

vita

David K. Gattie

BIOGRAPHICAL SKETCH

David Gattie is an [Associate Professor of Engineering](#) in the University of Georgia's [College of Engineering](#), and a [Senior Fellow](#) in the University of Georgia's [Center for International Trade and Security](#). He has 14 years of private industry experience as an energy services engineer and environmental engineer. His research is in the area of energy policy and integrated energy resource planning for the power sector with a particular focus on the national security implications of U.S. nuclear power. Dr. Gattie established the university's first environmental engineering undergraduate program in 2009, which he ushered through full accreditation in 2012, and he teaches graduate and undergraduate courses in energy systems and energy security for both the College of Engineering and the Center for International Trade and Security. He also serves on the Advisory Board for the Energy Policy Institute at Boise State University and as an uncompensated member on the Advocacy Council for Nuclear Matters. He also has provided [testimony before](#) the U.S. House Energy and Commerce Committee on energy, climate and nuclear power policy, various Georgia state legislative committees and the Georgia Public Service Commission.

RESEARCH INTERESTS

Current research is in the electric power sector with a focus on comprehensive energy policy, integrated resource planning and the energy and national security implications of nuclear power. Particular focus on comprehensive energy policy that accounts for the realities of a world undergoing unprecedented economic growth and development and that gives full consideration of the value of nuclear power in meeting these economic objectives under the constraints of carbon reductions. He has a strong interest in extending expertise in energy and natural resources into developing economies and areas of energy poverty. Dr. Gattie is currently leading the development of the Energy Security Initiative (ESI) at UGA in collaboration with UGA's Center for International Trade and Security (CITS) in the School of Public and International Affairs (SPIA). This has included the development of three graduate courses in energy security: INTL 8278 Energy Statecraft, INTL 8279 Energy Security and Policy and MCHE 8500 Technical Foundations of Energy for Policymakers.

EDUCATION

PhD (Ecology), University of Georgia, 1993.
BSAE (Agricultural Engineering), University of Georgia, 1983.

PROFESSIONAL POSITIONS HELD

2018-Present	Senior Fellow, UGA Center for International Trade and Security
2017-2018	Resident Fellow, UGA Center for International Trade and Security
2012-Present	Associate Professor of Engineering, UGA College of Engineering
2006-2012	Associate Professor, UGA Biological & Agricultural Engineering
2000-2006	Assistant Professor, UGA Biological & Agricultural Engineering
1998-1999	Instructor, UGA Biological & Agricultural Engineering,
1995-1998	Environmental Engineer, Oak Ridge Institute for Science and Education
1992-1995	Sr. Environmental Engineer, DynCorp/TAI, Athens, GA
1986-1992	Environmental Engineer, Technology Applications Inc., Athens, GA
1984-1986	Energy Services Engineer, Sumter EMC, Americus, GA
1983-1984	Production Management, Ralston Purina Co., Gainesville, GA

EXPERT TESTIMONY

1. U.S. House Energy and Commerce Committee, Energy Security Roundtable, January 26, 2023. [Link to Testimony](#)
2. David Gattie before the U.S. House of Representatives Energy and Commerce Subcommittee on Environment and Climate Change: Hearing on "Building a 100 Percent Clean Economy: Solutions for Economy-Wide Deep Decarbonization", December 5, 2019
 - Provided testimony on the national security threats around global climate change and America's nuclear power enterprise. [Link to Testimony](#)
3. David Gattie before the Georgia Public Service Commission Docket No. 29849, Document Filing #169732. November 9, 2017—Testimony provided to the Georgia Public Service Commission for Georgia Power Company's Seventeenth Semi-Annual Vogtle Construction Monitoring Report. Testified on the non-monetized benefits of nuclear power. [Link to Testimony](#)
4. David Gattie before the Georgia Public Service Commission Docket No. 44280, Document Filing #191865. November 10, 2022—Testimony provided to the Georgia Public Service Commission. Testified on issues associate with monthly net-metering of rooftop solar. [Link to Testimony](#)

