ARKA PANDIT

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ACADEMIC APPOINTMENTS

University of South Alabama, Mobile, AL — January 2017 – Till date
Assistant Professor

Georgia Institute of Technology, Atlanta, GA — June 2014 – December 2016
Research Faculty

Georgia Institute of Technology, Atlanta, GA — August 2009 – May 2014
Graduate Research & Teaching Assistant

University of Massachusetts, Dartmouth, MA — August 2007 – July 2009
Graduate Research & Teaching Assistant

EDUCATION

Doctor of Philosophy in Environmental Engineering
Georgia Institute of Technology, Atlanta, GA — May 2014
Thesis: Resilience of Urban Water Systems: An 'Infrastructure Ecology' approach to sustainable and resilient (SuRe) planning and design
Advisor: John C. Crittenden, PhD, P.E., N.A.E

Graduate Certificate in Public Policy
Georgia Institute of Technology, Atlanta, GA — May 2013

Master of Science in Civil Engineering
(Major: Environmental Engineering)
University of Massachusetts Dartmouth, North Dartmouth, MA — July 2009
Thesis: Selective removal and recovery of Phosphate from wastewater
Advisor: Sukalyan Sengupta, PhD, P.E.

Bachelor of Engineering, *Civil Engineering*
Indian Institute of Engineeing, Science and Technology, Shibpore, India — June 2003

COURSES DEVELOPED AND TAUGHT

University of South Alabama, Mobile, AL *(Primary Instructor)*
Graduate Courses
- CE 571: Biological Wastewater Treatment (Fall '17, Fall '19)
- CE 572: Physicochemical Water Treatment (Spring '18)
- CE 590: Water Chemistry (Fall '18)
- CE 592: Surface Water Quality Modeling (Summer '19)

Undergraduate Courses
- CE 370: Introduction to Environmental Engineering (Spring '17 – '19)
- CE 374: Environmental Engineering Laboratory (Spring '17 – '19)
- CE 412/512: Sustainability and Management of Infrastructure Systems (Fall '17)
- CE 470/590: Water and Wastewater Treatment (Fall '18 – 19)
- CE 471: Water and Wastewater Treatment Design Laboratory (Fall '18 – 19)
- CE 494: Environmental Transport Modeling (Spring '19)
- EG 270: Engineering Thermodynamics (Summer '17)

Georgia Institute of Technology, Atlanta, GA *(Co-developed and Co-taught)*
- CEE 6345: Sustainable Engineering (Fall '14 – '16)
- CEE 8813C: Sustainable Engineering (Fall '10 – '13)

RESEARCH

University of South Alabama, Mobile, AL

Research Area:

- The role of socioeconomics on community resilience in the immediate aftermath of natural disasters
- The evolving architecture of food-energy-water interrelationship under the uncertainties of a changing climate in coastal regions
- Complex Network Analysis of transportation corridors to assess the vulnerability and resilience of transportation sector
- Development of a sustainable and novel material to manage phosphorus flux into the Gulf of Mexico
- Development of a framework to assess the life-cycle cost, environmental impact and ecological services of low-impact development technologies for urban runoff management
- The environmental and ecological impact of small-medium scale seafood processing plants on the Gulf of Mexico
- The impact of eutrophication from non-point sources on the ecological, economic and social resilience of the Gulf of Mexico region

Georgia Institute of Technology, Atlanta, GA

Research Area:

- Development of an "infrastructural symbiosis" model to examine the interconnections and interdependencies between different urban infrastructure components
- Development of a novel index to quantify "full-spectrum" resilience for urban water systems
- Development of a multi-criteria optimality model between sustainability and resilience for urban water systems
- Development of a closed-loop 'nutrient grid' within the context of urban systems to assess the interdependence between water, energy and food.
- Examination of the interplay between policy decision making and incorporation of resilience in urban infrastructure systems
- Network analysis of infrastructure system topologies to evaluate their intrinsic resilience
- Ecological Network Analysis (ENA) of urban infrastructure systems to assess the resilience of interconnected infrastructure systems
- Analysis of the spatiotemporal space of decision making for urban infrastructure systems
- Analysis of how visual analytics of social media data can influence in resilient and sustainable urban infrastructure development
- Development of a regional Input-Output (IO) dataset for Georgia from open source data and modifying an open-source life-cycle analysis (LCA) software to develop a region-specific LCA tool for the project *"Characterization and Quantification of Solid Waste Disposed in Georgia"*.

