lee, E. Dreelin, A. Shah. 2020. Plumbing Safety: A National Concern for New, Renovated, and Damaged Plumbing, EPA Plumbing Modeling Workshop, Cincinnati, USA (*oral presentation*).

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45. Salehi, M. **[(3)]**, T. Odimayomi, K. Ra, C. Ley, R. Julien, **A. P. Nejadhashemi**, J. S. Hernandez-Suarez **[(1)]**, J. Mitchell, A. D. Shah, A. Whelton. 2019. The Symbiosis between Building Drinking Water Quality and a Water Distribution System, ACE19 Conference/American Water Works Association, Innovating the Future of Water, Denver, USA (*oral presentation*).

46. Lee, J. **[(3)]**, M. Salehi Esfandarani, A. J. Whelton, J. Mitchell, **A. P. Nejadhashemi**, 2019. New Developments In Premise Plumbing: Integrated Hydraulic and Water Quality Modeling, ACE19 Conference/American Water Works Associations, Innovating the Future of Water, Denver, USA (*poster presentation*).

47. *Roy, P. C., A. Guber, M. Abouali [(1)], **A. P. Nejadhashemi**, K. Deb [(3)], A. J. M. Smuker, 2019, Simulation Optimization of Water Usage and Crop Yield Using Precision Irrigation, 10th

International Conference on Evolutionary Multi-Criterion Optimization, East Lansing, USA (*oral presentation*).

48. Kropp, I.M. **(1)**, **A. P. Nejadhashemi (3)**, K. Deb, M. Abouali (1), P.C. Roy, U. Adhikari (1), G. Hoogenboom, 2019. A Multi-Objective Approach to Improve Crop Production in a Sustainable Manner, 10th International Conference on Evolutionary Multi-Criterion Optimization, East Lansing, USA (*poster presentation*).

49. Lee, J. **(3)**, M. Salehi Esfandarani, A. J. Whelton, J. Mitchell, **A. P. Nejadhashemi**, 2019, Development of Premise Plumbing's Integrated Hydraulic and Water Quality Modeling. American Society of Civil Engineers (ASCE), Environmental Water Resources Institute (EWRI) Congress, Pittsburg, USA (*oral presentation*).

50. **Nejadhashemi, A. P. (3)**, I. Kropp (1), K. Deb, M. Abouali (1), P.C. Roy, G. Hoogenboom, 2018, Optimization for Sustainable Agricultural Production, Global Water Security Conference for Agriculture and Natural Resource. Hyderabad, India (*oral presentation*).

51. Javidi Sabbaghian, R. **(1,3)**, **Nejadhashemi, A. P.**, 2018, Selection of the Best Water Supply Scenario for Urban Demand based on the Risk Analysis in Decision-Making Model. 11th International Conference on Urban Drainage Modeling, Palermo, Italy (*oral presentation*).

52. Saravi, B. (1), **A. P. Nejadhashemi (3)**, I. Kropp (1), 2018. Using Deep Learning to Create a Dynamic Crops Growth Model, ASABE Annual International Meeting, Detroit, MI, USA (*oral presentation*).

53. Daneshvar, F. (1), **A. P. Nejadhashemi (3)**, M. Herman (1), M. Abouali (1), 2018. Assessing the Response of Climate Variabilities on Riverine Ecological Integrity, ASABE Annual International Meeting, Detroit, MI, USA (*oral presentation*).

54. Kropp, I. (1), **A. P. Nejadhashemi (3)**, K. Deb, M. Abouali (1), P. C. Roy, G. Hoogenboom, 2018. Engineering Crop Water and Nutrient Management for Sustainable Agricultural Intensification, ASABE Annual International Meeting, Detroit, MI, USA (*oral presentation*).

55. Herman, M. R. (1), **A. P. Nejadhashemi (3)**, M. Abouali (1), J. S. Hernandez-Suarez (1), F. Daneshvar (1), Z. Zhang, M. C. Anderson, A. M. Sadeghi, C. R. Hain, A. Sharifi, 2018. Evaluating the Role of Evapotranspiration Remote Sensing Data in Improving Hydrological Modeling Predictability, ASABE Annual International Meeting, Detroit, MI, USA (*oral presentation*).

56. Rojas-Downing, M.M. (1), **A. P. Nejadhashemi (3)**, B. Elahi, K. A. Cassida, F. Daneshvar (1), J. S. Hernandez-Suarez (1), M. Abouali (1), M. R. Herman (1), S. A. Al Masraf (1), T. Harrigan, 2018. A New Measure to Address Sustainability on Dairy Production, ASABE Annual International Meeting, Detroit, MI, USA (*oral presentation*).

57. **Nejadhashemi, A. P. (3)**, M. Abouali (1), F. Daneshvar (1), U. Adhikari (1), M. R. Herman (1), T. J. Calappi, 2018. Evaluation of the Effectiveness of Conservation Practices under Implementation Site Uncertainty, ASABE Annual International Meeting, Detroit, MI, USA (*oral presentation*).

58. Hernandez-Suarez, J. S. (1), **A. P. Nejadhashemi (3)**, I. Kropp (1), M. Abouali (1), Z. Zhang, K. Deb, 2018. The Importance of Hydrological Model Calibration on Predictability of Environmental Flow Indices, ASABE Annual International Meeting, Detroit, MI, USA (*oral presentation*).

59. Adhikari, U. [(1)], E. Martinez-Martinez [(1)], **A. P. Nejadhashemi [(3)]**, S. A. Woznicki [(1)], S. Giri [(1)], 2018. Model Integration Approach in Assessing the Impacts of Wetland Restoration on Sediment Reduction, ASABE Annual International Meeting, Detroit, MI, USA (*oral presentation*).

60. Roy P., A. Guber, M. Abouali [(1)], **A. P. Nejadhashemi**, A. Smucker, K. Deb [(3)], 2018. Simulation Optimization of Water Usage and Crop Yield Using Precision Irrigation, The Genetic and Evolutionary Computation Conference, Kyoto, Japan (*oral presentation*).

61. **Nejadhashemi, A. P. [(3)]**, I. Kropp [(1)], K. Deb, M. Abouali [(1)], P.C. Roy, G. Hoogenboom, 2018, Sustainable Agricultural Intensification through Crop Water and Nutrient Management Optimization, 9th International Congress on Environmental Modelling and Software. Fort Collins, CA USA (*oral presentation*).

62. * Mitchell, J. [(3)], I. Kropp [(1)], **A. P. Nejadhashemi**, R. Julien, T. AW, J. Rose, M. Salehi, A. Whelton, 2018. Evaluating the Relationship Between Water Usage and Microbial Drinking Water Quality in a Residential Green Building, Water Microbiology Conference, Chapel Hill, NC, USA (*oral presentation*).

63. Kropp, I. [(1)], **A. P. Nejadhashemi [(3)]**, K. Deb, M. Abouali [(1)], P.C. Roy, 2017, A Systems Approach to Address Water and Nutrient Use Efficiency for Sustainable Agricultural Intensification. The National Systems Conference. Agra, India (*oral presentation*).

64. Roy, P, A. Guber, M. Abouali [(1)], **A. P. Nejadhashemi**, I. K. Deb [(3)], A. Smuker, 2017, Multi-Objective EAs approach to Optimization of Water Usage and Crop Production for Subsurface Water Retention Technology. The National Systems Conference. Agra, India (*oral presentation*).

65. Rojas-Downing, M.M. [(1)], **A. P. Nejadhashemi [(3)]**, B. Elahi, K. A. Cassida, F. Daneshvar [(1)], J. S. Hernandez-Suarez [(1)], M. Abouali [(1)], M. R. Herman [(1)], S. A. Al Masraf [(1)], T. Harrigan, 2017, A Systems Approach to Address Sustainability in Dairy Production. The National Systems Conference. Agra, India (*oral presentation*).

66. Daneshvar F. [(1)], **A. P. Nejadhashemi [(3)]**, Z. Zhang, M.R. Herman [(1)], A. Shortridge, S. Marquart-Pyatt, 2017. Multilevel Spatial Modeling in Environmental Justice and Stream Health, ASABE Annual International Meeting, Spokane, WA, USA (*oral presentation*).

67. Herman, M. R. [(1)], **A. P. Nejadhashemi [(3)]**, F. Daneshvar [(1)], M. Abouali [(1)], D. M. Ross, S. A. Woznicki [(1)], Z. Zhang, 2017. Designing a Bioenergy Landscape with Respect to Stream Health, ASABE Annual International Meeting, Spokane, WA, USA (*oral presentation*).

68. Rojas-Downing, M.M. [(1)], **A. P. Nejadhashemi [(3)]**, M. Abouali [(1)], F. Daneshvar [(1)], S. A. Al Masraf [(1)], M.R. Herman [(1)], T. Harrigan, Z. Zhang, 2017. Climate Change Impacts Analysis of Grazing Dairy Production, ASABE Annual International Meeting, Spokane, WA, USA (*oral presentation*).

69. Hernandez-Suarez J.S. [(1)], **A. P. Nejadhashemi [(3)]**, F. Daneshvar [(1)], M.R. Herman [(1)], M. Abouali [(1)], 2017. Bayesian Variable Selection for Stream Health Modeling, ASABE Annual International Meeting, Spokane, WA, USA (*oral presentation*).

70. Roy P., K. Deb [(3)], A. Guber, **A. P. Nejadhashemi**, A. Smucker, 2017. Investigating Practicalities in Optimization of a Precision Irrigation System, The Genetic and Evolutionary Computation Conference, Berlin, Germany (*oral presentation*).

71. Abouali M. [(1)], **A. P. Nejadhashemi [(3)]**, F. Daneshvar [(1)], U. Adhikari [(1)], M. R. Herman [(1)], T.J. Calappi, B.G. Rohn, 2017. Watershed-level Evaluation of Wetland Implementation Strategies on Phosphorus Reduction, IAGLR's 60th annual Conference on Great Lakes Research, Detroit, MI, USA (*oral presentation*).

72. Daneshvar F. [(1)], **A. P. Nejadhashemi [(3)]**, Z. Zhang, M. R. Herman [(1)], A. Shortridge, S. Marquart-Pyatt, 2017. Assessing Impact of Spatial Resolution on Stream Health Based Environmental Justice Models, IAGLR's 60th annual Conference on Great Lakes Research, Detroit, MI, USA (*oral presentation*).

73. Herman M. R. [(1)], **A. P. Nejadhashemi [(3)]**, F. Daneshvar [(1)], D. M. Ross, S. A. Woznicki [(1)], Z. Zhang, A. Esfahanian, 2017. Stream Health Based Optimization of Best Management Practice Implementation, IAGLR's 60th annual Conference on Great Lakes Research, Detroit, MI, USA (*oral presentation*).

74. Martinez-Martinez E. [(1)], **A. P. Nejadhashemi [(3)]**, S.A. Woznicki [(1)], U. Adhikari [(1)], S. Giri [(1)], 2017. Evaluating the Wetland Restoration Scenarios for Watershed-scale Sediment Reduction, IAGLR's 60th annual Conference on Great Lakes Research, Detroit, MI, USA (*oral presentation*).

