

Mauricio Eduardo Arias, PhD, PE

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Summary

I am an ecological engineer interested in watershed-scale interactions among climate, infrastructure, and water ecosystems in the tropics and sub-tropics. I have published 63 peer-reviewed articles in top scientific journals including Science, Nature Sustainability, Proceedings of the National Academy of Sciences, Water Resources Research, and Journal of Hydrology. I have been the PI or Co-PI in 16 externally funded research projects for a total of US\$7.1 million, and I have been the senior mentor of 18 graduate students. In 2021, I became a Gulf Research Program Early Career Fellow by the National Academy of Sciences.

Research and Professional Interests

- Water Resources Sustainability
- Watershed hydrology
- Ecological Engineering
- Water Quality Modeling
- Water infrastructure and environmental flows
- Ecohydrology of tropical and subtropical lowlands

Professional Training

Post-doctoral Fellowship, Sustainability Science Program, Harvard University, 2014-2016, project: *Tradeoffs between hydropower and hydrological alterations in the Amazon.*

PhD in Civil Engineering, University of Canterbury, Christchurch (New Zealand), 2014. Discipline: Hydrological and Ecological Engineering. Dissertation: *Impacts of hydrological alteration in the Mekong to the Tonle Sap Ecosystem.*

Master of Engineering, Environmental Engineering Sciences, Systems Ecology/Ecological Engineering Program, University of Florida, Gainesville (USA), 2007, Research Project: *Characterization of suspended-sediments in a stormwater system during rainfall-runoff events.*

Bachelor of Science, Environmental Engineering Sciences, University of Florida, Gainesville (USA), 2006. Magna Cum Laude, Minor in Anthropology, Honors Thesis: *Feasibility of Using Constructed Wetlands to Treat Municipal Wastewater in the Bogotá Savannah, Colombia.*

Research/Professional Experience

Associate Professor, Civil and Environmental Engineering, USF, Aug. 2023–Present.

Assistant Professor, Civil and Environmental Engineering, USF, Aug. 2016–Aug 2023.

Post-doctoral Research Fellow in Sustainability Science, Organismic and Evolutionary Biology Department/Kennedy School of Government, Harvard University, Sept 2014 – June 2016.

International Consultant, Mekong River Commission, Oct 15-Jun 16.

Research Associate, Dept. of Civil and Natural Resources Eng., Univ. of Canterbury, Aug 13–Aug 14.

Research Assistant, Dept. of Civil and Natural Resources Eng., Univ. of Canterbury, Sept 09- Jul 13.

Consultant, Conservation International, May-Jun 2010.

Water Resources Engineer, Jones, Edmunds & Associates, Gainesville, FL (USA), Feb 07–Mar. 09.

Graduate Research Assistant, H.T. Odum Center for Wetlands, Univ. of Florida, Aug 06–Dec 07.

Undergraduate Research Assistant, University of Florida, May 01–May 04.

Honors and Awards

- Gulf Research Program Early Career Fellow by the National Academy of Sciences, 2021-2023
- Outstanding Research Achievement Award, USF, 2023
- McKnight Junior Faculty Fellowship by the Florida Education Fund, 2020-2021
- HydroLearn Fellow, 2020
- Giorgio Ruffolo Post-doctoral Research Fellowship, Harvard University, 2014-2016
- University of Canterbury International Doctoral Student Scholarship, 2009-2012
- Environmental Engineering Alumni Scholarship. University of Florida, 2005
- Engineering Dean's Scholarship. University of Florida, 2005
- Herencia Latina Scholarship. January 2003
- 1st Place, Water Environment Federation National Student Design Competition, 2006
- 1st Place, Florida Water Environment Association Student Design Competition, 2006
- University Scholar, University of Florida, 2005

Teaching Experience

Course instructor at USF:

- CWR 4812: Capstone Water Resources/Environmental Engineering Design, Spring 2023
- ENV 6564: Environmental /Water Resources Engineering Design, Spring 2023
- ENG 3353 Basic Fluid Mechanics, Spring 2017-2022 (taught 6 times, once every year)
- CWR 6626 Ecological Engineering, Fall 2017, 19, 21 (new graduate course developed)
- CGN 6933 Water Resources Sustainability, Fall 2016, 18, 22 (new graduate course developed)
- ENV 6935: Environmental/Water Resources Engineering Seminar, Spring 2019 and 2021 (co-taught)

Invited lecturer:

- University of South Florida: Env. and Water Resources Eng. Capstone Design, Spring 2020-21
- Harvard Kennedy School: Water Resources Development and Management, Spring 2015 and 2016
- University of Canterbury: ENCN444 Water Infrastructure and Design, ENNR 320 Integrated Catchment Analysis, ENCN401 Engineering for Developing Communities, 2013

Mentoring

Postdocs:

Osama Tarabih, 2022-Present

Hung Quyen, 2021-Present

USF Student advisees (5 PhDs, 1 MS, 3 REU):

1. Cody Stewart, PhD Environmental Engineering (degree expected SP 2023)
2. Megan Kramer, PhD Environmental Engineering (graduation expected 2025)
3. Jessica Boyer, PhD Environmental Engineering (graduation expected 2025). USF Presidential Fellow
4. Sajad Soleymani Hasani, PhD Civil Engineering-Water Resources (graduation expected 2026)
5. Sophea Rom Phy, Civil Engineering-Water Resources (graduation expected 2027)
6. Daniela Vasquez, MS Civil Engineering-Water Resources (graduation expected 2023)
7. Ochitya Fernando, USF REU, BS Environmental Engineering
8. Andres Rodriguez, USF REU, BS Environmental Engineering

USF Alumni (1 Postdoc, 4 PhD, 9 MS, 7 REUs)

1. Thanh Duc Dang, Postdoc 2021-2023 (now at NIWA)
2. Osama Tarabih, PhD Civil Engineering-Water Resources (2022; Now a postdoc at USF)
3. Michelle Platz, PhD in Environmental Eng. (2022) NSF GRF Fellow (Now with Limnotech)

4. Joshua Benjamin, PhD in Environmental Eng. (2021) (Now with Black and Veatch)
5. Charlotte Haberstroh, PhD Civil Engineering-Water Resources (2021) Now with Applied Sciences, Inc.
6. Andres Lora, MS Civil Engineering-Water Resources (2023) Now with Black and Veatch
7. Nisa Ishfaqun, MS Environmental Engineering (2023)
8. Megan Kramer, MS Environmental Engineering (2022)
9. Lillian Mulligan, MS Environmental Engineering (2021)
10. Samar Al Mashrafi, MS Environmental Engineering (2021)
11. Alex Miller, MS Civil Engineering (2020, now with HDR)
12. Mohit Kaura, MS Environmental Engineering (2018)
13. Awet Tsegay, MS Environmental Engineering (2018)
14. Katie Castor (Co-advised with Jim Mihelcic), MS Engineering Sciences (2018)
15. Jenna Brooks, USF REU, BS Civil Engineering (outstanding achievement award, NSF GRF Fellow at Northeastern University)
16. Ayla Sheridan, NSF Water Sustainability REU Program (2022)
17. Ashley Hocking, NSF Water Sustainability REU Program (2022)
18. Bruno Mancini, REU, BS Chemical Engineering (2022). Now MS student at USF
19. Hope Koutz, BS Civil Engineering (2019).
20. Ruben Palomo, BS Civil Engineering (2018-19, now E.I. with Jones Edmunds).
21. Jessica Carlee Chaffin, BS Civil Eng. (2018-19, outstanding achievement award, now E.I. with HDR).