University of Massachusetts Dartmouth, North Dartmouth, MA

Research Area:

- Utilization of a Hybrid Anion Exchange Resin (HAIX®) to remove and recover phosphate from municipal wastewater in presence of competing anions and Natural Organic Matter (NOM)
- Study of the performance of a field-scale sulfur-oxidizing denitrifying bioretention unit in removing nitrogen from a dairy-farm runoff

RESEARCH GRANTS

University of South Alabama, Mobile, AL

2018

- Alabama Department of Conservation and Natural Resources (ADCNR) grant for *"The Environmental and Ecological Impact of Small to Medium Seafood Processing Industries on the Mobile and Bon Secour Bay"*: ***(Submitted, Under Review)*** – Principal Investigator (PI)

- National Science Foundation (NSF) grant for *"NRT-INFEWS: Understanding the Interdependencies between Food, Energy and Water Systems in the Gulf of Mexico Region (GULF – FEWS)"* as National Science Foundation Research Traineeship (NRT) Program: ***(Submitted, Under Review)*** – Lead Principal Investigator (Lead-PI)
- Alabama Water Resources Research Institute (AWRRI) grant for *"Phosphorus Removal from Wastewater using 3D printed, Activated, High Specific Surface Area Media in Activated Sludge Reactor"*: ***(Submitted, Under Review)*** – Principal Investigator (PI)
- National Science Foundation (NSF) grant for *"Disrupting the model for water-wastewater infrastructure: Potential for decentralized networks"* as Leading Engineering for America's Prosperity, Health, and Infrastructure (LEAP HI): ***(Submitted, Under Review)*** –Co-Principal Investigator (Co-PI)
- Arcelor Mittal & Nippon Steel (AM/NS) grant for "*Improving the Efficiency of Spent Hydrochloric Acid Regeneration from Steel Pickling Plants":* ***(Awarded amount: $21,330)*** –Principal Investigator (PI)
- University of South Alabama Center for Environmental Resiliency grant for *"A Sustainable Solution to Maintain and Enhance the Ecological and Environmental Resilience of the Gulf of Mexico":* ***(Submitted, Under Review)*** – Principal Investigator (PI)
- University of South Alabama grant for Summer Undergraduate Research Fellowship for "*Removal and Recovery of Phosphorus from Non-Point Source using Permeable Reactive Barriers":* ***(Awarded amount: $2,575)*** – Faculty Mentor

2017

- University of South Alabama grant for Summer Undergraduate Research Fellowship for "*Managing Urban Stormwater Runoff: Life-Cycle Environmental Impact and Cost Assessment":* ***(Awarded amount: $2,250)*** – Faculty Mentor
- Alabama Coastal Area Management Program grant for "Resilience of Coastal Urban Infrastructure: Quantification and Decision Making Framework (ReCUr)": ***(Submitted, Unsuccessful)*** – Principal Investigator (PI)
- Mississippi-Alabama Sea Grant Consortium grant for *"Impact of Non-Point Run-off on Gulf Coast Eco system: An Analysis of Environmental and Economic Resiliency":* ***(Submitted, Unsuccessful)*** –Co-Principal Investigator (Co-PI)

Georgia Institute of Technology, Atlanta, GA (only successful grants are listed)

2012-16

- National Science Foundation (NSF) grant for *"Workshop on 'Assess the Current State and Identify the Research Needs for Sustainable and Resilient Urban Infrastructure Systems (Re)Development'"*
  (Awarded amount: $49,959) – Co-Principal Investigator (Co-PI) *&* Primary Author
- National Science Foundation (NSF) grant for *"FEW: Opportunities, Challenges, and Implications of a Nutrient Grid"*
  (Awarded amount: $199,999 for 3 years) – Primary Contributing Author *&* Senior Researcher
- National Science Foundation (NSF) grant for *"Participatory Modeling of Complex Urban Infrastructure Systems (Model Urban SysTems)"* as Resilient Interdependent Infrastructure Processes and Systems (RIPS) Type 2 grant
  (Awarded amount: *$2,499,499.00 for 3 years*) – Primary Contributing Author
- National Science Foundation (NSF) grant for *"Catalyzing a New Collaboration with China on Developing Resilient and Sustainable Urban Infrastructures"* as supplement to an NSF Resilient and Sustainable Infrastructure (RESIN) grant
  (Awarded amount: *$175,000 for 1 year*) – Co Author
- National Science Foundation (NSF) grant to evaluate *"The role of visual analytics of social media in resilient and sustainable urban infrastructure development"* as supplement to an NSF Resilient and Sustainable Infrastructure (RESIN) grant
  (Awarded amount: *$46,494.00 for 1 year*) – Primary Author