75. Abouali M. [(1)], J. Mitchell [(3)], **A. P. Nejadhashemi**, P. Hatami [(1)], C. Gibbs, L. Rivers, 2016. Developing a Predictive Model to Detect Mishandling in the Self-Reported Water Discharge Data, Society of Risk Analysis Annual Meeting, San Diego, CA, USA (*poster presentation*).

76. Daneshvar F. [(1)], **A. P. Nejadhashemi [(3)]**, M. R. Herman [(1)], M. Abouali [(1)], 2016. Climate Change Impacts on Macroinvertebrate Communities in the Saginaw River Watershed, Environmental Science & Policy Program- Research Symposium on Environmental Health, East Lansing, MI, USA (*poster presentation*).

77. Rojas-Downing M. M. [(1)], **A. P. Nejadhashemi [(3)]**, M. Abouali [(1)], F. Daneshvar [(1)], S. A. Al Masraf [(1)], M. R. Herman [(1)], T. Harrigan, Z. Zhang, 2016. Vulnerability of Grazing Dairy Systems to Climate Change in Michigan, Fate of the Earth, East Lansing, MI, USA (*poster presentation*).

78. Woznicki, S.A. [(1)], **A. P. Nejadhashemi [(3)]**, Y. Tang, L. Wang. 2016. A Framework to Assess the Impacts of Climate Change on Stream Health Indicators in Michigan Watersheds, AGU's Fall Meeting, San Francisco, CA, USA (*oral presentation*).

79. Daneshvar F. [(1)], **A. P. Nejadhashemi [(3)]**, M.R. Herman [(1)], 2015. Comparison of Multiple Point and Single Point Calibration Performance for the Saginaw River Watershed, International SWAT Conference, West Lafayette, IN, USA (*oral presentation*).

80. **A.P. Nejadhashemi** [(3)], M.R. Herman [(1)], F. Daneshvar [(1)], D.M. Ross, S.A. Woznicki [(1)], Z. Zhang, A. Esfahanian. 2015. Optimization of Conservation Practice Implementation Strategies in the Context of Environmental Flow. Ecohydrology' 2015, Lyon, France (*oral presentation*).

81. Woznicki S.A. [(1)], **A. P. Nejadhashemi [(3)]**, 2015. Development of a Comprehensive Framework to assess the Impacts of Climate Change on Stream Health, ASABE 1st Climate Change Symposium - Adaptation and Mitigation, Chicago, IL, USA (*oral presentation*).

82. Daneshvar F. [(1)], **A. P. Nejadhashemi [(3)]**, M. Abouali [(1)], 2015. Climate Change Impact on Macroinvertebrate Communities in the Flint River Watershed, ESPP Research Symposium:

International Research Collaborations: Addressing environmental challenges, East Lansing, MI, USA (*poster presentation*).

83. Daneshvar F. [(1)], K.D. Dolan [(3)], **A. P. Nejadhashemi**, 2015. Evaluation of a Nonlinear Regression Model Used for Stream Temperature Prediction. 28th International Meeting on Inverse Problems, East Lansing, MI, USA (*poster presentation*).

84. Esfahanian E. [(1)], **A. P. Nejadhashemi [(3)]**, M. Abouali [(1)], F. Daneshvar [(1)], A. Ameli, S. Woznicki [(1)], 2015. Defining Drought in the Context of Stream Health, ASABE 1st Climate Change Symposium - Adaptation and Mitigation, Chicago, IL, USA (*poster presentation*).

85. Daneshvar F. [(1)], **A. P. Nejadhashemi [(3)]**, M. Abouali [(1)], S. Woznicki [(1)], M. R. Herman [(1)], 2015. The Response of Benthic Macroinvertebrate Communities to Climate Change within the Saginaw River Watershed, ASABE 1st Climate Change Symposium - Adaptation and Mitigation, Chicago, IL, USA (*poster presentation*).

86. Herman M. R. [(1)], **A. P. Nejadhashemi [(3)]**, S. Woznicki [(1)], F. Daneshvar [(1)], 2015. Impacts of Climate Change on Fish Biological Integrity within the Flint Watershed, ASABE 1st Climate Change Symposium - Adaptation and Mitigation, Chicago, IL, USA (*poster presentation*).

87. Rojas-Downing M. M. [(1)], **A. P. Nejadhashemi [(3)]**, T. Harrigan, 2015. Climate Change on Livestock Interactions: Impacts and Human Dimensions, ASABE 1st Climate Change Symposium - Adaptation and Mitigation, Chicago, IL, USA (*poster presentation*).

88. Javidi Sabbaghian R. [(1)], **A. P. Nejadhashemi [(3)]**, M. Zarghami, M.B. Sharifi, 2015. Risk-Based Multiple Criteria Decision Analysis for Ranking Climate Change Mitigation Scenarios, ASABE 1st Climate Change Symposium - Adaptation and Mitigation, Chicago, IL, USA (*poster presentation*).

89. Adhikari U. [(1)], **A. P. Nejadhashemi [(3)]**, S. A. Woznicki [(1)], 2015. Climate Change and Eastern Africa: A Review of Impact on Major Crops, ASABE 1st Climate Change Symposium - Adaptation and Mitigation, Chicago, IL, USA (*poster presentation*).

90. Woznicki S.A. [(1)], **A. P. Nejadhashemi [(3)]**, 2014. Characterizing the Effects of Climate Change on Stream Health, ESPP Research Symposium: Environmental Risk and Decision Making, East Lansing, MI, USA (*poster presentation*).

91. Daneshvar F. [(1)], **A. P. Nejadhashemi [(3)]**, Z. Zhang, A. Shortridge, S. Marquart-pyatt, G. Habron, M. R. Herman [(1)], G. M. Sanchez [(1)], 2014. Evaluating the Impact of Social Data Resolution on Environmental Justice Model Performance, ESPP Research Symposium: Environmental Risk and Decision Making, East Lansing, MI, USA (*oral presentation*).

92. Rojas-Downing M.M. [(1)], **A. P. Nejadhashemi [(3)]**, 2014. The Use of Remote Sensing to Asses Drought Impacts on Livestock, ESPP Research Symposium: Environmental Risk and Decision Making, East Lansing, MI, USA (*poster presentation*).

93. Herman M.R. [(1)], **A. P. Nejadhashemi [(3)]**, 2014. Applications and Limitations of Stream Health Indices, ESPP Research Symposium: Environmental Risk and Decision Making, East Lansing, MI, USA (*poster presentation*).

94. Javidi Sabbaghian R. [(1)], **A. P. Nejadhashemi [(3)]**, M. Zarghami, M.B. Sharifi, 2014. Developing a Fuzzy Group Decision Making Framework for Managing Water Resources Risk, ESPP Research Symposium: Environmental Risk and Decision Making, East Lansing, MI, USA (*poster presentation*).

95. Esfahanian E. [(1)], **A. P. Nejadhashemi [(3)]**, 2014. Assessing Vulnerability of Fish to Extreme Dry Periods, ESPP Research Symposium: Environmental Risk and Decision Making, East Lansing, MI, USA (*poster presentation*).

96. Woznicki, S.A. [(1)], **A. P. Nejadhashemi [(3)]**, M. Parsinejad, 2013. Crop Irrigation and Yield Uncertainty due to Climate Change. First International Conference on Global Food Security, Noordwijkerhout, The Netherlands (*poster presentation*).

97. Sanchez G. [(1)], **A. P. Nejadhashemi [(3)]**, Z. Zhang; S.A. Woznicki [(1)]; G. Habron; S. Marquart-Pyatt; A. Shortridge. 2013. Evaluating a Socio-Ecological Indicator-Based System for Decision-Making Support in Watershed Management. The 4th International Conference on Computing for Geospatial Research and Application, San Jose, CA, USA. (*poster presentation*).

98. Woznicki, S.A. [(1)], **A. P. Nejadhashemi [(3)]**, M. Parsinejad, 2013. Integrating High-resolution Spatiotemporal Climate Change Data for Modeling Irrigation Demand. ASABE Annual International Meeting, Kansas City, MO, USA (*poster presentation*).

99. Sowa, S.P. [(3)], M. Herbert, S. Mysorekar, M. Fales, K. Hall, A. Sasson, A. Froelich, C. Vollmer-Sanders, L. Wang, **A. P. Nejadhashemi**, S. Ludsin, J. Reuter, J. Arnold, M. White, M. Johnson, C. Rewa, 2013. The Wildlife Component of CEAP– Great Lakes and Western Lakes Erie Efforts, The 5th National Conference on Ecosystem Restoration, 2013, Chicago, IL, USA (*oral presentation*).

100. Giri, S. [(1)], **A.P. Nejadhashemi [(3)]**, S. Woznicki [(1)], and Z. Zhang, 2013. Analysis of Best Management Practice Effectiveness and Spatiotemporal Variability Based on Different Targeting Strategies. ASABE Annual International Meeting, Kansas City, MO, USA (*poster presentation*).

101. Woznicki, S.A. [(1)], **A. P. Nejadhashemi [(3)]**, Y.A. Hamaamin [(1)], 2013. Climate Change and Associated Risks to Stream Integrity. ASABE Annual International Meeting, Kansas City, MO, USA (*oral presentation*).

102. Safferman, S.I. [(3)], S.A. Miller, **A. P. Nejadhashemi**, R. Julienry, S. Zhang [(1)]. 2013. Wastewater Irrigation Strategies that Prevent Metal Mobilizing Microorganisms from Predominating, Microbial Ecology and Water Engineering Conference 2013, Ann Arbor, MI, USA (*poster presentation*).

103. Woznicki, S.A. [(1)], **A. P. Nejadhashemi [(3)]**, Y.A. Hamaamin [(1)], 2013. Impacts of Climate Change on Stream Ecosystem Integrity. 13th Annual American Ecological Engineering Society Meeting, East Lansing, MI, USA (*poster presentation*).

104. Giri, S. [(1)], **A.P. Nejadhashemi [(3)]**, S.A. Woznicki [(1)], and Z. Zhang, 2013. Analysis of Best Management Practice Effectiveness and Spatiotemporal Variability Based on Different Targeting Strategies. 13th Annual American Ecological Engineering Society Meeting, East Lansing, MI, USA (*poster presentation*).

105. Sanchez G. [(1)], **A. P. Nejadhashemi [(3)]**, Z. Zhang; S.A. Woznicki [(1)]; G. Habron; S. Marquart-Pyatt; A. Shortridge. 2013. Development of a Socio-ecological Model for Watershed-based Management, Spatial Statistics 2013, Columbus, OH, USA (*poster presentation*).

106. Woznicki, S.A. [(1)], **A. P. Nejadhashemi [(3)]**, Y.A. Hamaamin [(1)], 2013, Risk of adverse impacts to aquatic ecosystem integrity due to climate change, HydroEco 2013, 4th International Conference on Hydrology and Ecology, Rennes, France (*oral presentation*).