HONORS, AWARDS AND HONORARY SOCIETIES

<u>Year</u>	<u>Recognition</u>
2013	Senior Teaching Fellow, UGA Center for Teaching & Learning
2012	Inducted into the University of Georgia's Teaching Academy
2006	Early Career Teaching Award, UGA CAES
2006	Biological & Agricultural Engineering Teacher of the Year
2003	Teacher of the Year, Institute of Biological Engineering, UGA Chapter
2002	Non-Tenured Faculty Award, ASEE, BAE Division
2002	Distinguished Teaching Award, <i>Gamma Sigma Delta</i> Honor Society
2000	AGHON (Agricultural Honor Society)
1999	Outstanding Leadership Among University Professors, UGA SGA
1998, 1999	Teacher of the Year, ASAE, UGA Section

INTERNATIONAL WORK

Dr. Gattie is collaborating on energy policy issues in South Korea. He recently served as mentor to the Deputy Director of ROK's Ministry of Trade, Industry and Energy who was on a one-year appointment as a visiting research scholar at the University of Georgia.

Dr. Gattie has collaborated with research faculty from engineering, environmental science, ecology, environmental design, global agriculture, and health and nutrition to develop global service learning programs with Kasetsart University and Chiang Mai University in Thailand (from 2005-2009), with environmental engineering programs at EARTH University in Costa Rica and the University of Costa Rica (2006-2011), and with engineering programs at SRM University in India (2015). Dr. Gattie has also spent time at Tsinghua University in Beijing, China developing online instruction in power generation and emissions (2015). Overall, these programs focused on energy, environmental emissions, natural resources and the human condition.

PUBLICATIONS

Chapters in Books (4)

1. Lawrence TM, Gattie DK. 2018. North American Legislation for Energy Efficiency in Buildings.
2. Smith MC, Thomas DL, Gattie DK. 2003. Agricultural Runoff Characteristics. *Encyclopedia of Water Sciences*, pp. 15-18, Marcel-Dekker Publisher.
3. Vellidis GW, Gattie DK, Smith MC. 2000. *Ecology and Technology, Encyclopedia of Life Support Systems, 5:11.4.1 (EOLSS)-UNESC*.
4. Hill R, Kellam NN, Gattie DK. 2008. Chapter 6: Essential Mathematics and Science Content as a Base for Understanding and Teaching Engineering Principles. Council for Technology Teacher Education Yearbook: Engineering and Technology Education, 2008, 103-132.

Journal Editorship (2)

1. Schramski JR, Gattie DK (Eds). 2009. Special Issue *Ecological Modelling*, "Cross-Disciplinary Informed Ecological Network Theory – Selected Papers from the Third Workshop on Ecological Network Analysis", Vol. 220, No. 22:3111-3240 (129 pp).
2. Gattie DK, Mitsch WJ (Eds). 2003. Special Issue *Ecological Engineering*, "The Philosophy and Emergence of Ecological Engineering", Vol.20, No.5:327-454 (127 pp).

Journal Editorials (2)

1. Schramski JR, Gattie DK. 2009. Cross-disciplinary informed ecological network theory. *Ecological Modelling*, 220(22):3111-3112.
2. Gattie DK, McCutcheon SM, Smith MC. 2003. Ecological Engineering: The State-of-the-Field. *Ecological Engineering*, 20(5):327-330.