PROFESSIONAL EXPERIENCE

West Bengal Power Development Corporation Limited, Kolkata, India August 2005 - December 2006

Assistant Engineer (Civil)

- Quality control of water supply to the residential township
- Research and development of a Fly-Ash utilization program through its effective utilization in roadway construction as subgrade material and as coarse aggregates in concrete mix design
- Maintaining compliance with the environmental standards of West Bengal Pollution Control Board
- Monitoring and control of Fly Ash, SO_2, NO_X emission

- Monitoring the process of optimization of water demand
- Maintenance of a captive composite (earthen & concrete) dam

Electrosteel Castings Limited, Kolkata, INDIA July 2003 - July 2005

Engineer (Civil)

Project: *'Augmentation of Daltonganj Water Supply Scheme',* Daltonganj, Jharkhand, India

- Process design and construction administration of a 21.6 MLD water treatment plant along with associated intake structures and distribution system as part of turnkey project
- Team leader for testing river water quality and designing suitable chemical treatment processes for the water treatment plant
- Project management and preparation of contract documents

SELECTED PUBLICATIONS & CONFERENCE PRESENTATIONS

Publications: Peer-reviewed Journals (‡ indicates Student Author)

1. Chai, R.‡, **Pandit, A.**, **(2018)** "Managing the Influx of Nutrients to Coastal Areas from Non-Point Sources at the Watershed Scale" *Environmental Science: Water Research and Technology* (Under Review)
2. **Pandit, A.**, Crittenden, J.C. **(2018)** "Quantifying Full Spectrum Resilience of Urban Water Systems: A Framework" *Water Resources Management (Under Review)*
3. **Pandit, A.**, DesRoches, R., Rix, G.J., Crittenden, J.C. **(2018)** "The SuRe (Sustainable and Resilient) Zone of Urban Infrastructure System (UIS) Planning & Design" *Journal of Infrastructure Systems (Under Review)*
4. **Pandit, A.,** Brown, H., Newell, J. P., Chang, M. E., Weissburg, M., Xu, M., … Crittenden, J. C. **(2017).** "Infrastructure Ecology: An Evolving Paradigm for Sustainable Urban Development". *Journal of Cleaner Production,* doi:10.1016/j.jclepro.2015.09.010 (*Number of Citations: 31)*
5. James, J-A.C., Thomas, V., **Pandit, A.,** Crittenden, J.C. **(2016)** "Water, air emissions, and cost impacts of air-cooled microturbines for combined cooling, heating and power (CCHP) systems: A case study in the Atlanta region" *Engineering,* 2 (4), 470-480 (*Number of Citations: 4)*
6. **Pandit, A.**, Crittenden, J.C. **(2016)** "Index of Network Resilience (INR) for Urban Water Systems" *International Journal of Critical Infrastructure,* 12(1/2), 120-142. *(Number of Citations: 18*) *including an earlier peer-reviewed conference paper*
7. **Pandit, A.**, Lu, Z., Crittenden, J.C. **(2015).** "Managing the Complexity of Urban Systems" *Journal of Industrial Ecology* 19(2), 201-204. (*Number of Citations: 10)*
8. **Pandit, A.**, Crittenden, J.C. **(2015)** "Resilient Urban Systems: Where We Stand Now and Where We Need to Go" *Solutions,* 6(1), 74-81.
9. Minsker, B., Baldwin, L., Crittenden, J., …, **Pandit, A.,** Parker, J., Rivera, S., Surbeck, C., Wallace, W., and Williams, J. **(2015)**. "Progress and Recommendations for Advancing Performance-Based Sustainable and Resilient Infrastructure Design." *J. Water Resour. Plann. Manage.* , 141(12): A4015006. (*Number of Citations: 26)*
10. Sengupta, S., **Pandit, A (2011)** "Selective Removal of Phosphorus from Wastewater Combined with Its Recovery as a Solid-Phase Fertilizer" *Water Research,* 45(11), 3318-3330 (*Number of Citations: 146)*
11. Ergas, S. J., Sengupta, S., Siegel, R., **Pandit, A.**, Yao, Y., Yuan, X **(2010)** "Performance of Nitrogen Removing Bioretention Systems for Control of Agricultural Runoff" *Journal of Environmental Engineering*, 136(10), 1105-1112 (*Number of Citations: 49)*