107. **Nejadhashemi, A.P. [(3)]**, M. Einheuser [(1)], S.P. Sowa, L. Wang, Y.A. Hamaamin [(1)], S.A. Woznicki [(1)], 2013, Model the Effects of Conservation Practices on Stream Health, HydroEco 2013, 4th International Conference on Hydrology and Ecology, Rennes, France (*poster presentation*).

108. Smith, C.M., J.R. Williams [(3)], **A.P. Nejadhashemi**, S.A. Woznicki [(1)], and J.C. Leatherman, 2013. Economics of Reservoir Sedimentation. 2013 Kansas Dam Safety Conference, Overland Park, KS, USA (*oral presentation*).

109. Smith, C.M., J.R. Williams [(3)], **A.P. Nejadhashemi**, S.A. Woznicki [(1)], J.C. Leatherman, 2013. An Economic Analysis of Reservoir Sediment Management: Cropland Management versus Dredging. Southern Agricultural Economics Association annual meeting, Orlando, FL, USA (*poster presentation*).

110. Parsinejad [(3)], M., A. BemaniYazdi, S. Araghinejad, **A.P. Nejadhashemi**, and M. Sarai Tabrizi, 2012. Optimal Water Allocation in Irrigation Networks Based on Real Time Climatic Data, ASABE Annual International Meeting, Dallas, TX, USA (*oral and paper presentation*).

111. Doran, P.J., K. Hall, S.P. Sowa [(3)], M.E. Herbert, L. Cole, S. Mysorekar. T. Bowe, **A.P. Nejadhashemi**, L. Wang, C. Rewa. 2012. Protecting Fish from Agricultural Impacts as Climate Changes: How Much Conservation Is Enough? The 142nd Annual Meeting of the American Fisheries Society, Minneapolis – St. Paul, MN, USA (*oral presentation*).

112. Novaes, V.M. [(1)], D.P. Christian [(3)], C. Gamble, and **A.P. Nejadhashemi**. 2012. Michigan Avenue Bioretention Three Years Later: The Monitoring Results are in. The Water Environment Federation (WEF) Collection Systems, St. Louis, Missouri, USA (*oral presentation*).

113. Smith, C.M., J.R. Williams [(3)], **A.P. Nejadhashemi**, S.A. Woznicki [(1)], B.B. Golden, and K.R. Douglas-Mankin, 2012. Economics of Nutrient and Sediment Reduction Strategies. Kansas WRAPS Working Group Seminar, Topeka, KS, USA (*oral presentation*).

114. Smith, C.M., J.R. Williams [(3)], **A. P. Nejadhashemi**, S.A. Woznicki [(1)], B.B. Golden, and K.R. Douglas-Mankin, 2011. Economics of Nutrient and Sediment Reduction Strategies for Tuttle Creek Lake, Water Future Kansas Conference, Topeka, KS, USA (*oral presentation*).

115. Woznicki S.A. [(1)] and **A. P. Nejadhashemi [(3)]**, 2011. Best Management Practice Sensitivity Analysis under Climate Change Scenarios. ASABE Annual International Meeting, Louisville, KY, USA (*oral presentation*).

116. Giri, S. [(1)], **A. P. Nejadhashemi [(3)]**, and S.A. Woznicki [(1)], 2011. Best Evaluation of Targeting Methods for Implementation of Best Management Practices in Saginaw River Watershed. ASABE Annual International Meeting, Louisville, KY, USA (*oral presentation*).

117. Love, B.J. [(1)] and **A. P. Nejadhashemi [(3)]**, 2011, Water Quality Impact Assessment of Large Scale Biofuel Crops Expansion in Agricultural Regions of Michigan, ASABE Annual International Meeting, Louisville, KY, USA (*oral presentation*).

118. Einheuser, M.D. [(1)], **A. P. Nejadhashemi [(3)]**, L. Wang, and S.P. Sowa, 2011. Exploring Relationships between In-Stream Conditions and Ecological Health under Landuse and Climate Scenarios Using a Watershed Model. ASABE Annual International Meeting, Louisville, KY, USA (*oral and paper presentation*).

119. Smith, C., J. Williams [(3)], **A. P. Nejadhashemi**, S.A. Woznicki [(1)], B.B. Golden, and K.R. Douglas-Mankin, 2011. From the Dust Bowl to The Mud Bowl: Economics of Reservoir Sedimentation, Universities Council on Water Resources and National Institutes for Water Resources) UCOWR/NIWR Conference, Boulder, CO, USA (*poster presentation*).

120. Love, B.J. [(1)], M.D. Einheuser [(1)], and **A. P. Nejadhashemi** [(3)], 2011. Effects on Aquatic and Human Health Due to Large Scale Bioenergy Crop Expansion, ASABE Annual International Meeting, Louisville, KY, USA (*poster presentation*).

121. Martinez-Martinez, E. [(1)] and **A. P. Nejadhashemi** [(3)], 2011. A Functional Assessment of Wetlands at Watershed Scale, ASABE Annual International Meeting, Louisville, KY, USA (*poster presentation*).

122. **Nejadhashemi, A. P. [(3)]**, B. Wardynski [(1)], S.A. Woznicki [(1)], and S.P. Sowa, 2011. Environmental Impacts of Land-Use Changes in the Agricultural Regions of Michigan and Wisconsin, ASABE Annual International Meeting, Louisville, KY, USA (*poster presentation*).

123. Woznicki, S.A. [(1)] and **A. P. Nejadhashemi [(3)]**, Assessing Uncertainty in Best Management Practice Effectiveness under Future Climate Scenarios, ASABE Annual International Meeting, Louisville, KY, USA (*poster presentation*).

124. Hamaamin, Y.A. [(1)], **A. P. Nejadhashemi [(3)]**, M.D. Einheuser [(1)], and D.A. Hamilton, 2011. Application of Fuzzy Logic Techniques in Estimating the Regional Index Flow for Michigan, ASABE Annual International *Meeting*, Louisville, KY, USA (*poster presentation*).

125. Smith, C., J. Williams, **A. P. Nejadhashemi [(3)]**, S. Woznicki [(1)], B.B. Golden, and K.R. Douglas-Mankin, 2011. From the Dust Bowl to Economics of Reservoir Sedimentation, Water and the Future of Kansas Conference, Topeka, KS, USA (*poster presentation*).

126. Sowa, S.P. [(3)], M. Herbert, S. Mysorekar, L. Wang. **A. P. Nejadhashemi**, C. Shen, J. Bartholoic. Y. Shi, P. Mantha, C. Rewa, 2010. Assessing Benefits of Agricultural Best Management Practices to Fish Communities Across MI and WI through Integration of Multiple Geospatial Datasets and Physicochemical Models, AFS 140th Annual Meeting, Landscapes and Fish-Habitat Relationships: New Approaches and Applications, Pittsburgh, PA, USA (*oral presentation*).

127. Love B. J. [(1)] and **A. P. Nejadhashemi [(3)]**, 2010. Environmental Impact Analysis of Biofuel Crops Expansion in the Saginaw River Watershed. ASABE Annual International Meeting, Pittsburgh, PA, USA (*oral and paper presentations*).

128. Woznicki S. A. [(1)] and **A. P. Nejadhashemi [(3)]**, 2010. Assessing the Impacts of Climate Change on Best Management Practices (BMPs) Implementation Strategies. ASABE Annual International Meeting, Pittsburgh, PA, USA (*oral and paper presentation*).

129. **Nejadhashemi, A. P. [(3)]**, C. Shen, B. J. Wardynski [(1)], and P.S. Mantha, 2010. Evaluating the Impacts of Land Use Changes on Hydrologic Responses in the Agricultural Regions of Michigan and Wisconsin. ASABE Annual International Meeting, Pittsburgh, PA, USA (*poster and paper presentation*).

130. Prohaska, M.D. [(1)], **Nejadhashemi, A. P. [(3)]**, and X. Yu [(1)], 2010. Water Quality Best Management Practices, Effectiveness, and Cost for Reducing Contaminant Losses from Urban Areas. ASABE Annual International Meeting, Pittsburgh, PA, USA (*poster presentation*).

131. **Nejadhashemi, A. P. [(3)]**, D. Hodge, D.M. Reinhold, 2009. Eco-Economic Impact Analysis of Bioenergy Activities. The Consortium for Plant Biotechnology Research, Washington DC, USA (*poster presentation*).

132. Smith, C.M. [(3)], H. George, and **A. P. Nejadhashemi**, 2008, Cost-Effective Conservation: Using a BMP Auction for Targeting in Kansas, Kansas WRAPS Conference, Salina, KS, USA (*oral presentation*).

133. Smith, C. [(3)], H. George, **A. P. Nejadhashemi**, W. Hargrove and J. Leatherman, 2008. Cost-Effective Conservation: Using a BMP Auction for Targeting in Kansas, 2008 National Water Conference, (*oral presentation*).

134. **Nejadhashemi, A. P. [(3)]**, K.R. Mankin, C.M. Smith, R.M. Wilson, S.P. Brown, R. Christianson, W.L. Hargrove, J.C. Leatherman, D.L. Devlin, and S.L. Hutchinson, 2007, Adaptive Modeling for Watershed Restoration, American Ecological Engineering Society Annual Conference: Ecological Engineering in the Great Plains Ecosystem, Manhattan, KS, USA (*poster presentation*).

135. **Nejadhashemi, A. P. [(3)]** and K.R. Mankin, 2007. Comparison of Four Water Quality Models (STEPL, PLOAD, L-THIA and AVSWAT-X) in Simulating Nutrient Dynamics in a Watershed. ASABE Annual International Meeting, Minneapolis, MN, USA (*oral and paper presentation*).

136. **Nejadhashemi, A. P. [(3)]**, A. Shirmohammadi [(2)], H.J. Montas, J.M. Sheridan, and D.D. Bosch. 2007. Analysis of Watershed Physical and Hydrological Effects on Baseflow Separation. ASABE Annual International Meeting, Minneapolis, MN, USA (*poster and paper presentation*).

137. **Nejadhashemi, A. P. [(3)]**, P.B. Parajuli, K.R. Mankin, and P.L. Barnes. 2007. Pathogen, Nutrient, and Sediment Prediction Using AVSWAT-X and WARMF Water Quality Models. Fourth Conference on Watershed Management to Meet *Water* Quality Standards and TMDLs. San Antonio, TX, USA (*oral and paper presentation*).

138. **Nejadhashemi, A. P. [(3)]**, J.M. Sheridan, A. Shirmohammadi [(2)], and H.J. Montas, 2005. Improvement in Hydrograph Separation Estimation by Incorporating Hydrologic Characteristics of Watersheds. ASABE Annual International Meeting, Tampa, Florida, USA (*poster and paper presentation*).

139. **Nejadhashemi, A. P. [(3)]**, A. Shirmohammadi [(2)], J.M. Sheridan, and H.J. Montas, 2004. Evaluation of Analytical Methods for Streamflow Partitioning. ASABE/CSAE Annual International Meeting, Ottawa, Ontario, Canada (*oral and paper presentation*).