Popular Press Editorials, Commentaries and Briefs on Energy Policy (45)

1. Gattie, D. 2023. Georgia's Reality-Based Approach to Energy and Economic Growth. James Magazine. May/June Issue, pp. 57-58. [Link to Article](#)
2. Gattie, D. 2023. US hyperfocus on decarbonization creates geopolitical blind spots. *The Hill*. March 7, 2023. [Link to Article](#)
3. Gattie, D. 2023. National interests are best served by an all-of-the-above energy approach. *Ohio Cooperative Living*. February 1, 2023. [Link to Article](#)
4. Gattie, D. 2022. Georgia's Future of Prioritizing Energy Security and Reliability. *James Magazine*, September/October Issue, pp. 27-29. [Link to Article](#)
5. Gattie, D, and Hewitt, M. 2022. Security-centric and climate-inclusive: Energy policy for an era of great power politics. *Force Distance Times*. June 23, 2022. [Link to Article](#)
6. Gattie, D, and Hewitt, M. 2022. Energy Sovereignty Will Be the Westphalian Principle of the 21st Century, *The National Interest*. February 22, 2022. [[Article Link](#)]
7. Gattie, DK, Conrad, J, and Massey, J. 2022. UGA Energy Outlook. [Outlook Description](#) [[Link to Outlook Presentation](#)]
8. McFarlane, R, and Gattie D. 2021. Nuclear Affairs. *The National Interest*, (176): 69-75. November/December Issue. [[Link to Paper](#)]
9. Gattie, DK. 2021. South Korea's Summit Solution Dreams and Zero Carbon Realities. *The National Interest*. March 30, 2021. Copy and Paste this link [[Article Link](#)]

10. Gattie, DK. 2021. President Biden’s Executive Order on Climate Change: Implications for the US Industrial Base. Invited Expert Brief for *Global America Business Institute*. [[Link to Brief](#)].
11. Gattie, D. K., and Massey, J. N. K. (2020). Twenty-First-Century US Nuclear Power: A National Security Imperative. *Strategic Studies Quarterly*, 14(3): 122-143. [In Press]. [[Link to Paper](#)]
12. Gattie, DK. 2020. U.S. Energy, Climate and Nuclear Power Policy in the 21st Century: The Primacy of National Security. *The Electricity Journal*, 33(1):106690. [[Link](#)]
13. Gattie, DK. 2020. House climate plan needs global and national security context. *The Hill*. July 9, 2020. [[Link](#)]
14. Gattie, DK. 2020. U.S. nuclear power: safety and security. *Georgia Magazine: Georgia’s Energy Outlook*. July 2020. [[Article Link](#)]
15. Gattie, DK. 2020. Nuclear power: green and efficient. *Georgia Magazine: Georgia’s Energy Outlook*. June, 2020. [[Article Link](#)]
16. Gattie, DK. 2020. Georgia Positioned Well as U.S. Debates Energy Future. *MEAG Power Current*. Vol. 13: Issue 1. [Invited] [[Article Link](#)]
17. Gattie, DK. 2019. U.S. Nuclear Power: America’s Brand is at Risk. *Morning Consult*. October 29, 2019. [[Article Link](#)]
18. Gattie, DK. 2019. Will the US Lead? Or let China and Russia dominate nuclear energy. *The Hill*. May 22, 2019. [[Article Link](#)]
19. Gattie, DK. 2019. Three Decades in the Making: America’s Newest Nuclear Reactor. *Nuclear Matters News*, March 22, 2019. [[Article Link](#)]
20. Gattie, DK. 2019. 100% Renewable Energy isn’t a Response to Climate Change—It’s a Retreat. *The Hill*. March 14, 2019. [[Article Link](#)]
21. Gattie, DK. 2019. The Green New Deal: Isolationist in scope and blind to geopolitical realities. *The Hill*. February 11, 2019. [[Article Link](#)]
22. Gattie, DK. 2018. Eisenhower’s nuclear legacy holds steady at Vogtle. *Augusta Chronicle* (Picked up by Athens Banner-Herald and Savannah Morning News). December 1, 2018. [[Article Link](#)]
23. Gattie, DK. 2018. What Khashoggi killing means for US-Saudi nuclear power policy. *The Hill*. November 14, 2018. [[Article Link](#)]
24. Gattie, DK. U.S. nuclear power is a strategic asset. *The Washington DC100*, September 24, 2018. [[Article Link](#)]
25. Gattie, DK. 2018. U.S. Nuclear Power: Too Strategic to Fail. *The Hill*. August 30, 2018. [[Article Link](#)]
26. Gattie, DK. 2018. Fueling America’s National Security and Global Leadership. *InsideSources*. July 13, 2018. [[Article Link](#)]
27. Gattie, DK. 2018. The problem with California going all-in on solar energy. *The Hill*, May 11, 2018. [[Article Link](#)]
28. Gattie, DK. 2018. Nuclear Energy: A Key Component of America’s Global Leadership. *Morning Consult*, February 16, 2018. [[Article Link](#)]
29. Gattie, DK and N. Hertel. 2018. The Public Service Commission’s Proper Vogtle Decision. *James Magazine*, Jan/Feb 2018. [[Article Link](#)]. [Invited Commentary]
30. Gattie, DK. 2017. Nuclear power’s resilience and security benefits are priceless. *The Hill*, December 8, 2017. [[Article Link](#)].
31. Gattie, DK. 2017. The US can do better than the Clean Power Plan. *The Hill*, October 13, 2017. [[Article Link](#)]. [Invited Commentary]
32. Gattie, DK. 2017. America is sacrificing its leadership role in nuclear energy. *The Hill*, October 6, 2017. [[Article Link](#)].
33. Gattie, DK. 2017. A Call for American Primacy in Civilian Nuclear Power. *The Washington DC100*, September 8, 2017. [[Article Link](#)].
34. Gattie, DK. 2017. U.S. National Security and a Call for American Primacy in Nuclear Power. *Forbes*, September 7, 2017. [[Article Link](#)].
35. Gattie, DK. Nuclear Power in America: All Eyes Are on Georgia. *GeorgiaPol*. August 2, 2017. [[Article Link](#)]. [Invited Commentary].