Graduate committees (36 students total):

At USF:

33. Dilini Herath (PhD Civil Eng, 2023-present); 32. Linden Cheek (PhD Env Eng, 2023-present); 31. Sheila Chero-Orozco (PhD Env Eng, 2023-present); 30. Mark Vicciardo (MS Env Eng, 2023-present); 29. Rachael Cooper (PhD Env Eng, 2022-present); 28. Chao Ye (PhD Env Eng, 2022-present); 27. Jiayi Hua (PhD Env Eng, 2022-present); 26. Nicholas Ferreira (MS Civil Eng, 2022-present); 25. Steve Youseff (MS Civil Eng, 2023); 24. Natashan Luesaksiriwattana (MS Civil Eng, 2022); 23. Javad Zeidi (PhD Civil Eng, 2021-present); 22. Carley Defillips (MS in Biological Sciences, 2023); 21. Xia Yang (PhD Env Eng, 2022); 20. Fatih Gordu (PhD Civil Eng, 2022); 19. Rick Bowers (PhD Civil Eng., 2022). 18. Thanh Lam (MS Env Eng, 2021), 17. Md Yeasir Arif Rahman (PhD Env Engineering, 2021); 16. Ashley Osler (MS Civil Eng, 2022); 15. Bisheng Gao (MS Env Eng, 2020); 14. Corbyn Cools (MS Env Eng, 2020); 13. Emily Nabong (MS Env. Eng., 2020); 12. Xiaofan Xu (PhD Env Eng, 2020); 11. Dawei Tang (MS in Biological Sciences, 2019); 10. Jesse Hillman (MS Civil Eng, 2019); 9. Oswaldo Galicia (MS Env Eng, 2019), 8. Thilanki Rajaguru (PhD Civil Eng, 2018), 7. Uchechi Akabogu (MS Civil Eng, 2018), 6. Brian Wells (MS Env Eng, 2018); 4. John Pryor (MS Eng, 2018); 3. Maria Briones (MS Env Eng, 2018), 2. Jacob Magnum (MS Env Eng, 2017); 1. Michelle Roy (MS Env Eng, 2016).

At other universities:

3. Diego Acevedo, PhD Valorization of Reverse Osmosis Brines, KU Leuven, 2020-Present
2. Bikesh Shrestha, PhD Civil Engineering, Univ. of Canterbury, co-supervisor, 2014-2020
1. Thanh Dang Duc, PhD Civil Engineering, Univ. of Canterbury, co-supervisor, 2014-2018

Funded Research Grants

PI or Co-PI in externally funded research projects for \$7.1 million, with direct control of \$4.5 million.

1. *Developing Generalizable Approach for Coupled CyanoHAB Predictive Models*, 2023-2024, Awarded by USACE ERDC (coPI)
2. *Zombie to living community ponds by novel bio-infiltration*, 2023-2026, Awarded by the Environmental Protection Agency. Co-PI (21% of funding)
3. *Integrating Modeling Tools and Observations for Prediction and Management of Harmful Algal Blooms in the St. Lucie Estuary and Watershed* (\$2.5M), 2023-2025, Awarded by USACE ERDC (PI)

4. *Subseasonal-to-Seasonal Forecasting for Informed Decision-Making in the Mekong River Basin* (654k total; 418k to USF), 2023-2025, Awarded by NASA (PI)
5. *Coupling lake, watershed, and estuarine models to better understand the role of engineered freshwater discharges in driving the severity, location, and timing of harmful algal blooms* (\$2.3 million total; \$390k to USF), 2021-2024, Awarded by the US Army Corps of Engineers Engineer Research and Development Center (USF PI)
6. *Temporal and Spatial Optimization of Existing and Emerging Nutrient Management Technologies and Practices for Control of Harmful Algal Blooms* (\$1M), 2020-2023, Awarded by the Environmental Protection Agency (#840090). Co-PI (21% of funding)
7. *Palmetto Beach Living Coastline and Community Engagement (200k)*, 2022-2023. Awarded by the National Fish and Wildlife Foundation – National Coastal Resilience Fund 2021, co-PI.
8. *Effective Energy Recovery in Desalination and Water Reclamation Utilities through Pressure-Retarded Osmosis* (130k), 2020-2021. Awarded by the Bureau of Reclamation (#R19AC00100), PI.
9. *Investigation of Stormwater BMPs in the City of Tampa* (98k), 20-21. Awarded by the City of Tampa. PI.
10. *Gulf Research Program Fellowship, 2021-2022* (\$76,000). Awarded by the National Academy of Sciences, PI
11. *Landfill Leachate Management with Adsorbent-enhanced Constructed Wetlands, 2021-2023* (\$56k). Awarded by the Hinkley Center for Solid Hazardous Waste Management, PI
12. *Evaluation of Hydrodynamic Effects of Manchester Waterway, 2021-2022* (\$23,681). Awarded by the Manchester Waterway Civic Association, PI
13. *McKnight Junior Faculty Development Fellowship, 2020-2021* (\$15,000). Awarded by the Florida Education Fund, PI.
14. *Cost-Effective Hybrid Constructed Wetlands for Landfill Leachate Reclamation, 2020* (\$58k). Awarded by the Hinkley Center for Solid Hazardous Waste Management, Co-PI
15. *Managing pressures from the development of dams, land use conversion, and climate change on riverine ecosystems of the Mekong's Tonle Sap basins* (US\$390K; \$18K to USF), 2016-2018. Awarded by the John D. and Catherine T. MacArthur Foundation, USF PI
16. *Investigation of Stormwater Baffle Boxes in the City of Tampa* (147k), 2017-2019. Awarded by the City of Tampa, Co-PI (75% effort)
17. *Characterization of current velocities, net community production and net community calcification among nursery-reared coral communities in the Florida Keys* (\$10K), 2018-2019. Awarded by USF's New Researcher Program PI

Publications

Scopus Profile (H-index = 24; excluding self-citations of all co-authors)

<https://www.scopus.com/authid/detail.uri?authorId=23011471800>

Google Scholar (Citations = 3223): <http://scholar.google.com/citations?user=N808xGgAAAAJ&hl>

Peer-reviewed journal articles (*Denotes student/postdoc co-/supervised)

2023

63. Dang, T.D.*, **Arias, M.E.**, Tarabih, O.M.*, Ergas, S.J. Phlips, E., Rains, M.C., Zhang, Q. Modeling temporal and spatial variation of biogeochemical processes in a large subtropical lake: Assessing alternative solutions to algal blooms *Journal of Hydrology: Regional Studies* (Accepted June 2023)
62. Ye, C, Dang, TD, Xu, X., Stewart, C.J., **Arias, ME**, Zhang, Y, Zhang, Q. Coupled Effects of Future Rainfall and Land Use on Urban Stormwater Drainage System in Tampa, Florida (USA) *Ecological Indicators* (Accepted May 22, 2023)