140. **Nejadhashemi, A. P.** [(3)], A. Shirmohammadi [(2)], and H.J. Montas, 2003. Evaluation of Streamflow Partitioning Methods. ASABE Annual International Meeting, Las Vegas, Nevada, USA (*poster and paper presentation*).

141. **Nejadhashemi, A. P.** [(3)], E.R. Turner, A. Shirmohammadi [(2)], and H.J. Montas, 2003. Evaluation of Decision Support System for Phosphorous Management at Watershed Scale. ASABE Annual International Meeting, Las Vegas, Nevada, USA (*poster and paper presentation*).

142. **Nejadhashemi, A. P.** [(3)], A.M. Sexton, H.J. Montas, and A. Shirmohammadi [(2)], 2003. Nonlinear Analysis of Phosphorus Transport in Soil. ASABE Annual International Meeting, Las Vegas, Nevada, USA (*oral and paper presentation*).

143. Sohrabi, T.M. [(3)], A. Shirmohammadi [(2)], T.W. Chu, H.J. Montas, and **A.P. Nejadhashemi**, 2002. Incorporating Uncertainty Analysis in SAWT2000 Model Predictions. ASABE Annual International Meeting, Chicago, Illinois, USA (*oral and paper presentation*).

b. Local

1. Moller, K. [(1)], **A. P. Nejadhashemi** [(3)], M. Tirgaris [(1)], N.Vieira Junior, A. J. P. Carcedo, I. Ciampitti, P.V.V. Prasad, A. Diallo. 2025. Innovative Framework for Assessing Agricultural Resilience Across Economic Classes in Diverse Climate Scenarios. CSBE|ASABE 2025 Annual International Meeting. Toronto, Canada (*oral presentation*).

2. Kpodo, J.[(1)], P. Kordjamshidi, **A. P. Nejadhashemi** [(3)], 2024, ROBERTA VS. GPT-3.5: Unveiling Insights into Agricultural Question Answering Challenges, MSU Engineering Graduate Research Symposium East Lansing, MI, USA (*poster presentation*).

3. Hernandez-Suarez, J.S. [(1)], **A. P. Nejadhashemi** [(3)], I.M. Kropp [(1)], M. Abouali [(1)], Z. Zhang, K. Deb, 2019, Evaluation of the Impacts of Hydrologic Model Calibration Methods on Predictability of Ecologically-Relevant Hydrologic Indices, MSU Engineering Graduate Research Symposium East Lansing, MI, USA (*poster presentation*).

4. Kropp, I.M. [(1)], **A. P. Nejadhashemi** [(3)], K. Deb, M. Abouali [(1)], P.C. Roy, U. Adhikari [(1)], G. Hoogenboom, 2019. A Multi-Objective Approach to Water and Nutrient Efficiency for Sustainable Agricultural Intensification, MSU Engineering Graduate Research Symposium, East Lansing, MI, USA (*poster presentation*).

5. Herman, M.R. [(1)], **A. P. Nejadhashemi** [(3)], F. Daneshvar [(1)], M. Abouali [(1)], D.M. Ross, S.A. Woznicki [(1)], Z. Zhang, 2018. Reshaping the American Bioenergy Landscape to Address the Food, Water, and Energy Paradigm, MSU Engineering Graduate Research Symposium, East Lansing, MI, USA (*poster presentation*).

6. Rojas-Downing M. M. [(1)], **A. P. Nejadhashemi** [(3)], M. Abouali [(1)], F. Daneshvar [(1)], S. A. Al Masraf [(1)], M.R. Herman [(1)], T. Harrigan, Z. Zhang. 2017. Climate Change Resilience of Michigan Grazing Dairy Farms, International Scholar Showcase, East Lansing, MI, USA (*poster presentation*).

7. Rojas-Downing M. M. [(1)], **A. P. Nejadhashemi** [(3)], M. Abouali [(1)], F. Daneshvar [(1)], S. A. Al Masraf [(1)], M.R. Herman [(1)], T. Harrigan, Z. Zhang. 2017. Grazing Dairy Production under the Impacts of Climate Change: Opportunities and Challenges, Fate of the Earth Symposium, East Lansing, MI, USA (*poster presentation*).

8. Rojas-Downing M. M. [(1)], **A. P. Nejadhashemi [(3)]**, 2016. Pasture Diversification to Combat Climate Change Impacts on Grazing Dairy Production, Environmental Science and Policy Program Colloquium, East Lansing, MI, USA (*oral presentation*).

9. Daneshvar F. [(1)], **A. P. Nejadhashemi [(3)]**, M. R. Herman [(1)], M. Abouali [(1)], 2016. Sensitivity Analysis of Climate Change Impacts on Macroinvertebrate Communities in the Saginaw River Watershed, MSU Engineering Graduate Research Symposium, East Lansing, MI, USA (*poster presentation*).

10. Esfahanian E. [(1)], **A. P. Nejadhashemi [(3)]**, M. Abouali [(1)], F. Daneshvar [(1)], A. Ameli Renani, M. R. Herman [(1)], Y. Tang, 2016. Drought Impacts and Stream Ecosystem Functions, MSU Engineering Graduate Research Symposium, East Lansing, MI, USA (*poster presentation*).

11. Herman M. R. [(1)], **A. P. Nejadhashemi [(3)]**, F. Daneshvar [(1)], M. Abouali [(1)], D. R. Ross, S. A. Woznicki [(1)], Z. Zhang, 2016. Using an Evolutionary Algorithm to Optimize Bioenergy Crop Selection and Placement Based on Stream Health, MSU Engineering Graduate Research Symposium, East Lansing, MI, USA (*poster presentation*).

12. Rojas-Downing M. M. [(1)], **A. P. Nejadhashemi [(3)]**, M. Abouali [(1)], F. Daneshvar [(1)], S. A. Al Masraf [(1)], M. R. Herman [(1)], T. Harrigan, Z. Zhang, 2016. Pasture Diversification to Combat Climate Change Impacts on Grazing Dairy Production, MSU Engineering Graduate Research Symposium, East Lansing, MI, USA (*poster presentation*).

13. Adhikari U. [(1)], **A. P. Nejadhashemi [(3)]**, M. R. Herman [(1)], 2016. Multiscale Spatial and Temporal Climate Change Impact Assessment on Water Resources in Malawi, MSU Engineering Graduate Research Symposium, East Lansing, MI, USA (*poster presentation*).

14. Woznicki, S.A. [(1)], **A. P. Nejadhashemi [(3)]**, 2014. Impacts of Climate Change on Stream Ecosystem Integrity, The Annual College of Engineering Graduate Research Symposium, East Lansing, MI, USA (*poster presentation*).

15. Daneshvar F. [(1)], **A. P. Nejadhashemi [(3)]**, 2014. Evaluating Environmental Justice Model Performances at Different Census Levels, The Annual College of Engineering Graduate Research Symposium, East Lansing, MI, USA (*poster presentation*).

16. Rojas-Downing M.M. [(1)], **A. P. Nejadhashemi [(3)]**, 2014. Climate-smart Agriculture for Enhanced Food Security, The Annual College of Engineering Graduate Research Symposium, East Lansing, MI, USA (*poster presentation*).

17. Herman M.R. [(1)], **A. P. Nejadhashemi [(3)]**, 2014. A Review of Macroinvertebrate and Fish Stream Health Indices, The Annual College of Engineering Graduate Research Symposium, East Lansing, MI, USA (*poster presentation*).

18. Hamaamin, Y.A. [(1)], **A.P. Nejadhashemi [(3)]**, M.D. Einheuser [(1)], and D.A. Hamilton, 2012. Application of Fuzzy Logic Techniques in Estimating the Regional Index Flow for Michigan, The annual College of Engineering Graduate Research Symposium, East Lansing, MI, USA (*poster presentation*).

19. Sanchez G. [(1)], **A. P. Nejadhashemi [(3)]**, Z. Zhang; S.A. Woznicki [(1)], G. Habron, S. Marquart-Pyatt, A. Shortridge. 2012. Development of a Socio-ecological Model for Watershed-based

Management, The annual College of Engineering Graduate Research Symposium, East Lansing, MI, USA (*poster presentation*).

20. Martinez-Martinez E. [(1)], **A. P. Nejadhashemi [(3)]**, S.A. Woznicki [(1)], B. J. Love [(1)]. 2012. Modeling the Hydrological Significance of Wetland Restoration Scenarios, The annual College of Engineering Graduate Research Symposium, East Lansing, MI, USA (*poster presentation*).

21. Giri, S. [(1)], **A.P. Nejadhashemi [(3)]**, S.A. Woznicki [(1)], Z. Zhang, 2012. Analysis of Best Management Practice Effectiveness and Spatiotemporal Variability Based on Different Targeting Strategies. The annual College of Engineering Graduate Research Symposium, East Lansing, MI, USA (*poster presentation*).

Invited presentations:

a. National/International

1. **Nejadhashemi, A. P. [(3)]**, 2024, Large-Scale PFAS Fate and Transport Modeling. PFAS Symposium, PFAS Challenges and Solutions in the Great Lakes Basin: A Model for Freshwater Ecosystems. Lansing, Michigan.

2. **Nejadhashemi, A. P. [(3)]**, 2024, Watershed Scale PFAS Fate and Transport Model for Source Identification and Management Implications The Noblis Engineering Community of Practice presentation series. Reston, Virginia (delivered online).

3. **Nejadhashemi, A. P. [(3)]**, 2024, Understanding Resilience in the Context of International Development (ASABE Annual International Meeting) to present for the Distinguished Lecture Series (Water and Natural Resources in International Development) Anaheim, California.

4. **Nejadhashemi, A. P. [(3)]**, 2022, Integrating Key Ecological Health and Social Dimensions in Sustainable Water Resources Management (University of Tehran) to present for Water & Soil Environmental Research Institute. Karaj, Iran.

5. Rojas Downing, M.M. [(1)], **A. P. Nejadhashemi [(3)]**, 2021, Does climate change impact livestock or livestock impact climate change? National Meeting of Research and Innovation in Livestock, Agriculture, Forestry and Fisheries Aquaculture, Ciudad de Mexico, Mexico

6. **Nejadhashemi, A. P. [(3)]**, I. Kropp [(1)], K. Deb, 2020, Global Food Security Under the Lens of Water and Nutrient Use Efficiency (Ningxia University) to present at the Conference for the High-quality Development of Modern Ecological Irrigation Areas in the Yellow River Basin. Yinchuan, China.

7. Rojas Downing, M.M. [(1)], **A. P. Nejadhashemi [(3)]**, 2019, Climate Change and Livestock: Impacts, Adaptation and Mitigation (Chief Veterinarian: National Pork Producers Council) to present at the US Animal Health Association (USAHA) Annual Meeting: One Health. Providence, Rhode Island.

8. **Nejadhashemi, A. P.** [(3)], 2019, Converting Data into Knowledge: MSU'S Decision Support and Informatics Unit (Director of BioSense Institute and professor at the University of Novi Sad) to present at the BioSense Institute. Novi Sad, Serbia.

9. Rojas Downing, M.M. [(1)], A. P. **Nejadhashemi [(3)]**, 2019, Integration of Food Footprint and Remote Sensing to Address Sustainability in Grazing Dairy Production (Director of BioSense Institute and professor at the University of Novi Sad) to present at the BioSense Institute. Novi Sad, Serbia.