36. Gattie, DK. Nuclear Power in America Requires Political Resolve. *Morning Consult*. May 23, 2017. [[Article Link](#)]
37. Gattie, DK, and Jones S. An America Without Nuclear Power. *Forbes*. April 24, 2017. [[Article Link](#)].
38. Gattie, DK. 2017. Energy Policy Under President Trump. *Georgia Magazine*, January 2017. ([Article Link](#)). [Invited Commentary].
39. Gattie, DK. 2016. U.S. Missing the Mark on Climate Policy. *GeorgiaPol*, December 12, 2016. ([Article Link](#)). [Invited Commentary]
40. Gattie, DK. 2016. Pragmatic Energy Policy Recommendations for the Trump Administration. Featured Debate Article on Climate Etc., December 8, 2016. ([Link](#)). [Invited Debate Article].
41. Gattie, DK. 2016. U.S. Should Lead World in New Energy Infrastructure. *Athens Banner-Herald*, November 17, 2016. ([Article Link](#)).
42. Gattie DK. 2016. Georgia Officials Were Right to Keep the Nuclear Door Open. *Newnan Times-Herald*, August 20, 2016. ([Article Link](#)). [Invited Commentary].
43. Gattie DK. 2015. New EPA Rule is a Mistake: Clean Nuclear Power Ignored. *James Magazine*, September-October, 2015. ([Article Link](#)). [Invited Commentary].
44. Gattie DK. 2015. A Global View from a Local Expert. *Engineering Georgia Magazine*, July-August 2015. ([Article Link](#)). [Invited Commentary].
45. Gattie DK. 2014. U.S. Needs Multifaceted Approach to Energy Issues. *Athens Banner-Herald*, August 18, 2014 ([Article Link](#)).