61. Kramer, M.*, **Arias, M.E.**, “Modeling the Impact of Hydraulic Reconnection on Estuary Hydrodynamics.” *Journal of Ecological Engineering Design*. *Journal of Ecological Engineering Design* <https://doi.org/10.21428/f69f093e.4f085bec>
60. van Emmerik, T. H., Schreyers, L. J., Mellink, Y. A., Sok, T., & Arias, M. E. (2023). Large variation in Mekong river plastic transport between wet and dry season. *Frontiers in Environmental Science*, 11, 539.
59. Yang, X., Arias, M. E., & Ergas, S. J. (2023). Hybrid constructed wetlands amended with zeolite/biochar for enhanced landfill leachate treatment. *Ecological Engineering*, 192, 106990. <https://doi.org/10.1016/j.ecoleng.2023.106990>
58. Brooks, J.*, Stewart, C.J.*, Haberstroh, C.J.*, **Arias, M.E.** Characteristics and Fate of Plastic Pollution in Urban Stormwater Ponds *Environmental Pollution* <https://doi.org/10.1016/j.envpol.2023.121052>
57. Tarabih, O.*, Dang, T.D.*, Paudel, R., **Arias, M.E.**, Lake Operation Optimization of Nutrient Exports: Application of Phosphorus Control: Application of Phosphorus Control in the Largest Subtropical Lake in the US. *Environmental Modelling and Software* 160, 105603. <https://doi.org/10.1016/j.envsoft.2022.105603>
56. Lam, T., Yang, X., Ergas, S.J., **Arias, M.E.**, 2023. Feasibility of landfill leachate reuse through adsorbent-enhanced constructed wetlands and ultrafiltration-reverse osmosis. *Desalination* 545, 116163. <https://doi.org/10.1016/j.desal.2022.116163>
- 2022
55. Galelli, S., Dang, T.D.*, Ng, J.Y., Chowdhury, A.F.M.K., **Arias, M.E.**, 2022. Opportunities to curb hydrological alterations via dam re-operation in the Mekong. *Nat Sustain* 1–12. <https://doi.org/10.1038/s41893-022-00971-z> (Impact factor = 27.16)
54. Hinds, K-A., Platz, M.C.*, Zarger, R., **Arias, M.E.**, Engaging in Interdisciplinary Coastal Research During A Pandemic. *Human Organization* (2022) 81 (3): 271–279. <https://doi.org/10.17730/1938-3525-81.3.271> (Impact factor = 0.814)
53. AL Mashrafi*, S., Diaz-Elsayed, N., Benjamin, J.*, **Arias, M.E.**, Zhang, Q., 2022. An environmental and economic sustainability assessment of a pressure retarded osmosis system. *Desalination* 537, 115869. <https://doi.org/10.1016/j.desal.2022.115869> (Impact factor = 9.55)
52. Kondolf, G. M., Schmitt, R. J. P., Carling, P., Goichot, M., Keskinen, M., **Arias, M. E.**, Bizzi, S., Castelletti, A., Cochrane, T., Darby, S. E., Goichot, M., Kummur, M., Minderhoud, P.S.J., Nguyen, D., Nguyen, N.T., Oeurng, C.,1, Opperman, J., Rubin, Z., San, D.C., Schmeier, S., Wild, T. Save the Mekong Delta from Drowning. *Science* 376 (6593) 583-585. DOI: 10.1126/science.abm5176 (Impact factor = 51.433)
51. **Arias, M.E.**, Farinosi, F., Hughes, D.A., 2022. Future hydropower operations in the Zambezi River basin: Climate impacts and adaptation capacity. *River Research and Applications* 38, 926–938. <https://doi.org/10.1002/rra.3958> (Impact factor = 2.443)
50. Holtgrieve, G.W. and **Arias, M.E.** Optimizing Amazonian Dams for Nature. *Science* 375 (6582), 714-715. 10.1126/science.abn8311 (Impact factor = 51.433)
49. Miller, B.L., Holtgrieve, G.W., **Arias, M.E.**, Uy, S., Chheng, P. CH₄ production and oxidation contribute to CO₂ supersaturation in a tropical flood-pulse lake (Tonle Sap Lake, Cambodia). *Proceedings of the National Academy of Sciences* 119 (8) e2107667119. DOI: 0.1073/pnas.2107667119 (Impact factor = 11.2)
48. Benjamin, J.*, Al Mashrafi, S. Tejada-Martinez, A., Diaz-Elsayed, N., **Arias, M.E.**, Zhang, Q. Optimizing pressure retarded osmosis spacer geometries: An experimental and CFD modeling study. *J. of Membrane Science* 647, 5 April 2022, 120284. DOI: 10.1016/j.memsci.2022.120284 (Impact factor = 8.743)
47. Platz, M. C.*, **Arias, M.E.**, Byrne, R. H.. Metabolism Monitoring Methods and Potential Applications for Coral Reef Restoration. *Environmental Management* 69 (3) 621-625. DOI: 10.1007/s00267-022-01597-9 (Impact factor = 3.20)

46. Gao, B., Yang, X., Dasi, E., Lam, T., **Arias, M. E.**, Ergas, S. Enhanced Landfill Leachate Treatment in Sequencing Batch Biofilm Reactors (SBBRs) Amended with Zeolite and Biochar. *Journal of Chemical Technology & Biotechnology* 97 (3) 759-770. DOI: <https://doi.org/10.1002/jctb.6964> (Impact factor = 3.174)

45. Pryor, J.*, Zhang, Q., **Arias, M.E.**, Integrating Climate Change, Hydrology, and Water Footprint to Measure Water Scarcity in Lesotho, Africa. *Journal of Water Resources Planning and Management* 148 (1) 05021025. DOI: 10.1061/(ASCE)WR.1943-5452.0001502 (Impact factor = 3.3)

2021

44. Haberstroh, C.J.*, **Arias, M.E.**, Yin, Z, Y., Sok, T. Wang, M.C. Plastic transport in a complex confluence of the Mekong river in Cambodia. *Environmental Research Letters* 16 (9), 095009 (Impact factor = 6.793)

43. Haberstroh, C.J.*, **Arias, M.E.**, Zhewen, Y., Wang, M.C. Effects of Urban Hydrology on Plastic Transport in a Subtropical River. *Environmental Science & Technology Water* 1 (8) 1714–1727. DOI: 10.1021/acsestwater.1c00072

42. Miller, A. J.*, **Arias, M.E.**, Alvarez, S. Building and Agricultural Value at Risk in Florida (USA) from Flooding during Hurricane Irma. *Natural Hazards* 109 (2), 1327-1348. <https://doi.org/10.1007/s11069-021-04880-w> (Impact factor = 3.102)

41. Shrestha, B., Cochrane, T.A., Caruso, B., **Arias, M.E.**, Wild, T. Sediment management for reservoir sustainability and cost implications under land use/land cover change uncertainty. *Water Resources Research* 57 (4) e2020WR028351. 10.1029/2020WR028351 (Impact factor = 5.24)

40. Tarabih, O*. and **Arias, M.E.**, 2020. Hydrological and Water Quality Trends through the Lenses of Historical Operation Schedules in Lake Okeechobee. *Journal of Water Resources Planning and Management* 147 (7) 10.1061/(ASCE)WR.1943-5452.0001395 (Impact factor = 3.3)

39. Nabong, E., Whiteford, L., **Arias, M.E.**, Mihelcic, J. C Climate Change Adaptation Priority Strategies in the Philippines - Differences between Local Government Decision Makers and Marginalized Coastal Communities. *Environmental Engineering Science* 38 (5), 367-376 (Impact factor = 1.907)