10. **Nejadhashemi, A. P.** [3], 2018, How Big Data Expertise is Critical and How it's Being Applied Here and, in the Future (Associate Professor of Civil Engineering and Environmental and Ecological Engineering) to present at Plumbing Innovation and Opportunities Meeting at the Purdue University. West Lafayette, Indiana.

11. **Nejadhashemi, A. P.** [3], S. A. Woznicki [1], Y. Tang, L. Wang, 2018, Large-scale Modeling to Evaluate Stream Health Vulnerability to Climate Change. Invited by John Karen (Program Director for the Climate Change Conference) to present at the World Congress on Climate Change 2018: Impacts & Responses. Rome, Italy.

12. **Nejadhashemi, A. P.** [3], 2018, Computational Ecohydrology: Sustainable Decision-Making Considering Human and Environmental Uses of Water. Invited by William L. Hargrove (Director of the Center for Environmental Resource Management) to present at the special Water Resources Seminar Series. El Paso, USA (The travel cost was fully supported by the University of Texas at El Paso).

13. **Nejadhashemi, A. P.** [3], A. R. Sommerlot [1], S. A. Woznicki [1], M.D. Prohaska [1], 2017, Evaluating the True Cost of Management Strategies for Sediment Control Practices. Invited by Benjamin M. Gramig (University of Illinois at Urbana-Champaign) to present at the Scientific Challenges to Operationalizing Payments for Agro-Ecosystem Services Conference. Funded by the US Department of Agriculture, Agriculture and Food Research Initiative- The National Institute of Food and Agriculture. Indianapolis, USA.

14. **Nejadhashemi, A. P.** [3], 2017, Feeding Ten Billion: A Systems Approach. Invited by Prem Sewak Sudhish (Dayalbagh Educational Institute) to present at the National Systems Conference. Agra, India.

15. **Nejadhashemi, A. P.** [3], I. Kropp [1], K. Deb, 2017, Evolutionary Optimization of Water and Nutrient Use Efficiency for Sustainable Agricultural Intensifications under Climate Uncertainties. Invited by Nergiz Ozbag (USDA-Foreign Agricultural Service) to present at the Agriculture, Food and Drink Forum's Congress. Ankara, Turkey (The travel cost was fully supported by the USDA-Foreign Agricultural Service).

16. **Nejadhashemi, A. P.** [3], 2017, Evaluation of the Effectiveness of Conservation Practices under Implementation Site Uncertainty. Invited by Tim J Calappi (U.S. Army Corps of Engineers) to present at the Great Lakes Sedimentation Workshop. Chicago, USA.

17. **Nejadhashemi, A. P.** [3], 2017, Current and Future Trends in Computational Ecohydrology. Invited by Al-Farabi Kazakh National University and Kazakh National Agrarian University to present to faculty at the Institute of Water Research. Almaty, Kazakhstan.

18. **Nejadhashemi, A. P.** [3], M. M. Rojas-Downing [1], B. Elahi, K. A. Cassida, F. Daneshvar [1], J. S. Hernandez-Suarez [1], M. Abouali [1], M. R. Herman [1], S. A. Al Masraf [1], T. Harrigan, 2017, Food Footprint as a Measure of Sustainability for Grazing Dairy Farms. Invited by Wenjiang LIU (Director of the Division of Scientific Research and Cooperation, Xinjiang Institute of Ecology and Geography) to present at Joint Workshop on the Food, Energy, and Water Nexus. Xinjiang, China.

19. **Nejadhashemi, A. P.** [3], U. Adhikari [1], M.R. Herman [1], J.P. Messina, 2016, Multiscale Assessment of the Impacts of Climate Change on Water Resources in Tanzania. Organized by the

USAID and invited by Dr. Sieglinde Snapp to present at Indicators for the Sustainable Intensification of Agriculture Meeting. East Lansing, USA.

20. **Nejadhashemi, A. P.** [3], M.R. Herman [1], F. Daneshvar [1], M. Abouali [1], D.M. Ross, S.A. Woznicki [1], 2016, Optimization of Bioenergy Crop Selection and Placement based on a Stream Health Indicator. Invited by Dr. Yetta Jager (Environmental Sciences Division-Oak Ridge National Laboratory) to present at the International Association for Landscape Ecology. Ashville, USA.

21. **Nejadhashemi, A. P.** [3], 2015, Decision Support and Informatics. Invited by Alexander Moseson (AAAS Science & Technology Policy Fellow) to present at the U.S. Global Development Lab Headquarters. Washington DC, USA (The travel cost was fully supported by the U.S. Agency for International Development).

22. **Nejadhashemi, A. P.** [3], B. Love [1], M. Einheuser [1], 2014, Water Quality Impact Assessment of Large-scale Bioenergy Crop Expansion. Invited by the Helmholtz Centre for Environmental Research to present at the Biomass for Energy – Lessons from the Bioenergy Boom. Leipzig, Germany (The travel cost was fully supported by the Helmholtz Centre for Environmental Research).

23. **Nejadhashemi, A. P.** [3], 2014, Big Data Revolution in Agriculture. Invited by the United States Agency for International Development to present at the TechCon: Connecting to Accelerate Global Development. San Francisco, USA.

24. **Nejadhashemi, A. P.** [3], 2013, Assessing the Impacts of Climate Change on Water Resources and Conservation Practices Implementation Strategies. Invited by the Diagnostic Center for Population & Animal Health to present at the Communities and Livestock Conference. Lansing, USA.

25. **Nejadhashemi, A. P.** [3], 2012, Assessing the Impacts of Climate Change on Best Management Practice (BMP) Implementation Strategies. Invited by the MSU Extension Webinar Series on Climate Water and Agriculture. East Lansing, USA.

26. **Nejadhashemi, A. P.** [3], 2011, A Market Based Approach for Improving Water Quality. Invited by Michigan Department of Agriculture and Rural Development - Michigan Association of Conservation. Mount Pleasant, USA.

27. **Nejadhashemi, A. P.** [3], 2011, Best Management Practice Auction for River Raisin. Invited by Lenawee Conversation District to give a lecture to the Stakeholder Leadership Group. Blissfield, USA.

28. **Nejadhashemi, A. P.** [3], 2010, Best Management Practice Auction Method. Invited by Mr. Jack Knorek to give a lecture for the State Pollution Prevention Leadership Meeting, Michigan Department of Agriculture and Rural Development. Lansing, USA.

29. Mankin, K. R. and **A.P. Nejadhashemi** [3], 2008. Using Watershed Models to Assess Watershed Needs and Project Impacts, Invited by Ms. Amanda Schielke to give a lecture for the Heartland Regional Water Initiative, Impact Assessment and Achievements in Water Quality Protection. Nebraska City, USA.

30. **Nejadhashemi, A. P.** [3] and K. R. Mankin, 2008. Using Adaptive Approach in Watershed Modeling to Target Best Management Practices: Pomona Lake Watershed in Kansas Case Study,

Invited by Ms. Amanda Schielke to give a lecture for the Heartland Regional Water Initiative, Impact Assessment and Achievements in Water Quality Protection. Nebraska City, USA.

31. **Nejadhashemi, A. P.** [(3)], 2008. An Integrated Economic-Watershed Modeling Framework for the Watershed Assessment, Invited by Mr. Don Snethen to give a lecture for the Bureau of Water, Watershed Management Section, Kansas Department of Health and Environment. Topeka, USA.

32. **Nejadhashemi, A. P.** [(3)], 2008. Adaptive Watershed Modeling: An Approach to Integrate Local Stakeholder Knowledge with Best Science, Invited by Dr. William Hargrove to give a lecture for the 25th Annual Water and the Future of Kansas Conference. Topeka, USA.

33. **Nejadhashemi, A. P.** [(3)], 2007. Watershed Research, Planning and Management Invited by Ms. Judy Willingham to give a lecture for The Kansas Environmental Leadership Program, Wichita, USA.

34. **Nejadhashemi, A. P.** [(3)], 2007. Adaptive Approach in Water Quality Modeling (CPR for Wetlands and Streams III, 2007) Invited by Mr. Tim Huntzinger to give two lectures for the Kansas Alliances for Wetlands and Streams (KAWS) Conference, Kansas City, USA.

35. **Nejadhashemi, A. P.** **[(3)]**, 2001. The Effects of Chemical and Biological Fertilizer (Organic Matter) on Physical and Mechanical Properties of Soils. Fifth International Training Course on Biological Fertilizer, Baoding, China.

b. Local

36. **Nejadhashemi, A. P.** [(3)], 2023, Managing Water for Climate Smart Agriculture in South Asia to present for International Studies & Programs: Visiting International Professional Program. East Lansing, USA.

37. **Nejadhashemi, A. P.** [(3)], K. Richter, 2016, Decision Support and Informatics Applications in International Studies. Invited by Dr. DeAndra Beck (Associate Dean for Research- International Studies and Programs) to present at the international studies and programs seminar series. East Lansing, USA.

38. **Nejadhashemi, A. P.** [(3)], K. Richter, 2016, Converting Data into Knowledge. Invited by Dr. Mary Anne Walker (Director of Business Development- MSUglobal) to present at MSU Engineering Research Seminar. East Lansing, USA.

39. **Nejadhashemi, A.P.** [(3)], 2009, An Integrated Economic-Watershed Modeling Framework for the TMDL Development, Invited by Dr. Shu-Guang Li to give a lecture to a group of Chinese delegates from the China Institute of Water Resources and Hydropower Research. East Lansing, USA.

40. **Nejadhashemi, A.P.** [(3)], 2009, Critical Needs Concerning Water Quality and Quantity, Invited by Dr. Steve Safferman to give a lecture to an Extension Community Group organized by the Water Quality - Water Area of Expertise. East Lansing, USA.

41. **Nejadhashemi, A. P.** [(3)], 2007. Considerations for Watershed Model Selection (Application to a Real-World Study), Invited by Dr. A. Bhandari to lecture for the Environmental Engineering Seminar series at Kansas State University, Manhattan, USA.

42. **Nejadhashemi, A. P.** [3], 2006. Improving Estimates of Pollutant Transport Using Streamflow Components Assessment in the GIS Environment, Invited by Dr. A. Bhandari to give a lecture for the Environmental Engineering Seminar Series at Kansas State University, Manhattan, USA.