Journal Articles and Policy Papers (In Press or Accepted) (40)

*Indicates graduate student mentored by Gattie

1. Gattie, D. and Hewitt, M., 2023. National Security as a Value-Added Proposition for Advanced Nuclear Reactors: A US Focus. *Energies*, 16(17), p.6162.
2. Gattie, D and Hewitt, M. 2022. The U.S. Can't Lose the Global Nuclear Energy Race. *The National Interest*. December 17, 2022. [Link to Article](#).
3. Gattie, D, and Hewitt, M. 2022. Energy Sovereignty Will Be the Westphalian Principle of the 21st Century, *The National Interest*. February 22, 2022. [[Article Link](#)]
4. McFarlane, R, and Gattie D. (2021). Nuclear Affairs. *The National Interest*, (176): 69-75).
5. Gattie, DK. 2021. South Korea's Summit Solution Dreams and Zero Carbon Realities. *The National Interest*. March 30, 2021. [[Article Link](#)]
6. Gattie, DK. 2021. President Biden's Executive Order on Climate Change: Implications for the US Industrial Base. Policy Brief for *Global America Business Institute*. February 24, 2021. [[Link to Brief](#)].
7. Gattie, D. K., and Massey, J. N. K. (2020). Twenty-First-Century US Nuclear Power: A National Security Imperative. *Strategic Studies Quarterly*, 14(3): 122-143. ([Link to Paper](#))
8. Gattie, DK. 2020. U.S. Energy, Climate and Nuclear Power Policy in the 21st Century: The Primacy of National Security. *The Electricity Journal*, 33(1):106690.
9. Gattie DK, Edgar LP, Arriaga, K. 2019. Net Metering: Costs, Customers and a Smarter Way Forward for Florida. December 2019 Policy Paper for *Energy Fairness*. Published Online: <https://energyfairness.org/wp-content/uploads/2020/01/net-metering-2019-web.pdf>
10. Gattie DK, Darnell JL, Massey JNK. 2018. The Role of U.S. Nuclear Power in the 21st Century. *The Electricity Journal*, 31(10):1-5.
11. Gattie, DK. 2018. A Strategic Policy Framework for Advancing U.S. Civilian Nuclear Power as a National Security Imperative. *The Electricity Journal*, 31(1):23-32.
12. Schepis L, Gattie DK. 2017. Net-metering: Costs, Customers and a Smarter Way Forward. July 2017, Policy Paper for the *Partnership for Affordable Clean Energy*. Published Online: <https://energyfairness.org/wp-content/uploads/2017/07/Net-Metering-Report-PACE-and-Gattie.pdf>