Publications: Books and Book Chapters

1. Minne, L., **Pandit, A.**, Crittenden, J.C., Begovic, M., Kim, I., Jeong, H., James, J.-A., Lu, Z., Xu, M., French, S.P., Subrahmanyam, M., Noonan, D.S., Brown, M.A., Chandler, J., Chen, Y., Williams, E., Desroches, R., Bras, B., Li, K., Chang, M., **(2012). "**Interdependence Between Electric Energy, Gas, Transportation and Water Infrastructures in Large Urban Areas"**,** in: Meyers, R.A. (Ed.), Encyclopedia of Sustainability Science and Technology, Earth and Environmental Science. Springer, p. 12555. (*Number of Citations: 11)*

2. **Pandit, A.**, Jeong, H., Crittenden, J.C., French, S., Xu, M., Li, K., **(2012)** "Sustainable Infrastructure and Alternatives for Urban Growth," Cabezas H and Diwekar U (eds.) Sustainability: Multidisciplinary Perspectives. Bentham Science Publishers (*Number of Citations: 5)*
3. **Pandit, A (2010)** "Selective Removal and Recovery of Phosphate from Municipal Wastewater", Lambert Academic Publishing, Saarbrücken, Germany, ISBN 978-3-8433-8267-0

Publications: Peer-reviewed Conference Proceedings

1. **Pandit, A. (2018)** "Sustainability at the Core: Addressing the Grand Challenges of the 21st Century," *ABET Symposium*, San Diego, CA, USA, April 11–13, 2018.
2. Du, R., Lu, Z., **Pandit, A.,** Da, K., Crittenden, J.C., Park, H. **(2015)** "Toward Social Media Opinion Mining for Sustainability Research," *Computational Sustainability: Papers from the 2015 Association for the Advancement of Artificial Intelligence (AAAI) Workshop*, 21-23, Austin, Texas, USA, January 25–26, 2015. *(Number of Citations: 4)*
3. **Pandit, A.,** DesRoches, R., Rix, G., and Crittenden, J. **(2014)** A Framework to Identify the Sustainable and Resilient Zone of Urban Infrastructure System Planning and Design. *International Conference on Sustainable Infrastructure (ICSI) 2014*: pp. 434-441. *(Number of Citations: 1)*
4. James, J., **Pandit, A.**, and Crittenden, J. **(2014)** The Broader Environmental Impacts of Combined Heat and Power (CHP) Systems using an Infrastructure Ecology Approach. *International Conference on Sustainable Infrastructure (ICSI) 2014*: pp. 442-447.
5. **Pandit, A.,** Crittenden, J. C. **(2012)** "Index of Network Resilience (INR) for Urban Water Distribution Systems" *2012 Critical Infrastructure Symposium (Number of Citations: 18)*
6. Sengupta, S., **Pandit, A (2010)** "Selective Removal of Phosphorus From Wastewater Combined with Its Recovery as a Solid-Phase Fertilizer" *Proceedings of the Water Environment Federation, WEFTEC 2010: Session 91 through Session 100, pp. 7060-7079(20)*
7. Ergas, S.J., Sengupta, S., Siegel, R., Yao, Y., **Pandit, A.,** Yuan, X (2010) Denitrifying Bioretention Systems for Control of Non-Point Nitrogen Sources *Proceedings of the Water Environment Federation, WEFTEC 2010: Session 71 through Session 80, pp. 5085-5097(13) (Number of Citations: 2)*