MENTORING EXPERIENCES

Faculty Mentoring:

1. Chair of the mentoring committee for Dr. Daniel Uyeh. He is an assistant professor in the Department of Biosystems and Agricultural Engineering (2023-present)

2. Member of the mentoring committee for Dr. Narendra Das. He is an associate professor in the Department of Biosystems and Agricultural Engineering (2021-present)

3. Chair of the mentoring committee for Dr. Dana Kirk. He is an associate professor in the Department of Biosystems and Agricultural Engineering (2020-2023)

4. Member of the mentoring committee for Dr. Sanghyup Jeong. He is an assistant professor in the Department of Biosystems and Agricultural Engineering (2020-present)

5. Chair of the mentoring committee for Dr. Timothy Harrigan. He is an associate professor in the Department of Biosystems and Agricultural Engineering (2020-2024)

6. Mentor for Dr. Leila Hashemi-Beni. She is an assistant professor in the Department of Built Environment at the North Carolina A&T State University (2019-present)

7. Mentor for Dr. Ilce Medina Meza. She is an assistant professor in the Department of Biosystems and Agricultural Engineering (2017-2019)

8. Member of the mentoring committee for Dr. Amor Ines. He is an assistant professor in the Department of Plant, Soil and Microbial Sciences and Department of Biosystems and Agricultural Engineering (2015- 2020)

9. Chair/Member of the mentoring committee for Dr. Jade Mitchell. She is an associate professor in the Department of Biosystems and Agricultural Engineering (2013-2024)

Visiting Scholar/Postdoctoral Research Associate – Advisor:

1. **Mohammad Tirgariseraji**, (2023- present). Visiting Scholar: develop an integrated system framework to assess nutrition and food security in resource-constrained regions, Iran.

2. **Kouao Armand Anoh**, (2023). Visiting Scholar: Developing a decision support tool for the prevention of combined effects of climate variability and agricultural practices on the quality and quantity of groundwater in Bonoua, Côte d'Ivoire.

3. **Vahid Rafiei**, (2022-present). Specialist-Research: Hotspot identification and legacy assessment of per- and polyfluoroalkyl substances (PFAS) in agricultural watersheds: developing/validating a process-based model.

4. **Nicolas Fernandez Acosta** (2021-2022). Visiting scholar: Development of statewide PFAS stochastic modeling

5. **Gregorio Toscano** (2020-present). Postdoctoral research associate: Development of a multi-objective optimization tool for Chesapeake Bay Watershed

6. **Juan Sebastian Hernandez Suarez** (2020 - 2021). Postdoctoral research associate: Harnessing machine learning to estimate aquaculture production and value chain performance in Bangladesh

7. **Eeswaran Rasu** (2020-2021). Professional aid: Utilized crop and animal models for measuring the level of resiliency in agricultural productions

8. **Babak Saravi** (2019- 2020) Postdoctoral research associate: Worked on the application of deep learning techniques in agricultural systems modeling

9. **Yirigui Yirigui** (2018- 2019) Visiting scholar: Worked on the relationships between forest fragmentation and biological indicators of streams

10. **Umesh Adhikari** (2013- 2019) Postdoctoral research associate: Worked on the impacts of climate change on water resource and crop production in Africa and southeast Asia and evaluation of ecosystems services

11. **Maria Melissa Rojas-Downing** (2017- 2019) Postdoctoral research associate: Worked on the impacts of climate change on food, energy, and water nexus

12. **Mohammad Abouali** (2015-2017) Postdoctoral research associate: Worked on the area of big data applications in water resources engineering and decision support system

13. **Sabah Dawood Al Masraf** (2015-2016) Visiting scholar/Assistant Professor University of Baghdad: Studied the impacts of climate change on agricultural sectors

14. **Reza Javidi Sabbaghian** (2014) Visiting scholar from Ferdowsi University of Mashhad: Studied the applications of risk-based multiple criteria decision analysis for effective watershed management

15. **Subhasis Giri** (2013-2014). Postdoctoral research associate: Studied site selection strategies for best management practice implementation

16. **Masoud Parsinejad** (2012-2014) Visiting scholar/Associate Professor University of Tehran: Studied optimal water allocation in irrigation networks and climate change impacts on irrigation demands

17. **Isaac Mutenyo** (2012-2013) Fulbright scholar/Lectaure Kyambogo University: Evaluated hydrologic model performance in a mountainous watershed in tropical Africa

18. **Sabah Dawood Al Masraf** (2010-2011) Visiting scholar/Assistant Professor University of Baghdad: Studied the impacts of landuse changes on ecosystems services in Michigan

Graduate Student Committees – Primary Advisor:

a. Current Students

1. **Muhammad Talha**, Ph.D. Student, Biosystems and Agricultural Engineering & Computer Science Engineering. Project: Smart Extension Assistant (SEA): A One-Stop-Shop for All of your Extension Questions: Spring 2027.

2. **Shashank Mohan**, Ph.D. Student, Biosystems and Agricultural Engineering. Project Big Data Applications in Quantitative Microbial Risk Assessment: Fall 2026.

3. **Hoda Razavi**, Ph.D. Student, Biosystems and Agricultural Engineering. Project: Development of Efficient Multi-Objective Optimization Procedures for Large-Scale Water Quality Problems: Spring 2026.

4. **Kieron Moller**, Ph.D. Student, Biosystems and Agricultural Engineering. Project: Evaluation of the Level of Resiliency in Agricultural Productions under the Current and Future Climate Scenarios: Fall 2026.

5. **Josué Kpodo**, Ph.D. Student, Biosystems and Agricultural Engineering & Computer Science Engineering. Project: An Optimization-Based Integrated Modeling Procedure for Sustainable Food Production System Under Uncertainty and Intervention: Fall 2025.

b. Former Students

1. **Kieron Moller**, M.Sc. Student, Biosystems and Agricultural Engineering. Project: Unveiling the Resilience of Smallholder Farmers in Senegal Amidst Extreme Climate Conditions: November 2023. (Current position: PhD student at Biosystems and Agricultural Engineering, Michigan State University)

2. **Enid Banda**, M.Sc. Student, Biosystems and Agricultural Engineering. Project: Millet Yield Estimations in Senegal: Unveiling the Power of Regional Water Stress Analysis and Advanced Predictive Modeling. May 2023. (Current position: Water Engineer, Innovation: Africa)

3. **Mervis Chikafa II**, M.Sc. Student, Biosystems and Agricultural Engineering. Project: Multidimensional Evaluation of the Impacts of Agricultural Interventions to Achieve Food Security in Malawi. April 2023. (Current position: E_extension officer at Farm Radio Trust)

4. **Ian Kropp**, Ph.D. Student, Biosystems and Agricultural Engineering & Computer Science and Engineering. Project: Sparse large-scale multi-objective optimization for climate-smart agricultural innovation. Graduated August 2022. (Current position: Assistant Professor at the Computer Science Department, Ohio Northern University)

5. **Vahid Rafiei**, Ph.D. Student, Faculty of Health, Engineering and the Sciences/University of Southern Queensland. Project: Modeling Agricultural Non-Point Source Pollution at Catchment Scale: Application, Novel Calibration, and Model Advancement with the Focus on the Great Barrier Reef. Co-advisor Dr. Shahbaz Mushtaq. Graduated July 2022. (Current position: Specialist-Research at the Biosystems and Agricultural Engineering Department, Michigan State University)

6. **Anna Raschke**, M.Sc. Student, Biosystems and Agricultural Engineering. Project: Opportunities and Challenges of Integrated Large-Scale PFAS Modeling. Graduated December 2021. (Current position: Environmental Engineer at Vanguard Renewables)

7. **Hannah Ferriby**, M.Sc. Student, Biosystems and Agricultural Engineering. Project: Harnessing Machine Learning Techniques for Large-Scale Mapping of Inland Aquaculture Waterbodies In Bangladesh. Graduated October 2021. (Current position: Environmental Data Scientist-Tetra Tech)

8. **Juan Sebastian Hernandez Suarez**, Ph.D. Student, Biosystems and Agricultural Engineering. Project: Improving the Predictability of Hydrologic Indices in Ecohydrological Applications. Graduated August 2021. (Current position: Assistant Professor at the Universidad de los Andes)

9. **Eeswaran Rasu**, Ph.D. Student, Plant, Soil and Microbial Sciences. Project: Innovative Approaches to Gauge Resilience of Managed Rainfed Agricultural Systems: Graduated December 2020. (Current position: Postdoctoral Researcher, University of Tennessee)

10. **Babak Saravi**, Ph.D. Student, Electrical and Computer Engineering/Mississippi State University. Project: Evaluating the Applicability of Deep Learning Techniques in Agricultural Systems Modeling. Co-advised with Dr. Karimi-Ghartemani. Graduated October 2019. (Current position: Consulting Engineer Company)

11. **Ian Kropp**, M.Sc. Student, Biosystems and Agricultural Engineering. Project: An Evolutionary Multi-Objective Approach for Sustainable Agricultural Water and Nutrient Optimization. Graduated December 2018. (Current position: Assistant Professor at the Computer Science Department, Ohio Northern University)

12. **Matthew Herman**, Ph.D. Student, Biosystems and Agricultural Engineering. Project: Application of Earth Observation and Related Technology in Agro-hydrological Modeling. Graduated December 2018. (Current position: Nonpoint Source Environmental Engineer at Water Resources Division of the Michigan Department of Environment, Great Lakes, and Energy)

13. **Fariborz Daneshvar**, Ph.D. Student, Biosystems and Agricultural Engineering & Mechanical Engineering. Project: Integrating Key Ecological Health and Social Dimensions in Sustainable Water Resources Management. Graduated December 2017. (Current position: Physical Scientist at National Oceanic and Atmospheric Administration)

14. **Maria Melissa Rojas-Downing**, Ph.D. student, Biosystems and Agricultural Engineering. Michigan State University, Project: Evaluating the Impacts of Climate Change and Variability on Grazing Dairy Production. Graduated June 2017. (Current position: Assistant Professor at the Department of Biosystems Engineering, University of Costa Rica)

15. **Pouyan Hatami Bahman Beiglou**, M.Sc. Student, Biosystems and Agricultural Engineering. Project: Applicability of Data-Driven Methods for Assessing Compliance of Wastewater Treatment Plants Self-Reported Data Sets. Co-advised with Dr. Jade Mitchell, Graduated in December 2016. (Current position: Ph.D. student in the Department of Geography, Environment, and Spatial Sciences at Michigan State University)

16. **Elaheh Esfahanian**, Ph.D. Student, Biosystems and Agricultural Engineering. Project: Development of a Meteorological, Agricultural, Stream health, and Hydrological (MASH) comprehensive drought index. Co-advised with Dr. Jade Mitchell, Graduated in May 2016. (Current position: Water Resources Engineer at California Water Service Company)

17. **Sean Woznicki**, Ph.D. Student, Biosystems and Agricultural Engineering. Project: Development of a Comprehensive Framework to Assess the Impacts of Climate Change on Stream Health. Graduated

June 2015. (Current position: Assistant Professor at Grand Valley State University Annis Water Resources Institute)

18. **Valerie Novaes**, M.Sc. Student, Biosystems and Agricultural Engineering. Project: Assessing the Impacts of Post-Construction Best Management Practices on Stormwater Runoff in an Ultra Urban Environment. Graduated May 2015. (Current position: Water resources engineer at Tetra Tech)

19. **Matthew Herman**, M.Sc. Student, Biosystems and Agricultural Engineering. Project: Optimization of Environmental Flow to Preserve/Improve Ecological Function. Graduated December 2014. (Current position: Nonpoint Source Environmental Engineer at Water Resources Division of the Michigan Department of Environment, Great Lakes, and Energy)

20. **Edwin Martinez-Martinez**, Ph.D. Student, Plant, Soil and Microbial Sciences. Project: The Functional Assessment of Wetlands. Graduated August 2014. (Current position: Virginia State Conservationist at Usda-Natural Resources)

21. **Georgina Sanchez**, M.Sc. Student, Biosystems and Agricultural Engineering. Project: A Framework for Integrated Water Resources Management, Environmental Justice, and Stream Health. Graduated April 2014. (Current position: Research Scholar at NC State Center for Geospatial Analytics)

22. **Yaseen Hamaamin**, Ph.D. Student, Biosystems and Agricultural Engineering. Project: Applications of Soft Computing and Statistical Methods in Water Resources Management. Graduated January 2014. (Current position: Assistant Professor at the College of Engineering at the University of Sulaimani).