13. Gattie, DK. 2017. Incorporating Stability and Resilience in Energy Policy for the U.S. Power Sector: Recommendations for the Trump Administration. *The Electricity Journal*, 30(1):47-54.
14. Schramski JS, Gattie DK and Brown JH. 2015. Human Domination of the Biosphere. *Proceedings of the National Academy of Sciences* 112(31):9511-9517.
15. Gattie DK. 2015. The New Energy Economy: Perspective and Challenges of a Downstream Energy State, *The Electricity Journal*, 28(1):58-71.
16. *Belflower JB, Bernard JK, Gattie DK, Hancock DW, Risse LM, Rotz CA. 2012. A case study of the potential environmental impacts of different dairy production systems in Georgia, *Agricultural Systems*, 108:84-93.
17. Gattie DK, Kellam NN, Schramski JR, Walther J. 2011. Engineering Education as a Complex System, *European Journal of Engineering Education*, 36(6):521-535.
18. Schramski JR, Rutz ZJ, Gattie DK, Li K. 2011. Trophically Balanced Sustainable Agriculture, *Ecological Economics*, 72:88-96.
19. Schramski JR, Patten BC, Kazanci C, Gattie DK, Kellam NN. 2009. The Reynolds transport theorem: Application to ecological compartment modeling and case study of ecosystem energetics, *Ecological Modelling*, 220(22):3225-3232.
20. Gattie DK, Wicklein RC. 2007. Curricular value and instructional needs for infusing engineering design into grades 9-12 technology education, *Journal of Technology Education*, 19(1):6-18.
21. Gattie DK, Kellam NN, Turk HJ. 2007. Informing ecological engineering through ecological network analysis, ecological modelling, and concepts of systems and engineering ecology, *Ecological Modelling*, 208(1):25-40.
22. Gattie DK, Foutz TL. 2007. Systems and engineering ecology: Developing formal foundations for ecological engineering. *International Journal of Engineering Education*, 23(4):683-690.
23. Bata SA, Borrett SR, Patten BC, Whipple SJ, Schramski JR, Gattie DK. 2007. Equivalence of throughflow- and storage-based environs. *Ecological Modelling*, 206(3-4):400-406].
24. Birkett C, Tollner EW, Gattie DK. 2007. Total suspended solids and flow regime effects on periphyton development in a laboratory channel, *Trans. ASABE*, 50(3):1095-1104.
25. Schramski JR, Gattie DK, Patten BC, Bata SA, Whipple SJ, Borrett SR, Fath BD. 2007. Indirect effects and distributed control in ecosystems. Distributed control in the environ networks of a seven-compartment model of nitrogen flow in the Neuse River Estuary, USA: Time series analysis, *Ecological Modelling*, 206(1-2):18-30.
26. Whipple SJ, Borrett SR, Patten BC, Gattie DK, Schramski JR, Bata SA. 2007. Indirect effects and distributed control in ecosystems: Comparative Network Environ Analysis of a Seven-Compartment Model of Nitrogen Flow in the Neuse River Estuary: Time Series Analysis, *Ecological Modelling*, 206(1-2):1-17.
27. Gattie DK, Schramski JR, Bata SA. 2006. Analysis of microdynamic environ flows in an ecological network, *Ecological Engineering*, 28(3):187-204.
28. Gattie DK, Schramski JR, Borrett SR, Patten BC, Bata SA, Whipple SJ. 2006. Indirect effects and distributed control in ecosystems: Network environ analysis of a seven-compartment model of nitrogen flow in the Neuse River Estuary, North Carolina, USA - Steady state analysis. *Ecological Modelling*, 194(1-3):162-177.
29. Schramski JR, Gattie DK, Patten BC, Borrett SR, Fath BD, Thomas CR, Whipple SJ. 2006. Indirect effects and distributed control in ecosystems: Distributed control in the environ networks of a seven-compartment model of nitrogen flow in the Neuse River Estuary, North Carolina, USA - Steady state analysis. *Ecological Modelling*, 194(1-3):189-201.
30. Gattie DK, Tollner EW, Foutz TL. 2005. Network environ analysis: A mathematical basis for describing indirect effects in ecosystems. *Transactions of ASAE*, Vol. 48(4):1645-1652.
31. Gattie DK, Lewis DL. 2004. A high-level disinfection standard for land-applying sewage sludges (biosolids). *Environmental Health Perspectives*, 112(2): 126-131.
32. Gattie DK, Smith MC, Tollner EW, McCutcheon SM. 2003. The emergence of ecological engineering as a discipline. *Ecological Engineering*, 20(5):409-420.