38. Haberstroh, C.J.*, **M.E. Arias**, Yin, Z., Wang, M. C. Effects of hydrodynamics on the cross-sectional distribution and transport of plastic in an urban coastal river *Water Environment Research* 93 (2) 186-200. 10.1002/wer.1386 (Impact factor = 1.946)

2020

37. Platz, M.*, Takeshita, Y., Bartels, E., **Arias, M.E.**, Evaluating the potential for autonomous measurements of net community production and calcification as a tool for monitoring coral restoration *Ecological Engineering* 158, 106042 (Impact factor = 4.035)

36. Souter, N.J., Shaad, K., Vollmer, D., Regan, H.M., Farrell, T., Meynell, P., Cochrane, T.A., **Arias, M.E.**, Piman, T., Andelman, S.J. Using the Freshwater Health Index to assess hydropower development scenarios in the Sesan, Srepok and Sekong River basin *Water* 12 (3) 788 (Selected as Editor's Choice) (Impact factor = 3.103)

35. **Arias, M.E.**, Farinosi, F., Lee, E., Livino, A., Briscoe, J., Moorcroft, P.R., Impacts of climate change and deforestation on hydropower planning in the Brazilian Amazon *Nature Sustainability* (2020) DOI: 10.1038/s41893-020-0492-y (Impact factor = 27.16)

34. Benjamin, J.*, **Arias, M.E.**, Zhang, Q. A Techno-Economic Process Model for Pressure Retarded Osmosis based Energy Recovery in Desalination Plants *Desalination* 476, 114218 (Impact factor = 9.55)

2019

33. Kaura, M.*, **Arias, ME.**, Benjamin, J.*, Oeurng, C., Cochrane, TA. The role of forests in securing hydropower sustainability in Cambodia *Ecosystem Services* 39, 101003. DOI: 10.1016/j.ecoser.2019.101003 (Impact factor = 5.454)

32. Farinosi, F., **Arias, M. E.**, Lee, E., Longo, M., Pereira, F. F., Livino, A., Moorcroft, P. R., Briscoe, J., Future climate and land use change impacts on river flows in the Tapajós Basin in the Brazilian Amazon *Earth's Future* 7 (8), 993-1017. DOI: 10.1029/2019EF001198 (Impact factor = 7.495)
31. Senent Aparicio, J., Jimeno Sáez, P., **Arias, M.E.**, O'Driscoll, L., Sánchez, J., Leon, L., Alcalá, F.J., Pulido Velázquez, D., 2019. Preparation of technical posters as a tool to improve transversal competences of civil engineering studies. *International Journal of Engineering Education* 35, 1872–1880 (Impact factor = 1.29)
30. Pool, T., Elliott, V., Holtgrieve, G.W., **Arias, M.E.**, Altman, I., Kaufman, L., McCann, K., Fraser, E.D.G., Tudesque, L., Chevalier, M., Grenouillet, G., Ratha, C., Lek, S., McMeans, B., Cooperman, M., Phen, C., Hannah, L., Miller, B., Bo, G., Nam, S. Fish assemblage structure within a dynamic floodplain habitat patch network of a Southeast Asian tropical lake, *Freshwater Biology* 64(11), pp. 2026-2036 (Impact factor = 3.767)
29. Sabo, J.L., Holtgrieve, G.W., Ruhi, A., **Arias, M.E.**, Ngor, P.B., Elliott, V., Räsänen, T., Nam, S., 2019. Response to Comment on “Designing river flows to improve food security futures in the Lower Mekong Basin.” *Science* 364, eaav9887. <https://doi.org/10.1126/science.aav9887> (Impact factor = 51.433)
28. Oeurng, C., Cochrane, T.A., Chung, S., Kondolf, M., Piman, T., **Arias, M.E.**, Assessing Climate Change Impacts on River Flows in the Tonle Sap Lake Basin, Cambodia. *Water* 11, 618 (Impact factor = 3.103)
27. **Arias, M.E.**, Holtgrieve, G.W., Ngor, P.B., Dang, T.D., Piman, T. Maintaining Perspective of Ongoing Environmental Change in the Mekong Floodplains. *Current Opinion in Environmental Sustainability*, 1–7. 10.1016/j.cosust.2019.01.002. (Impact factor = 4.1; Featured in issue front cover)
26. Hecht, J. S., Lacombe, G., **Arias, M. E.**, Dang, T. D., Piman, T. Hydropower dams of the Mekong River basin: a review of their hydrological impacts. *J of Hydrology*, 568 285-300. DOI: 10.1016/j.jhydrol.2018.10.045. (Impact factor = 5.722; Featured as one of the most downloaded articles in the journal)

2018

25. Holtgrieve, G. W., **M. E. Arias**, A. Ruhi, V. Elliott, S. Nam, P. B. Ngor, T. A. Räsänen, and J. L. Sabo. Response to Comments on “Designing river flows to improve food security futures in the Lower Mekong Basin”. *Science* 361, no. 6398 (2018): eaat1477 (Impact factor = 51.433)
24. **Arias, M.E.**, Lee, E., Farinosi, F., Pereira, F.F., Moorcroft, P.R. Decoupling the effects of deforestation and climate variability in the Tapajós basin in the Brazilian Amazon. *Hydrological Processes* 32 (11) 1648-1663. DOI: 10.1002/hyp.11517 (Impact factor = 3.181)
23. Dang D. T. *, Cochrane, T.A., **Arias, M.E.**, Quantifying sediment dynamics in mega deltas using remote sensing data: a case study of the Mekong floodplains. *International Journal of Applied Earth Observation and Geoinformation* 68 (June 2018) 105–115. DOI: 10.1016/j.jag.2018.02.008 (Impact factor = 4.0)
22. Dang D. T. *, Cochrane, T.A., **Arias, M.E.**, Van, T.P.D., Modeling the impact of future development and sea level rise on the hydrology of the Mekong River floodplains and delta. *Journal of Hydrology Regional Studies* 15, 119-133 (Impact factor = 5.119)
21. **Arias, M.E.**, Wittmann, P., Parolin, P., Murray-Hudson, M. A., Cochrane, T.A. (2018) Interactions between flooding and upland disturbance drives species diversity in large river floodplains. *Hydrobiologia* 814 (1) 5-17. DOI: 10.1007/s10750-016-2664-3 (Impact factor = 2.056)
20. Kondolf, M., Schmitt, R.J.P., Carling, P., Darby, S., **Arias, M.E.**, Bizzi, S., Castelletti, A., Cochrane, T.A., Gibson, S., Kummu, M., Oeurng, C., Rubin, Z., Wild, T., Changing sediment budget of the Mekong: Cumulative threats and management strategies for a large river basin. *Science of the Total Environment* 625, 114-134 (Impact factor = 4.9)
19. Shrestha, B.*, Cochrane, T.A., Caruso, B. S., **Arias, M. E.**, Land use change uncertainty on streamflow and sediment projections in areas undergoing rapid development: A case study in the Mekong Basin. *Land Degradation & Development* 29(3) 835-848 (Impact factor = 7.27)

2017

18. Sabo, J.L., Ruhi, A., Holtgrieve, G. H., Elliott, V., **Arias, M. E.**, Ngor, P.B., Räsänen, T., Nam, S., Designing river flows to improve food security futures in the Lower Mekong Basin. *Science* Dec 8 2017. doi:10.1126/science.aao1053. (Impact factor = 51.433; Featured in front cover)