Publications: Working Papers

1. "Closing the loop of food waste: The food – energy – water nexus" *Open Access Journal of Waste Management & Xenobiotics*
2. "The effect of network topology on resilience and water quality of urban water distribution systems" *(In preparation for Science of the Total Environment)*
3. "The existence of dynamic-adaptive cycles and panarchy in urban infrastructure systems" *(In preparation for Global Environmental Change)*
4. "Spatiotemporal dimensions of decision making for urban infrastructure systems" *(In preparation for Environmental Science & Technology)*

Conference Presentations (* indicates presenting author; ‡ indicates Student author) *(Only the most recent 30 presentations are listed)*

1. Chai, R‡., **Pandit, A.* (2018)** "Removal and Recovery of Phosphorus from Non-Point Source using Permeable Reactive Barriers," *2018 EPA Region 6 Stormwater Conference*, Albuquerque, NM, USA, August 19–23, 2018.
2. **Pandit, A. * (2018)** "Sustainability at the Core: Addressing the Grand Challenges of the 21st Century," *ABET Symposium*, San Diego, CA, USA, April 11–13, 2018.
3. Crittenden, J.C.*, Lu, Z., **Pandit, A. (2016)** "U.S. EPA Urban Sustainability Assessment and Management Workshop" *U.S. EPA Urban Sustainability Assessment and Management Workshop*. Chicago, IL
4. Crittenden, J.C.*, Lu, Z., **Pandit, A. (2016)** "Welcome to Mars: A Toolbox for Sustainable Science and Engineering," *National Academy of Science Conference - Transition Toward Sustainability after 15 Years: Where Do We Stand in Advancing the Scientific Foundation*. Newport Beach, CA, USA, January 14-15, 2016

5. Crittenden, J. C.*, Jeong, H., **Pandit, A. (2015)** "Sustainable Urban Water Management" *The 6th IWA-ASPIRE Conference & Exhibition.* Beijing, P.R. China.
6. Crittenden, J. C.*, **Pandit, A. (2015)** "Infrastructure Ecology: An Evolving Paradigm for Sustainable Urban Development" *2015 AEESP Conference*, Plenary Session. Yale University, New Haven, CT.
7. Crittenden, J. C.*, **Pandit, A. (2014)** "Grand Challenges for Energy Production in the 21st Century" *2014 AIChE Annual Meeting,* Plenary Session: Optimizing Health, Safety & Environmental (HSE) Sustainability. Atlanta, GA.
8. **Pandit, A.**, DesRoches, R., Rix, G.J., Crittenden, J. C.* **(2014)** "A Framework to Identify the Sustainable and Resilient Zone of Urban Infrastructure System Planning and Design" *ASCE International Conference on Sustainable Infrastructure 2014,* Session: The Infrastructure Resiliency Imperative - Recent Experiences, Lessons Learned. Long Beach, CA
9. **Pandit, A.***, Crittenden, J. C. **(2014)** "Advanced Oxidation Processes and its Applications" 23rd *National Association of Remedial Project Managers (NARPM) Annual Training Program, US EPA* Session: Georgia Tech Innovative Technologies and Research. Atlanta, GA
10. **Pandit, A.*,** James, J.C., Jeong, H., Crittenden, J.C. **(2014)** "Water and Energy Impacts: A comparison of urban growth scenarios and the implementation of decentralized water and energy alternatives" 247th ACS National Meeting and Exposition, Session: ENVR Advances in Materials for Water and Energy – PM Session. Dallas, TX
11. **Pandit, A.*,** Jeong, H., Lu, Z., Minne, E.A., James, J.C., French, S. P., Crittenden, J.C. **(2013)** "Infrastructure Ecology: An Evolving Paradigm for Sustainable Urban Development" *Metropolitan North Georgia Water Planning District.* Marietta, GA
12. **Pandit, A.,** Bras, B., Minne, E. A., Dunham-Jones, E., Augenbroe, G., Jeong, H., … Crittenden, J. C.* **(2013)** "Infrastructure Ecology: An Evolving Paradigm for Sustainable Urban Development" *2013 World Engineers Summit,* Session Keynote: Environmental Engineering Education. Singapore
13. **Pandit, A.***, Crittenden, J. C. **(2013)** "The Effect of Network Topology on Resilience and Water Quality in Urban Water Distribution Systems" *AEESP 50th Anniversary Conference,* Session: Fb::Watershed Management. Golden, CO
14. **Pandit, A.*,** Bras, B., Minne, E. A., Dunham-Jones, E., Augenbroe, G., Jeong, H., … Crittenden, J. C. **(2013)** "Infrastructure Ecology: The Water-Energy-Transportation-Land Use-Socioeconomic Nexus" *2013 AEESP 50th Anniversary Conference,* Session: C::Sustainable Cities. Golden, CO
15. **Pandit, A.,** Jeong, H., Lu, Z., Minne, E.A., James, J.C., Sung, S.M., Frankland, J., Kim, I., French, S. P., Bras, B., Begovic, M.M., Crittenden, J.C. **(2013)** "A Decision Support Tool for Sustainable and Resilient Urban Infrastructure Development" *7th International Society for Industrial Ecology Biennial Conference,* Session:1.1 Urban Infrastructure and Low Carbon Development. Ulsan, Republic of Korea
16. **Pandit, A.***, Crittenden, J. C. **(2013)** "A Conceptual Framework for Sustainable and Resilient Urban Water Systems" *2013 World Environmental and Water Resources Congress,* Session: Sustainability in Water Management 2: Systems Analysis. Cincinnati, OH
17. Jeong, H., James, J.C., **Pandit, A.***,* Crittenden, J. C., French, S. P., Noonan, D., Begovic, M., Bras, B., Brown, M. **(2013)** "A Conceptual Framework for Sustainable and Resilient Urban Water Systems" *2013 World Environmental and Water Resources Congress,* Panel Discussion: Future Needs and Solutions for Performance-based Sustainable Water Resources Infrastructure. Cincinnati, OH
18. **Pandit, A.***, Crittenden, J. C. **(2013)** "Full Spectrum Resilience for Urban Water Systems" *International Symposium on Sustainable Systems & Technology 2013,* Session: Resilience. Cincinnati, OH
19. **Pandit, A.*,** Jeong, H., Lu, Z., Minne, E.A., James, J.C., Sung, S.M., Frankland, J., Kim, I., French, S. P., Bras, B., Begovic, M.M., Crittenden, J.C. **(2013)** "A Decision Support Tool for Sustainable and Resilient Urban Infrastructure Development" *International Symposium on Sustainable Systems & Technology 2013,* Session: Infrastructure. Cincinnati, OH