33. Lewis DL, Gattie DK, Novak ME, Sanchez S, Pumphrey C. 2003. Interactions of pathogens and irritant chemicals in land-applied sewage sludges (biosolids). *New Solutions*, 12(4) 409-423.
34. Lewis DL, Gattie DK, Novak M, Sanchez S, Pumphrey C. 2002. Interactions of pathogens and irritant chemicals in land-applied sewage sludges (biosolids). *BMC Public Health*, 2:11.
35. Das KC, Smith MC, Gattie DK, Boothe DH. 2002. Stability and quality of municipal solid waste compost from a landfill aerobic bioreduction process. *Advances in Environmental Research*. 6(3):401-409.
36. Lewis DL, Gattie DK. 2002. Pathogen risks from applying sewage sludge to land. *Environmental Science and Technology*. 36(13):286A-293A.
37. Edwards AJ, Smith MC, Gattie DK. 2002. Integrating water quality modeling with GIS to determine management strategies: a study of Fort Gordon, Georgia. *Journal of Spatial Hydrology*, 2:1.
38. Boothe DH, Smith MC, Gattie DK. 2001. Characterization of microbial populations in landfill leachate and bulk samples during aerobic bioreduction. *Advances in Environmental Research*. 5(3): 285-294.
39. Smith MC, Gattie DK. 2000. Converting landfill processes from anaerobic to predominantly aerobic. *Elsevier, Eve-web. Today, Vol. 1, March 2000*.
40. Smith MC, Gattie DK, Boothe DH, Das KC. 2000. Enhancing aerobic bioreduction under controlled conditions in a municipal solid waste landfill through the use of air injection and water recirculation. *Advances in Environmental Research*. 3(4): 459-471.

Presentations and Panel Discussions (208)

(*Indicates Presenter, †Indicates Published Counterpart)

1. Gattie, D. 2023. Implications of North America Energy and Climate Policies: A U.S. Industrial Base Perspective. *The Energy Council 2023 Global Energy and Environmental Issues Conference*. Jackson Hole, Wyoming, December 9, 2023.
2. Gattie, D. 2023. Realities and National Security Implications of the Proposed U.S. Energy Transition. *Arkansas Electric Cooperative Corporation Annual Meeting*. Little Rock, Arkansas, December 4, 2023.
3. Gattie, D. 2023. Energy Resources & Technologies: The National Security Imperative. *UGA Center for International Trade & Security Trade and Security Panel*. Athens, Georgia, November 30, 2023.
4. Gattie, D. and Bryce, R. 2023. Understanding the Implications of Policy and Regulatory Drivers. *National Rural Utilities Cooperative Finance Corporation Independent Borrower's Executive Forum*. Savannah, Georgia, November 14, 2023.
5. Gattie, D. 2023. The National Security Implications of a U.S. Energy Transition. *Wisconsin Electric Cooperative Association Annual Meeting*. Eau Claire, Wisconsin, November 8, 2023.
6. Gattie, D. 2023. Energy Overview for Florida Legislators. *Florida State Capitol*, Tallahassee, Florida, October 17, 2023.
7. Gattie, D. 2023. Georgia's Advantageous Electricity Market Structure. *Municipal Electric Authority of Georgia Mayors Summit*. Braselton, Georgia, November 11, 2023.
8. Gattie, D. 2023. The Proposed U.S. Energy Transition: National Security Implications and a Call for Realism. *PowerSouth Fall Focus*. Miramar Beach, Florida, October 4, 2023.
9. Gattie, D. 2023. U.S. Energy Resources & Technologies: Prioritizing Relative Advantage in 21st Century Strategic Competition. *2023 Conservative Climate Summit*. Orem, Utah, September 8, 2023.
10. Gattie, D., Conrad, J., Massey, J. 2023. UGA Energy Update for Georgia Legislators. Athens, Georgia, August 4, 2023.