17. Pereira, F.F., Farinosi, F., **Arias, M.E.**, Lee, E., Briscoe, J., Moorcroft, P.R., (2017). Technical Note: A hydrological routing scheme for the Ecosystem Demography model (ED2+R). *Hydrol. Earth Syst. Sci.* 21, 4629. doi:10.5194/hess-2016-114 (Impact factor = 4.256)

2016

16. Shrestha, B.*, Cochrane, T.A., Caruso, B. S., **Arias, M. E.**, Piman, T., Uncertainty in flow and sediment predictions due to future climate scenarios for the 3S Rivers in the Mekong Basin. *J of Hydrology*, 540 1088-1104. DOI: 10.1016/j.jhydrol.2016.07.019 (Impact factor = 3.727)

15. Oeurng, C., T. A. Cochrane, **M. E. Arias**, B. Shrestha*, and T. Piman, Assessment of Changes in Riverine Nitrate in the Sesan, Srepok and Sekong Tributaries of the Lower Mekong River Basin. *Journal of Hydrology: Regional Studies* 8 (December 2016): 95–111. DOI: 10.1016/j.ejrh.2016.07.004 (Impact factor = 5.119)

14. Dang, D.T.*, Cochrane, T.A., **Arias, M.E.**, Van, P. D. T., de Vries, T. T., Hydrological regime changes as impacted by water infrastructure development in the Mekong Floodplains. *Hydrological Processes* 30: 3824–3838. doi: 10.1002/hyp.10894 (Impact factor = 3.181)

13. Piman, T., Cochrane, T.A., **Arias, M.E.** (2016) Effect of Proposed Large Dams on Water Flows and Hydropower Production in the Sekong, Sesan and Srepok Rivers of the Mekong Basin. *River Research and Applications* 32, 2095–2108. doi:10.1002/rra.3045 (Impact factor = 2.067)

2014

12. **Arias, M.E.**, Piman, T., Lauri, H., Cochrane, T.A., Kumm, M. (2014) Dams on Mekong tributaries as significant contributors of hydrological alterations to the Tonle Sap Floodplain in Cambodia. *Hydrological and Earth System Sciences* 18 5303–5315, DOI: 10.5194/hess-18-5303-2014 (Impact factor = 4.256)

11. Cochrane, T. A., **Arias, M. E.**, Piman, T. (2014) Historical impact of water infrastructure on water levels of the Mekong River and the Tonle Sap System. *Hydrological and Earth System Sciences* 18 4529-4541, DOI: 10.5194/hessd-18-4529-2014 (Impact factor = 4.256)

10. **Arias, M.E.**, Cochrane, T.A., Kumm, M., Lauri, H., Koponen, J., Holtgrieve, G.W., Piman, T. (2014) Impacts of hydropower and climate change on drivers of ecological productivity of Southeast Asia's most important wetland. *Ecological Modelling* 272C 252-263, DOI: 10.1016/j.ecolmodel.2013.10.015 (Impact factor = 2.974)

9. **Arias, M.E.**, Cochrane, T.A., Elliott,V. (2014) Modelling future changes of habitat and fauna of the Tonle Sap wetland of the Mekong. *Environmental Conservation* 41.02 (2014): 165-175 (Impact factor = 3.063)

2013

8. Holtgrieve, G.W., **Arias, M.E.**, Irvine, K.N., Lamberts, D., Ward, E.J., Kumm, M., Koponen, J., Richey, J.E. (2013) Patterns of Ecosystem Metabolism in the Tonle Sap Lake, Cambodia with Links to Capture Fisheries. *PLoS ONE* 8(8): e71395. DOI:10.1371/journal.pone.0071395 (Impact factor = 3.24)

7. **Arias, M.E.**, Cochrane, T.A., Norton, D., Killeen, T.J., Khon, P. (2013) The flood pulse as the underlying driver of vegetation in the largest wetland and fishery of the Mekong Basin. *AMBIO* 42 (7) 864-876, DOI: 10.1007/s13280-013-0424-4 (Impact factor = 5.129)

6. **Arias, M.E.**, Brown, M.T., Sansalone, J. J. (2013) Characterization of stormwater suspended sediments and phosphorus in an urban catchment in Florida (USA). *Journal of Environmental Engineering* 2013.139:277-288 (Impact factor= 1.8)

5. Piman, T., Cochrane, T.A., **Arias, M.E.**, Green, A., Dat, N.D. Assessment of Flow Changes from Hydropower Development and Operations in Sre Kong, Se San and Sre Pok Rivers of the Mekong Basin. *Journal of Water Resources Planning and Management* 139.6 (2013): 723-732 (Impact factor = 3.054)

2012

4. Cooperman M.S., S. Nam, **M. E. Arias**, T. Cochrane, V. Elliott, T. Hand, L. Hannah, G. Holtgrieve, L. Kaufman, A. Koenig, J. Koponen, V. Kum, K. McCann, P. McIntyre, B. Min, C. Ou, N. Rooney, K. Rose, J. Sabo, K.O. Winemiller, A watershed moment for the Mekong: New regulations may boost sustainability of the world's largest inland fishery. *Cambodian Journal of Natural History* December 2012

3. **Arias, M.E.**, Cochrane, T.A., Piman, T., Kummu, M., Caruso, B., Killeen, T.J. (2012) Quantifying changes in flooding and habitats in the Tonle Sap Lake (Cambodia) caused by water infrastructure development and climate change in the Mekong Basin. *Journal of Environmental Management* 112 53-66 (Impact factor = 6.789)

2011

2. **Arias, M.E.**, Cochrane, T.A., Lawrence, K., Killeen, T. J., and Farrell T.A. (2011) Paying the forest for electricity: A modelling framework to market forest management as payment for ecosystem services benefiting hydropower generation. *Environmental Conservation* 38 (4) 1-12 (Impact factor = 3.063)

2009

1. **Arias, M.E.**, M.T. Brown (2009) Feasibility of using constructed treatment wetlands for municipal wastewater in the Bogotá Savannah, Colombia. *Ecological Engineering* 35 (2009) 1070-1078 (Impact factor = 4.035)

Peer-reviewed conference proceedings (n = 5)

Benjamin, J*, **Arias, M.E.**, Zhang, Q. (2019). "Pressure Retarded Osmosis: A Potential Technology for Desalination Energy Recovery and Concentrate Management". Proceedings of the 2019 International Water Conference, Orlando, Florida, November 2019

Dang Duc, T.*, Cochrane, **Arias, M.E.**, Van, T.P.D., De Vries, T. (2015) Analysis of water level changes in the Mekong Floodplain impacted by flood prevention systems and upstream dams. Proceedings of the 36th IAHR World Congress, The Hague, Netherlands, June 28-July 3, 2015

Arias, M.E., Cochrane, T.A., Caruso, B., Killeen, T.J., Kummu, M. (2011) A landscape approach to assess impacts of hydrological changes to vegetation communities of the Tonle Sap Floodplain. Proceedings of the 34th IAHR World Congress, Brisbane, Australia, June 27-July 1, 2011

Cochrane, T.A., **Arias, M.E.**, Teasley, R.L. and Killeen, T.J. (2010) Simulated changes in water flows of the Mekong River from potential dam development and operations on the Se San and Sre Pok tributaries. Montreal, Canada: IWA World Water Congress and Exhibition (IWA 2010), 19-24 Sep 2010