20. **Pandit, A.*,** Jeong, H., Lu, Z., Minne, E.A., James, J.C., Crittenden, J.C. **(2012)** "Infrastructure Ecology: An Integrative Approach for Sustainable Urban Development" *Third ISIE Asia-Pacific Meeting,* Session: Sustainable urban systems and infrastructure (SUS). Tsinghua University, Beijing, China
21. **Pandit, A.***, Crittenden, J. C. **(2012)** "Infrastructure ecology: A resilience based approach to sustainability of urban infrastructure systems" *4th International Ecosummit – Ecological Sustainability: Restoring the Planet's Ecosystem Services,* Session: GS07 - Sustainability and resilience. Columbus, OH
22. **Pandit, A.***, Crittenden, J. C. **(2012)** "Resilience of Urban Water Systems" *International Symposium on Sustainable Systems & Technology 2012,* Session: Urban Infrastructure. Boston, MA
23. **Pandit, A.*,** Crittenden, J.C., Jeong, H., Lu, Z., Minne, E.A., James, J.C., Xu, M., French, S. P., Sung, S.M., Noonan, D., Brown, M., DesRoches, R., Bras, B., Begovic, M., **(2012)** "Infrastructure Ecology: An Integrative Approach towards More Sustainable Urban Systems" *International Symposium on Sustainable Systems & Technology 2012,* Session: Urban Infrastructure. Boston, MA
24. **Pandit, A.***, Crittenden, J. C. **(2012)** "Index of Network Resilience (INR) for Urban Water Distribution Systems" *2012 Critical Infrastructure Symposium,* Session 1A: Infrastructure Network Analysis. Arlington, VA
25. **Pandit, A.***, Minne, E. A., Crittenden, J. C., Jeong, H., Lu, Z., James, J. C., Taylor, R. E., French, S. C., Subrahmanyam, M., Bras, B **(2011)** "Sustainable and Resilient Urban Infrastructure: An Infrastructure Ecology Approach" *AEESP Education and Research Conference 2011*, Session M3a: Urban Infrastructure (Systems). Tampa, FL
26. **Pandit, A.***, Jeong, H., Lu, Z., Crittenden, J. C. **(2011)** "An Infrastructure Ecology Approach for Sustainable and Resilient Urban Infrastructure: Compact Growth and Decentralized Infrastructure." *Power Systems Conference and Exposition, 2011,* Session: PEECPL01: Interaction between Electrical Smart Grid with distribution generation and the existing Infrastructure. Phoenix, AZ.
27. **Pandit, A.***, Jeong, H., Crittenden, J. C., Xu, M., Ariaratnam, S., Begovic, M., Bras, B., Brown, M., DesRoches, R., French, S., Georgakakos, A., Karady, G., Li, K., Noonan, D., Perrings, C., Williams, E **(2010)** "Sustainable and resilient urban infrastructure design: A holistic approach" *The 6th International Conference on Sustainable Water Environment,* Session 4.7: Infrastructure. Newark, DE
28. Sengupta, S.*, **Pandit, A (2010)** "Selective Removal of Phosphorus From Wastewater Combined with Its Recovery as a Solid-Phase Fertilizer" *WEFTEC 2010*, Session 99: What's New in Phosphorus and Nitrogen Removal. New Orleans, LA
29. Jeong, H., Crittenden, J.C.*, Xu, M., **Pandit, A (2010)** "Holistic Framework for Sustainable and Resilient Design of Urban Energy and Water Infrastructure" *WEFTEC 2010*, Session 36: AEESP Session: Water Sustainability. New Orleans, LA
30. Sengupta, S.*, Ergas, S. J., Siegel, R., Yao, Y., **Pandit, A (2008)** "Use of Denitrifying Bioretention Systems to Control Non-Point Sources of Nitrogen" *19th Annual Nonpoint Source Pollution Conference of New England Interstate Water Pollution Control Commission (NEIWPCC).* Groton, CT