23. **Maria Melissa Rojas-Downing**, M.Sc. student in Biosystems and Agricultural Engineering. Michigan State University, Project: Resource Use, Conservation, and Environmental Impacts in the Transition from Confinement to Pasture-Based Dairies. Co-advised with Dr. Harrigan, Graduated in November 2013. (Current position: Assistant Professor at the Department of Biosystems Engineering, University of Costa Rica)

24. **Subhasis Giri**, Ph.D. Student, Biosystems and Agricultural Engineering. Project: Assessing Best Management Practices and Implementation Strategies to Improve Water Quality. Graduated August 2013. (Current position: Assistant Research Professor at the School of Environmental and Biological Sciences, Rutgers University)

25. **Shuai Zhang**, M.Sc. Student, Biosystems and Agricultural Engineering. Project: Modeling Oxygen Concentration in Wastewater-Irrigated Soil. Co-advised with Dr. Safferman, Graduated August 2013. (Current position: Graduate student at the Master of Business Administration program at the University of the West)

26. **Atiq Syed**, Ph.D. Biosystems and Agricultural Engineering. Project: Effects of Hydraulic and Hydrologic Flow Routing Methods on Runoff Estimation. Co-advised with Dr. Safferman, Graduated in November 2012. (Current position: Regional Dams Engineer at US Forest Service)

27. **Andrew Sommerlot**, M.Sc. Student, Biosystems and Agricultural Engineering. Project: Developing New Modeling Techniques to Evaluate the Environmental and Economic Impacts of Individual Management Practices at the Field and Watershed Scales. Graduated July 2012. (Current position: Lead AI Engineer at PLNAR)

28. **Matthew Einheuser**, M.Sc. Student, Crop and Soil Sciences. Project: Exploring Relationships between In-Stream Conditions and Ecological Health under Landuse and Climate Scenarios Using a

Watershed Model. Graduated December 2011. (Current position: Natural Resources Manager at Rochester Hill, Michigan)

29. **Sean Woznicki**, M.Sc. Student, Biosystems and Agricultural Engineering. Project: Assessing the Impacts of Climate Change on Best Management Practice Implementation Strategies. Graduated December 2010. (Current position: Assistant Professor at Grand Valley State University Annis Water Resources Institute)

30. **Brad Love**, M.Sc. Student, Biosystems and Agricultural Engineering. Project: Environmental Impact Assessment of Biofuel Crops Expansion in Michigan. Graduated December 2010. (Current position: Owner of the Love Ag Solutions LLC)

c. Graduate Student Committees – Member

1. **Vikas Rai,** Ph.D. student in Biosystems and Agricultural Engineering | Michigan State University, Dr. Narendra N. Das, primary advisor. Project: Advancing Agricultural Drought Monitoring and Forecasting through Integrated Modelling and High-Resolution Satellite Data over India. Anticipated graduating date: Fall 2027.

2. **Saesol Kang,** Ph.D. student in Agricultural, Food, and Resource Economics | Michigan State University, Dr. Molly Sears, primary advisor. Project: Economic and Environmental Impacts of Water Pollution Policies. Anticipated graduating date: Fall 2027.

3. **Emeka Aniekwensi,** M.Sc. student in Biosystems and Agricultural Engineering | Michigan State University, Dr. Ehsan Ghane, primary advisor. Project: Dynamics of Phosphorus Losses in Sub-surface Drainage Fields. Anticipated graduating date: Fall 2026.

4. **Arunav Nanda,** Ph.D. student in Biosystems and Agricultural Engineering | Michigan State University, Dr. Narendra N. Das, primary advisor. Project: Impact Assessment of Sensitivity Analysis-Based Hydrological Model on Agro-Hydrological Parameters in a River Basin. Anticipated graduating date: Fall 2025.

5. **Yousef Khajavigodellou,** Ph.D. student in Geography, Environment, and Spatial Sciences| Michigan State University, Dr. Jiaguo Qi, primary advisor. Project: Modeling Climate-Human Effects on Water Food Security and Water Management (Quality and Quantity) in Iran. Anticipated graduating date: Fall 2025.

6. **Kate Wernicke,** M.Sc. student in Biosystems and Agricultural Engineering | Michigan State University, Dr. Jade Mitchell, primary advisor. Project: Development of a Risk-Based Framework for Prioritization of Contaminants in Drinking Water. Anticipated graduating date: Fall 2025.

7. **Oluyemi Adetule,** Ph.D. student in Biosystems and Agricultural Engineering | Michigan State University, Dr. Jade Mitchell, primary advisor. Project: Contaminants and Risk Assessment in Drinking Water due to Infrastructural Failures. Terminated Spring 2024.

8. **Yousef Mahfouz Abdalmonem Abdalaal,** Ph.D. student in Biosystems and Agricultural Engineering | Michigan State University, Dr. Ehsan Ghane, primary advisor. Project: Development of a New Design Approach, Decision Support Tool, and Management Guidelines for Improving Saturated Buffer Performance. Graduated Spring 2024.

9. **Nicolás Fernández Acosta,** Ph.D. student in Civil and Environmental Engineering| Universidad de los Andes, Dr. Luis A. Camacho, primary advisor. Water Quantity and Quality in Headwater Catchments: Comprehensive Data Assessment, Modeling, and Simulation of Scenarios. Anticipated graduating date: Graduated Spring 2023.

10. **Sami Shokrana,** Ph.D. student in Biosystems and Agricultural Engineering | Michigan State University, Dr. Ehsan Ghane, primary advisor. Project: Predicting the Effects of Weir Management on Drainage Discharge of a Controlled Drainage System in a Changing Climate. Graduated Fall 2022.

11. **Kara Jane Dean,** Ph.D. student in Biosystems and Agricultural Engineering | Michigan State University, Dr. Jade Mitchell, primary advisor. Project: Narrowing the Uncertainty Associated with Pathogen Persistence in Surface Waters for Applications in Quantitative Microbial Risk Assessment. Graduated Fall 2022.

12. **Matthew Flood,** Ph.D. student in Fisheries and Wildlife | Michigan State University, Dr. Joan Rose, primary advisor. Project: Environmental Microbial Surveillance: From Source tracking in Watersheds to Pathogen Monitoring in Sewersheds: Graduated Spring 2022.

13. **Ryan Julien,** Ph.D. student in Biosystems and Agricultural Engineering | Michigan State University, Dr. Jade Mitchell, primary advisor. Project: Analyzing Factors Which Affect Legionella Risks In A Full-Scale Green Building Premise Plumbing System. Graduated Spring 2021.

14. **Nafiseh Haghtalab,** Ph.D. student in Geography, Environment, and Spatial Sciences | Michigan State University, Dr. Nathan Moore, primary advisor. Project: Evaluating Climate Variability and Coupling Strength of Land-Atmosphere Interactions across the Amazon Basin. Graduated Spring 2021.

15. **Damon Abdi,** Ph.D. student in Horticulture | Michigan State University, Dr. Tom Fernandez, primary advisor. Project: Reducing water and agrochemical movement from container nursery production using bioreactors and irrigation management. Graduated Spring 2020.

16. **Jason S. Smith,** Ph.D. student in Plant, Biosystems and Agricultural Engineering | Michigan State University, Dr. Steve Safferman, primary advisor. Project: Soil phosphorus dynamic holding capacity. Anticipated graduating date: Spring 2020.

17. **Ding Wang,** Ph.D. student in Computer Science and Engineering | Michigan State University, Dr. Pang-Ning Tan, primary advisor. Project: Online learning algorithms for mining trajectory data with application to hurricane prediction. Graduated Summer 2020.

18. **Prakash Jha,** Ph.D. student in Plant, Soil and Microbial Sciences | Michigan State University, Dr. Amor Ines, primary advisor. Project: Water remediation systems to address nutrient and pesticide loads in container nursery production runoff: Graduated Fall 2019.

19. **April Frake,** Ph.D. student in Geography | Michigan State University, Dr. D Joseph P. Messina, primary advisor. Project: Scaling Irrigation and Malaria Risk in Malawi. Graduated Summer 2019.

20. **Proteek Roy,** Ph.D. student in Computer Science and Engineering | Michigan State University, Dr. Kalyanmoy Deb, primary advisor. Project: Metamodeling Framework for Simultaneous Multi-Objective Optimization Using Efficient Evolutionary Algorithms. Graduated Summer 2019.

21. **Kara Jane Dean,** M.Sc. student in Biosystems and Agricultural Engineering | Michigan State University, Dr. Jade Mitchell, primary advisor. Project: Risk Assessment Models to Support Management of Opportunistic Pathogens in Piped Water Systems. Graduated Spring 2019.

22. **Rebecca Bender,** M.Sc. student in Biosystems and Agricultural Engineering | Michigan State University, Dr. Dawn Reinhold, primary advisor. Project: Effect of saturation on nutrient removal in stormwater treatment systems. Graduated Spring 2019.

23. **Younsuk Dong,** Ph.D. student in Biosystems and Agricultural Engineering | Michigan State University, Dr. Steve Safferman, primary advisor. Project: Modeling high-strength wastewater soil treatment system to maximize pollutant treatment. Graduated June 2018.

24. **Dennis Michael Ross,** Ph.D. student in Computer Science and Engineering | Michigan State University, Dr. Abdol-Hossein Esfahanian, primary advisor. Project: Edge impact in graphs and social network matrix completion. Graduated May 2016.

25. **Alaba Bolueade,** Ph.D. student in Biosystems and Agricultural Engineering | McGill University, Dr. Chandra Madramootoo, primary advisor. Project: Spatial modeling of soil heterogeneities and their impacts on runoff, sediment, and total phosphorus loss. Graduated May 2013.

26. **Jennifer Beddoes,** M.Sc. student in Biosystems and Agricultural Engineering | Michigan State University, Dr. Dawn Reinhold, primary advisor. Project: Bioretention/Phytoremediation enhancement through plant tissue culture. Graduated July 2012.

27. **Umesh Adhikari,** Ph.D. student in Biosystems and Agricultural Engineering | Michigan State University, Dr. Tim Harrigan, primary advisor. Project: E. Coli Control in a Constructed Wetland. Graduated December 2012.