Arias, M.E., Brown, M.T. (2009) Feasibility of Treatment Wetlands for Municipal Wastewater in Colombia: Emergy Evaluation of Treatment Alternatives. In: Brown, M.T., S. Sweeney, D.E. Campbell, S. Huang, E. Ortega, T. Rydberg, D. Tilley and S. Ulgiati (eds). 2009 Emergy Synthesis 5: Theory and applications of the emergy methodology. Proceedings of the 4th Biennial Emergy Conference. Center for Environmental Policy, University of Florida, Gainesville. 483 pp

Book Chapters

Souter, N.J., Vollmer, D., Shaad, K., Farrell, T., Regan, H., Arias, M.E., Cochrane, T.A., Andelman, T.S., 2021. Planning for Climate Change and Mechanisms for Co-operation in Southeast Asia's Sesan, Sekong and Srepok Transboundary River Basin, in: Babel, M., Haarstrick, A., Ribbe, L., Shinde, V.R., Dichtl, N. (Eds.), *Water Security in Asia: Opportunities and Challenges in the Context of Climate Change*. Springer International Publishing, Cham, pp. 31-44. https://doi.org/10.1007/978-3-319-54612-4_3

Parolin, P., Ferreira, L.V., Piedade, M.T.F., Cunha, C.N., Wittmann, F., **Arias, M.E.** (2016). Flood Tolerant Trees in Seasonally Inundated Lowland Tropical Floodplains, in: Goldstein, G., Santiago, S.L. (Eds.), *Tropical Tree Physiology: Adaptations and Responses in a Changing Environment*. Springer International Publishing, Cham, pp. 127-147

Piman, T., Cochrane, T.A., **Arias, M.E.**, Dat, N.D., Vonnarart, O. (2015) Managing Hydropower under Climate Change in the Mekong Tributaries. In S. Shrestha (Ed.), *Managing Water Resources under Climate Uncertainty: Examples from Asia, Europe, Latin America, and Australia*. Springer Water

Professional Service

USF CEE Department: Environmental Engineering faculty search committee 2019, CEE graduate admissions committee, CEE Environmental Engineering committee, CEE Water Resources committee, participating faculty in Concentration in Engineering for International Development, Faculty advisor for fellows in NSF National Research Training (STRONG-COASTS) and Graduate Assistance in Areas of National Need (GAANN).

USF at-large: PhD Dissertation Chair (Suzanne Young, Integrative Biology (2017); Matt McCarthy, Marine Science (2017); Alvaro Sierra, Industrial Engineering (2019); Lauren Griffiths, Geosciences (2020); Ferhat Karakas, Mechanical Engineering (2020); James Conrad, Integrative Biology (2020), USF internal grants review (2019).

Southwest Florida Water Management District Springs Management Committee, academic representative 2018-2022.

Consortium of Universities for the Advancement of Hydrologic Science, USF representative since 2017.

American Geophysical Union: Ecohydrology Technical Committee member (2020-2022), Fall Meeting session chair and convener (2013, 2019), student presentation judge (2016-19), Frontiers of Hydrology Session Chair (2022).

American Water Resources Association, Faculty advisor and founder of USF Student Chapter, 2019-Present. National Conference session organizer (2020)

American Ecological Engineering Society, New journal planning committee (2020-21), graduate poster competition judge (2020-21), journal liaison committee (2021-), Chair and host of the 2023 conference.

Journal of Ecological Engineering Design, Associate Editor (2021-)

National Science Foundation: Reviewer and panelist (2016, 2017, 2020-2023).

Environmental Protection Agency: Proposal panelist (2017).

USAID: Proposal panelist (2017).

MS-LA SeaGrant: Proposal panelist (2019).

Book reviewer, Ten Years After A Perfect Storm in The Amazon Wilderness (2018).

High School student science fair mentor, Lakeland Christian School.

International scientific committee member, International Symposium on Floodplain Ecosystems, Siem Reap, Cambodia, July 24-27, 2017.

Energy Panel organizer, Sustainability Science Symposium, Harvard University, May 20-21, 2016.

Session moderator, International Congress for Conservation Biology, Auckland (NZ), 2011.

ASCE Journal of Environmental Engineering, Special Issue Associate Editor

Journal reviewer (55+): Biotropica (1), Communications Earth & Environment (1), Cambodian Journal of Natural History (1), Earth Surface Processes (1), Ecohydrology and Hydrobiology (2), Ecological Engineering (10), Ecological Modelling (8), Environmental Modelling and Software (3), Environmental Science & Technology (3), Environmental Science & Technology Water (2), Frontiers in Ecology and the Environment (1), Environmental Earth Sciences (1), Environmental Monitoring and Assessment (1), Frontiers in Environmental Science (1), Frontiers in Water (1), Global Environmental Change (1), Hydrobiologia (1), Hydrological Processes (1), Hydrological and Earth System Sciences (2), International Journal of Water Sciences (1), Journal of Asian Earth Sciences (1), Journal of Environmental Engineering (1), Journal of Environmental Management (1), Journal of Hydrologic Engineering (1), Journal of Hydrology (2), Journal of Hydrology: Regional Studies (1), Journal of Water Resources Planning and Management (5), Lakes and Reservoirs (1), Nature Sustainability (5), Nature Communications (1), Remote Sensing of the Environment (1), River Research and Applications (2), Science of the Total

Environment (7), Scientific Reports (2), Urban Water (1), Water (1), Water Resources Research (8), Wetlands Ecology and Management (2).

Workshop/Network participation

- **Florida Blue-Green Algae State-of-the-Science Symposia**, Maitland May 15-16 2023 and St. Petersburg 2019.
- **NASA SERVIR Applied Science Team**, Huntsville, AL, Feb 2023.
- **Human Response to Environmental Change in the Lower Mekong**, Center for International Social Science Research, University of Chicago, May 11-12, 2018
- **NSF CNH-RCN Amazon Dams Network**, Flagstaff, AZ, May 15-19, 2017 and Palmas, Brazil, May 14-18, 2018
- **Mekong Delta Sediments**, UC Berkeley, Dec 9-12, 2016
- **Water Diplomacy Workshop**, Harvard Law School and MIT, June 20-24, 2016
- **NSF INFEWS in large rivers**, University of Washington (Seattle, WA), December 10-12, 2015
- **Mekong Foodweb modelling group**, UC Santa Barbara/Cambodia (alternating years) 2011-2016

Professional Affiliations

American Geophysical Union (2013-present)

American Ecological Engineering Society (2006-2008, 2018-present)

American Water Resources Association Florida Chapter (2020-present)

American Society of Civil Engineers (2021-present)

International Association of Hydrological Sciences (2011-present)

Skills

Computer knowledge:

- Water Modeling: Watershed hydrology, hydraulic routing, infrastructure operations, 1D/2D/3D hydrodynamics, surface water quality, environmental flows
- Geographic Information Systems and remote sensing: ArcGIS 10.X, ENVI
- Numerical and statistical analysis: Microsoft Excel, R, Matlab, Visual Basic, CANOCO

Languages:

	<u>Speaking</u>	<u>Reading</u>	<u>Writing</u>
Spanish	Mother tongue	Mother tongue	Mother tongue
English	Fluent	Fluent	Fluent
Portuguese	Fluent	Fluent	Good