STUDENTS SUPERVISED

- **Doctoral Students:**
  - Sheena Neizer; Optimization of Pharmaceutical Removal from Municipal Wastewater Using an Aerobic Granular Sludge Biological Process (Current) – Co-Advisor
- **Masters Students:**
  - Jennifer B Dennis; Environmental and Ecological Impacts of Small to Mid-Scale Seafood Processing Industries on the Gulf of Mexico (Current) – Primary Advisor
  - Katherine Beck; Decentralized Treatment Options for Municipal Wastewater Treatment in the Alabama Blackbelt Region (Current) – Co-Advisor
  - Terry J Rickey; Quantification and Study of Pharmaceutical Residues in Decentralized Wastewater Treatment Systems (Current) – Co-Advisor

- **Undergraduate Students:**
  - Rachel S Chai; Development of a Permeable Reactive Barrier using a Novel, Sustainable Material for Phosphorus Removal from Non-Point Sources (Current) – Primary Advisor
  - Haley Pugh; Disinfection-by-products: Formation Pathways and Removal Technologies (Current) – Primary Advisor
  - Lacey S Day; Improving the Efficiency of Spent Hydrochloric Acid Regeneration from Steel Pickling Plants (Current) – Primary Advisor
  - Breanna Riddle; Improving the Efficiency of Spent Hydrochloric Acid Regeneration from Steel Pickling Plants (Current) – Primary Advisor
  - Anniestacia Miskel; Managing Urban Stormwater Runoff: Life-Cycle Environmental Impact and Cost Assessment (2017) – Primary Advisor

SCHOLARLY AND PROFESSIONAL ACTIVITIES

- Peer Reviewer (Grant Proposal):
  - UK's Natural Environment Research Council
- Peer Reviewer (Journal Articles):
  - Journal of Infrastructure Systems;
  - Environment and Planning B: Planning and Design;
  - Journal of Pipeline Systems;
  - Resources, Conservation & Recycling;
  - Environmental Engineering & Management Journal;
  - Water Research;
  - Journal of Cleaner Production;
  - Water Resources Research;
  - IWA World Water Congress;
  - Water;
  - Sustainability;
  - African Journal of Environmental Science and Technology
- Conference Technical Committee Member:
  - 2nd International Conference on Sustainable Infrastructure 2016
  - 1st & 2nd International Conference on Complex Information Systems
- Faculty Advisor, Alabama Water Environment Association, University of South Alabama Student Chapter