28. **Katie Droscha,** M.Sc. Student in Fisheries and Wildlife | Michigan State University, Dr. Patricia A. Soranno, primary advisor. Project: An Examination of the Relationships between Lake Nutrients and Spatial Metrics for Quantifying Agricultural Land use/cover in Lake Catchments. Graduated November 2011.

29. **Craig Smith**, Ph.D. in Agricultural Economics | Kansas State University, Dr. Jeff Williams, primary advisor. Project: An Analysis of Alternative Soil, Nutrient, and Water Management Strategies. Graduated June 2011.

30. **Mehmet Oztan**, Ph.D. in Civil and Environmental Engineering | Michigan State University, Dr. Shu-Guang Li, primary advisor. Project: GIS-Enabled Modeling of Michigan's Groundwater Systems. Graduated March 2011.

Undergraduate Student – Primary Advisor:

1. Shahaab Ali
2. Megan Kline
3. Andrew Hovey
4. Berelian Karimian
5. Daniel Siatkosky
6. Christian Loveall
7. Alexander Raschke
8. Nathan Anthony

9. Emily Banach
10. Ryan McIntyre
11. Carly Nylander
12. Gregory Spletzer
13. Emily Campbell
14. Matthew Herman
15. Jennifer Jury
16. Michael Prohaska
17. Bradley Wardynski
18. Sean Woznicki
19. Rohith Gali

Awards and Recognitions Received by My Graduate Students:

1. Razavi, H. 2024. Katherine and Merle L. Esmay Fellowship. ($2.0K)

2. Kpodo, J. 2024. The Most Outstanding Graduate Student - medal and scholarship from MSU College of Engineering and Biosystems and Agricultural Engineering Department.

3. Razavi, H. 2023. Mynsberge Experiential Scholarship ($2.5K)

4. Razavi, H. 2022. Taylor Scholarship ($2.5K)

5. Chikafa, M. 2022. Taylor Scholarship ($2.5K)

6. Banda J. 2022. George A. Mynsberge Experiential Learning Scholarship

7. Kropp, I. 2022. The Most Outstanding Graduate Student - medal and scholarship from MSU College of Engineering and Biosystems and Agricultural Engineering Department.

8. Kpodo J. 2021. DeLisa Scholarship ($5K)

9. Hernandez Suarez, J.S. 2020. The BE Outstanding Graduate Student.

10. Hernandez Suarez, J.S. 2019. The Most Outstanding Graduate Student - medal and scholarship from MSU College of Engineering and Biosystems and Agricultural Engineering Department.

11. Hernandez Suarez, J.S. 2018. Environmental Science and Policy Program Network Fellowship.

12. Kropp, I. 2018. C.S. Mott Pre-Doctoral Fellowship ($35K)

13. Hernandez Suarez, J.S., 2018. Merle and Catherine Esmay Scholarship.

14. Herman, M.R., 2018. BAE nominee for the College of Engineering Fitch Beach Award and Outstanding Research Fellowship.

15. Rojas-Downing, M.M., 2017. ASABE Annual International Meeting, Oral Presentation Winner for the Natural Resources & Environmental System.

16. Rojas-Downing, M.M., 2017. Dissertation Completion Fellowship.

17. Herman, M.R., 2017. Recognition of Graduate Student Excellence and Support of Graduate Programming Fellowship.

18. Daneshvar F., 2017. The Most Outstanding Graduate Student - medal and scholarship from MSU College of Engineering and Biosystems and Agricultural Engineering Department.

19. Rojas-Downing, M.M., 2017. Recognition of Graduate Student Excellence and Support of Graduate Programming Fellowship.

20. Rojas-Downing, M.M., 2017. Professional Development Fellowship.

21. Hernandez Suarez, J.S., 2017. Merle and Catherine Esmay Scholarship.

22. Daneshvar F., 2017. Professional Development Fellowship.

23. Esfahanian, E., 2016. Dissertation Completion Fellowship.

24. Rojas-Downing, M.M., 2016. Biosystems and Agricultural Engineering Service Recognition Fellowship.

25. Hatami Bahman Beiglou, P., 2016. Environmental Science and Policy Program (ESPP) Network Fellowship.

26. Hernandez Suarez, J.S., 2016. Fulbright-COLCIENCIAS Scholarship.

27. Rojas-Downing, M.M., 2016. Vulnerability of Grazing Dairy Systems to Climate Change in Michigan, ESPP Climate, Food, Energy and Water Summer Research Fellowship.

28. Daneshvar F., A. P. Nejadhashemi, M. R. Herman, M. Abouali, 2016. Sensitivity analysis of climate change impacts on macroinvertebrate communities in the Saginaw River Watershed, MSU Engineering Graduate Research Symposium, March 2016, East Lansing, MI, USA (Second Place).

29. Rojas-Downing, M.M., 2016. Be Spartan Green Outstanding Achievement Award.

30. Daneshvar F., 2016. Merle and Catherine Esmay Scholarship.

31. Herman M.R., A. P. Nejadhashemi. 2015. A Review of Macroinvertebrate- and Fish-based Stream Health Indices, Ecohydrology & Hydrobiology, 15(2): 53-67. (Top15 most downloaded articles in the first half of 2016).

32. Woznicki, S.A., A. P. Nejadhashemi, 2015. Development of a comprehensive framework to assess the impacts of climate change on stream health, MSU College of Engineering Fitch Beach Award, East Lansing, MI, USA, Second place.

33. Hatami Bahman Beiglou, P., 2015. Honorable mention at the Fate of the Earth symposium.

34. Woznicki, S.A., A. P. Nejadhashemi, 2014. Impacts of climate change on stream ecosystem integrity, the annual College of Engineering Graduate Research Symposium, March 2014, East Lansing, MI, USA, First place.

35. Rojas-Downing, M.M., 2014. Bill and Rita Stout Scholarship.

36. Herman M.R., A. P. Nejadhashemi, 2014. Applications and Limitations of Stream Health Indices, ESPP Research Symposium: Environmental Risk and Decision Making, October 2014, East Lansing, MI, USA, Second place.

37. Woznicki, S.A., 2014. Endowment Fellowship for Graduate Student Excellence, Biosystems and Agricultural Engineering.

38. Sanchez, G., 2013. United States Agency for International Development (USAID) Higher Education Solution Network (HESN) TechCon Challenge. Story Map Competition. Third Place, 60 participants from 17 Universities.

39. Rojas-Downing, M.M., 2013. Merle and Catherine Esmay Scholarship.

40. Daneshvar F., 2013. Outstanding achievement in cross-cultural relations award from MSU Office of International Students and Scholars.

41. Sanchez, G., 2013. Merle and Catherine Esmay Scholarship.

42. Woznicki, S.A., 2013. Outstanding Graduate Student Fellowship, Biosystems and Agricultural Engineering

43. Giri, S., 2013. Merle and Catherine Esmay Scholarship.

44. Rojas-Downing, M.M., 2013. Environmental Science Policy Program Doctoral Recruiting Fellowship ($35K).

45. Woznicki, S.A., 2011. Outstanding graduate student - medal and scholarship from MSU College of Engineering

46. Martinez-Martinez E., 2010-12. Alliance for Graduate Education and the Professoriate Research Materials Fellowship (AGEP) Michigan State University.

47. Martinez-Martinez E., 2010. Michigan Civil Right Award, United States Department of Agriculture.

ADDITIONAL EXPERIENCE:

Experimental and Field Experience:

- Participated in monitoring various soil characteristics in a 21-ha agricultural research site located at the USDA-Agricultural Research Service, Beltsville, Maryland. This site is part of the Optimizing Production inputs for Economic and Environment Enhancement (OPE3) study (2004-2006)

- Helped in plot setup, calibration of rainfall simulator, rain simulation and sample collection for study in pathogen transport through vegetated filter strips. This was a joint project between the U.S. Department of Agriculture (Agricultural Research Service) and the University of Maryland (2003-04)

- Engineer supervisor responsible for well performance pertaining to water resources exploration, and hydraulic structures in multiple projects at SAHRA-KAV Consultant Engineers (Tehran, Iran 1995-98)

- Conducted several geotechnical tests for evaluating mechanical characteristics of gypsiferous soils (University of Tehran, Iran, 1995-97)

Software and Analytical Developments:

- Developed the Runoff Reduction Credits for Low Impact Development Facilities. This program is designed to estimate Urban BMPs' effectiveness on pollution mitigation and groundwater recharge based on site-specific factors (Michigan State University, 2010)

- Developed the Best Management Practice Toolbox. This program is designed to estimate the pollution reduction effectiveness of Urban BMP based on site-specific factors (Michigan State University, 2010)

- Co-developed a spreadsheet program to analyze bids submitted in the BMP Auction. This program is designed to record, rank, and evaluate BMP Auction bids based on the associated economic costs and environmental benefits (Kansas State University, 2007).

- Developed a series of programs for automation of streamflow separation by incorporating hydrologic characteristics of watersheds (USDA-ARS Southeast Watershed Research Laboratory-SWRL) using FORTRAN, Visual BASIC, and ArcObjects (University of Maryland, 2004-2006).

- Developed and analyzed computer programs concerning processes of soil moisture and climatic data for a joint project between USDA- Agricultural Research Service and the U.S. Nuclear Regulatory Commission. Programs were written in AWK (UNIX), Visual Basic, ArcGIS, and SAS. The project report is titled "Field Protocols to Quantify Ground-Water Recharge Spatial and Temporal Behavior" (USDA-ARS, Beltsville, MD, 2005).

- Analyzed and evaluated a decision support system (Geographical Information Systems, Hydromod, and Expert System) for phosphorous management at the watershed scale using ERDAS Imagine (University of Maryland, 2003)

- Designed the Iranian Agricultural Engineering Research Institute's official website (IAERI, Karaj, Iran, 2000)

- Developed and implemented a national database system for research projects within the Access environment (IAERI, Karaj, Iran, 2000)

Continuing Professional Education:

- DSSAT Training Workshop
  Washington State University and University of Georgia, Griffin, GA (2014)

- BASINS/HSPF Training Workshop
  EPA, AQUA TERRA Consultants, and Utah State University, Atlanta, GA (2007)

- CE-QUAL-W2 Hydrodynamics and Water Quality Model Workshop
  Department of Civil and Environmental Engineering, Portland State University, Portland, OR (2007)

- Stream Investigation, Stabilization, and Design Workshop with an Emphasis on Innovative Approaches to Stream Stabilization and Restoration

US Army Corps of Engineers Water Operations Technical Support, Kansas State University, Manhattan, KS (2007)

- Using SWAPP: A SWAT and APEX Interface Program
  Fourth Conference on Watershed Management to Meet Water Quality Standards and TMDL, San Antonio, TX (2007)

- SWAT Advance Workshop
  Spatial Sciences Lab Texas A&M University, College Station, TX (2006)

- Theory and Practice of Small Urban Watershed Restoration
  University of Maryland Baltimore County, Baltimore, MD (2004)

- Water Infrastructure Security Enhancement
  American Society of Civil Engineers World Headquarters, Reston, VA (2004)

- Biological Fertilizers
  Research Institute of Microbiology, Hebei Academy of Sciences, Baoding, China (2001)