Outreach and Media

Featured in AGU Ecohydrology Blog (2019): <https://www.aguecohydrology.org/blog-adding-our-leaves/meet-a-leaf-mauricio-e-arias>

Featured newspaper articles:

- <https://vodenglish.news/trash-on-the-surface-microplastics-below-hundreds-of-tons-of-plastic-carried-daily-by-phnom-penh-rivers-research-finds/>
- <http://baysoundings.com/usf-lab-brings-international-experience-back-to-tampa-bay/>
- www.phnompenhpost.com/national/cambodias-most-important-ecosystem-tonle-sap-crisis-damage-past-point-no-return

Featured in documentary film *Hydropower in Cambodia: Impacts and Alternatives*, 2013: cambodiahydropower.weebly.com

Treasurer and water pollution workshop organizer, Children Beyond Our Borders (nonprofit organization), Colombia-US, 2008-09

Volunteer, Solar Park Pond Ecological Enhancement Project (Gainesville, USA), 2007-08

Volunteer Intern, WWF Yangtze River wetlands restoration program (Wuhan, China), 2004

Volunteer Park-Ranger, Chingaza National Park (Colombia), June – August 2003

Licenses/Certificates

- Professional Engineer State of Florida License 90867 (2021-)
- University of Florida Graduate certificate in Ecological Engineering (2007)

Professional presentations

Names of authors shown (*Denotes student co-/supervised) in presentations I was a co-author.

60. Arias, M.E., New Generation of Models to Manage Lake Okeechobee Harmful Algal Blooms. Water, Watershed, Wetland Seminar, UF, Gainesville, September 20, 2023 (Invited oral presentation)
59. EPA National Nutrient Management Team, virtual, July 20th, 2023. (Invited oral presentation)
58. Bloom Prediction and Modeling, Florida Blue-Green Algae State-of-the-Science Symposium II, Maitland May 15-16 2023 (Invited oral presentation)
57. Yang, X., Ergas, S.J., Arias, M.E., Hybrid Constructed Wetlands Amended with Zeolite/Biochar for Enhanced Landfill Leachate Treatment. 22nd Annual Conference of American Ecological Engineering Society, Baltimore, MD, June 21, 2022 (oral presentation)
56. Brooks, J.M.*, Arias, M.E. Plastic pollution characteristics and fate in urban stormwater ponds. AGU Frontiers in Hydrology Meeting, San Juan, PR, June 21, 2022 (poster presentation)
55. Brooks, J.M.*, Arias, M.E., Plastic pollution in stormwater ponds. AWRA 2021 Virtual Annual Water Resources Conference, Nov 8, 2021 (poster presentation)
54. Brooks, J.M.*, Arias, M.E., Settling behaviors of stormwater microplastics. 8th UF Water Institute Symposium, Gainesville, FL, Feb 22, 2022 (poster presentation)
53. Temporal and Spatial Optimization of Existing and Emerging Nutrient Management Technologies and Practices for Control of Harmful Algal Blooms. SWFWMD Coastal Springs Management Committee. May 25, 2022 (Invited)
52. ME Arias and O Tarabih, Impacts of Lake Okeechobee Operations on phosphorous exports to the Gulf, Gulf of Mexico Conference, Baton Rouge, LA, April 27, 2022 (Poster)
51. ME Arias and CJ Haberstroh, Plastic Pollution Loads from Tampa to the Gulf, Gulf of Mexico Conference, Baton Rouge, LA, April 26, 2022 (Oral)
50. Lam, T., Yang, X., Arias, M.E., Ergas, S.J., Feasibility of Landfill Leachate Reuse through Adsorbent-enhanced Constructed Wetlands and UF-RO. Florida Water Resource Conference, Daytona beach, FL, April 25, 2022 (poster)
49. Effects of Urban Runoff and Hydrological Seasonality on Plastic Transport in the Hillsborough River. BASIS7-ANEP, Tampa, March 1st, 2022 (Invited)
48. TDD Dang, JY Ng, AFMK Chowdhury, M Arias, S Galelli, Restoring environmental flows in tropical floodplains by coordinating water-energy operations. AGU Fall Meeting, New Orleans, LA December 13-17, 2021 (Poster)
47. Q Zhang, ME Arias, H Charkhgard, SJ Ergas, J Mihelcic, M Nachabe, MC Rains, TD Dang, J Hua, R Cooper, O Tarabih, V Mahmoodian. Temporal and Spatial Optimization of Existing and Emerging Nutrient Management Technologies and Practices for Control of Harmful Algal Blooms in Lake Okeechobee. AGU Fall Meeting, New Orleans, LA December 13, 2021 (Oral presentation)

M.E. Arias Curriculum Vitae

46. O Tarabih, M Arias. Impacts of Lake Okeechobee Operation Schedules on phosphorous exports. AGU Fall Meeting, New Orleans, LA, December 13-17, 2021 (Poster presentation)
45. Kramer, M.K., Arias, M.E., Evaluation of Hydrodynamic Effects of Waterway Restoration on Estuarine Ecosystems in Charlotte Harbor, Florida. 2021 AWRA Annual Water Resources Conference, November 9, 2021 (oral presentation)
44. Plastic Pollution Transport in Urban Rivers. USF Integrative Biology Department Seminar. October 21, 2021. (Invited seminar)
43. Environmental Regional Change in the Mekong Floodplains: What was predicted and what is going on now? Geosciences Seminar, University of Louisiana at Lafayette, March 19, 2021 (Invited)
42. Environmental Regional Change in the Mekong Floodplains: What was predicted and what is going on now? Spelman College Environmental & Health Sciences Seminar Series, March 10, 2021 (Invited)
41. Next Stop Graduate School! American Water Resources Association National Conference, Nov 11 2020 (Invited Panelist)
40. TD Dang, S Galelli, AK Chowdhury, M Arias. Would power grid interconnections protect the Mekong's wetlands? AGU Fall Meeting Dec 1, 2020 – Dec 17, 2020 (Virtual)
39. CJ Haberstroh, M Arias. Effects of Monsoonal-driven Flood Dynamics on Plastic Transport in the Mekong River Floodplain around Phnom Penh, Cambodia, AGU Fall Meeting Dec 1, 2020 – Dec 17, 2020 (Virtual)
38. Ergas, S.J., Arias, M.E., Cost-Effective Hybrid Constructed Wetlands for Landfill Leachate Reclamation. SWANA Hinkley Center Symposium, Online webinar, October 14, 2020 (oral presentation)
37. CJ Haberstroh, M Arias, Seasonal and longitudinal patterns of plastic pollution in a subtropical urban river. EGU General Assembly Conference, 4–8 May 2020 (Virtual)
36. TA Cochrane, B Shrestha, B Caruso, ME Arias, TB Wild. Assessing Watershed and Reservoir Level Sediment Management Options for Reducing Hydropower Production Loss Under LULC Uncertainty. AGU Fall Meeting, San Francisco, CA December 9-13, 2019 (Poster)
35. O. Tarabih, ME Arias. Improve our understanding of the Lake Okeechobee system to modify the system's infrastructure and operations for the well-being of the system. AGU Fall Meeting, San Francisco, CA December 9-13, 2019 (Poster)
34. CJ Haberstroh, ME Arias, Plastics in rivers-understanding the behavior of plastic particles through hydrodynamics, AGU Fall Meeting, San Francisco, CA December 9-13, 2019 (Poster)
33. CJ Haberstroh, Z Yin, CM Wang and ME Arias. Plastic Pollution in Rivers—Challenges and Opportunities of MicroRaman Spectroscopy for Characterization, Proceedings of the 2019 NanoFlorida International Conference Held at the University of South Florida, Tampa, FL, November 15th – 17th 2019
32. Arias, M.E., Seeking Consensus for Ecological Restoration of South Florida Ecosystems in a Water Resources Sustainability Course. 19th Annual Meeting of the American Ecological Engineering Society, Asheville, NC, June 8th, 2019 (oral presentation)
31. Arias, M.E., Platz, M.*, Characterization of ecosystem metabolism of restored coral in the Florida Keys. 19th Annual Meeting of the American Ecological Engineering Society, Asheville, NC, June 4th, 2019 (oral presentation)
30. Watershed Sustainability in a Changing World. Florida Water Climate Alliance, Orlando, FL, Dec. 20th, 2018 (Invited)
29. Arias, M.E., Kaura, M.*, Balancing Hydropower Generation and Forest Protection in Cambodia. American Geophysical Union Fall Meeting, Washington DC, December 11, 2018 (oral)
28. CJ Haberstroh*, ME Arias, Fishing for plastic in Florida: Field monitoring of plastic loads in an urban river. AGU Fall Meeting, Washington DC, Dec. 12, 2018 (Poster)
27. Arias, M.E., Kaura, M.*, The role of forests in securing hydropower needs of Cambodia. 18th Annual Meeting of the American Ecological Engineering Society, Houston, TX, June 13, 2018 (oral presentation)

26. Monitoring Ongoing Environmental Regional Change in the Mekong Floodplains. Wetlands Seminar, University of Florida, April 11, 2018 (Invited Seminar)
25. Arias, M.E., Haberstroh, C.J.*, Floodplain-wide coupling of flooding and vegetation patterns in the Tonle Sap of the Mekong River. American Geophysical Union Fall Meeting, December 15, 2017
24. Arias, M.E., GM Kondolf, RJP Schmitt, PA Carling, SE Darby, S Bizzi, A Castelletti, TA Cochrane, S Gibson, M Kummu, C Oeurng, Z Rubin, TB Wild. Losing ground in mega-deltas: basin-scale response to existential threats to the Mekong Delta. American Geophysical Union Fall Meeting, December 15, 2017
23. Impacts of Hydrological Alterations in the Mekong Floodplain Ecosystems. USF Integrative Biology Department Seminar. November 9th, 2017 (Invited seminar)
22. Arias, M.E., Haberstroh, C.J.*, Monitoring interannual patterns of floodplain vegetation in the Tonle Sap from space. International Symposium on Flood Pulse Ecosystems, Siem Reap (Cambodia), July 26th, 2017 (oral presentation)
21. Effects of climate change and deforestation on the Amazon's hydrological cycle will require interventions to hydropower planning in Brazil. American Geophysical Union Fall Meeting, San Francisco, USA, December 13th 2016 (oral presentation)
20. Tradeoffs between hydropower and hydrological alterations in the Amazon. Energy for Human Development speaker series, Massachusetts Institute of Technology, Sept. 27, 2016 (Invited presentation)
19. Shifts to planned hydropower generation in the Amazon driven by climate change. Sustainability Science Symposium, Harvard University, May 20-21, 2016 (oral presentation)
18. Is deforestation driving Southeastern Amazonia's hydrological transition? American Geophysical Union Fall Meeting, San Francisco, USA, December 14-18 2015
17. Sustainability of the Amazon: Tradeoffs Between Environmental Change, Hydropower and River Alterations. Brazil Studies Program Seminar, Harvard University, April 30th, 2015 (Invited)
16. Uncertainty and variability in sediment loads in the largest tributary of the Mekong Basin using the Soil and Water Assessment Tool. American Geophysical Union Fall Meeting, San Francisco, USA, December 15-19 2014 (oral presentation)
15. Altman, I., Arias, M.E., Gopal, S., Kaufman, L. Freshwater, Floods, Fish, and the Future of a Nation. Panel seminar at the Pardee Center for the Study of the Longer Range Future, Boston University, October 22, 2014 (Invited)
14. Coupling SWAT with land cover and hydropower models for sustainable development in the Mekong Basin. Pernambuco, Brazil: International SWAT Conference, 30 Jul-1 Aug 2014 (oral presentation)
13. Flooding and upland disturbance drive species richness in large river floodplains. Manaus, Brazil: International Conference on the Status and Future of the World's Large Rivers, 21-25 Jul 2014 (oral presentation)
12. Impacts of Hydrological Alterations to the Tonle Sap Ecosystem of the Mekong River Basin, American Geophysical Union Fall Meeting, San Francisco, USA, December 9-13, 2013
11. Impacts of Hydrology and Habitat Changes on the Primary Production of the Tonle Sap, Southeast Asia's Largest Lake. 4th International Ecosummit 2012, Columbus, Ohio, USA, October 1-5 2012 (oral presentation)
10. Impacts of hydrology and habitat changes on the primary production of Southeast Asia's largest lake. IWA World Congress on Water, Climate, and Energy, Dublin, Ireland, May 13-18 2012 (oral presentation)
9. Overview of Mekong's hydrological models of climate change and hydropower development and their impacts on the Tonle Sap. Adapting to Environmental Change in the Tonle Sap Lake and Floodplain: Enhancing Resilience of Ecosystems and Communities workshop organized by Conservation International. Phnom Penh, Cambodia, January 12-13, 2012 (invited oral presentation)
8. Fish, Mud, Thorns, and Rice: Field Survey of Floodplain Habitats in the Tonle Sap, Cambodia. 25th International Congress for Conservation Biology, Auckland, New Zealand, December 5-9, 2011 (oral presentation)

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7. A landscape approach to assess impacts of hydrological changes to vegetation communities of the Tonle Sap Floodplain. 34th IAHR World Congress, Brisbane, Australia, June 27-July 1, 2011 (oral presentation)
6. Mekong Flows: Modelling hydrological and ecological changes in the Lower Mekong Basin. UC Development network symposium, University of Canterbury, February 2011 (oral presentation)
5. Modelling future change of flooding and vegetation communities of the Tonle Sap Lake Floodplain. UC postgraduate showcase, University of Canterbury, September 2010 (oral presentation)
4. Characterization of Stormwater Pollution Loads: Implications for Design and Management of Ecologically-Engineered Systems. Eighth Annual American Ecological Engineering Meeting, June 11-23, 2008, Blacksburg, VA (oral presentation)
3. Characterization of Suspended-Sediments in a Closed-Basin Stormwater System during Rainfall-Runoff Events. First UF Water Institute Symposium, February 27, 2008, Gainesville, FL (poster presentation)
2. Feasibility of Treatment Wetlands for Municipal Wastewater in Colombia: Emergy Evaluation of Treatment Alternatives. Fifth Biennial Emergy Conference, January 31, 2008, Gainesville, FL (poster presentation)
1. Feasibility of Using Constructed Wetlands to Treat Municipal Wastewater in the Bogotá Savannah, Colombia. Seventh Annual American Ecological Engineering Meeting, May 21-25, 2007, Manhattan, KS (oral presentation)