11. Gattie, D. 2023. U.S. Energy and Climate Policy: Promise or Peril? Uncharted Waters for America's Industrial Economy. *Reynolds Linger Longer*. Greensboro, Georgia, August 2, 2023.
12. Gattie, D. 2023. America's Energy Transition: Through the Lens of Security. *Georgia Rural Electric Managers' Association 2023 Conference*. Hilton Head, South Carolina, July 17, 2023.
13. Gattie, D. 2023. The U.S. Energy Transition: What is America Proposing? Seminar Presentation to *Jackson Electric Membership Corporation Executives and Professional Staff*. Jackson EMC Headquarters, Jefferson, Georgia, June 27, 2023.
14. Gattie, D. 2023. Energy Sector Trends and the U.S. Energy Transition. *Washington Rural Electric Association Annual Meeting*. Richland, Washington, June 6, 2023.
15. Gattie, D. 2023. America's Energy Transition in the Context of National Security. *South Dakota Rural Electric Association 81st Annual Meeting*. Pierre, South Dakota, January 13, 2023.
- 16.
17. Gattie, D., McNamee, B., & Legg, L. 2022. How Georgia's Electric Market Structure Makes the State Competitive. *Georgia Legislator Symposium*. Greensboro, Georgia, December 16, 2022.
18. Gattie, D. 2022. The Energy Transition: A Security-Centric, Climate-Inclusive Perspective. *2022 Reboot Korea*. Seoul, South Korea, December 7, 2022.
19. Gattie, D. 2022. Challenges & National Security Implications of Transitioning to Low Carbon Energy. *American Chemistry Council Annual Planning Meeting*, Clearwater, Florida, November 11, 2022.
20. Gattie, D. 2022. Electrified Transportation in Georgia: Rising up to the Opportunities and Challenges. Testimony before the *Georgia Joint Legislative Study Committee on the Electrification of Vehicles*. October 25, 2022.
21. Gattie, D. 2022. Solar PV: An Overview for Georgia. Testimony before the *Georgia Rural Development Council*. October 24, 2022.
22. Gattie, D. 2022. America's Energy Transition: A Matter of State and National Security. Georgia Chamber of Commerce American Rural Prosperity Summit. Athens, Georgia, State, October 6, 2022.
23. Gattie, D. 2022. America's Energy Transition: National Security Implications. *Montana Electric Cooperatives' Association 61st Annual Meeting*, Great Falls, Montana, October 5, 2022.
24. Gattie, D., & Murphy, P. 2022. Next Steps and Paths Forward for International Nuclear Collaboration. Multilateral Nuclear Energy Dialogue: Opportunities for a New Nuclear Renaissance. Athens, Georgia, August 25, 2022.
25. Gattie, D. 2022. America's Energy Transition. *Utah Rural Electric Cooperative Association Board of Directors*, August 17, 2022.
26. Gattie, D. 2022. America's Energy Transition Through the Lens of Security. *Georgia EMC Directors' Association of Georgia 2022 Conference*. Jekyll Island, Georgia, August 15, 2022.
27. Gattie, D. 2022. Realities of America's Energy Transition: A Realist View from a Security Perspective. *Reynolds Linger Longer*, August, 1, 2022.
28. Gattie, D. 2022. Energy Security, Climate Change and the Energy Transition: Security-Centric, Globally-Engaged, Climate-Inclusive. *2022 Energy Security Dialogue*. Seoul, South Korea, July 27, 2022.
29. Gattie, D. 2022. Realities of U.S. Energy Transition: A Critical View from a Security Perspective. *Georgia Mining Association Annual Convention*. Ponte Verde, Florida, July 16, 2022.
30. Gattie, D. 2022. U.S. Energy Through the Lens of Security: Security-Centric, Globally-Engaged, Climate-Inclusive. *Rocky Mountain Mining Institute Annual Conference*, Snowmass, Colorado, June 27, 2022.
31. Gattie, D. 2022. America's Energy Transition: Security-Centric, Globally-Engaged, Climate-Inclusive. *Association of Rural Electric Generating Cooperatives*, June 13, 2022.

32. Gattie, D. 2022. Energy & Electric Power: U.S., Georgia & Global Overview for Policymakers. *Jackson Electric Membership Corporation Officer Presentation*. Jefferson, Georgia, June 10, 2022.
33. Gattie, D. 2022. America's Energy Transition Through the Lens of Security. *UGA Energy Security Conference*, Athens, GA, April 27, 2022.
34. Gattie, D. 2022. The Future of U.S. Nuclear Energy. Nuclear Energy Institute's President's Circle. March 2022.
35. U.S. Energy & Electric Power Policy: The National Security Imperative. Ohio Electric Cooperatives Winter Conference, Columbus, Ohio, February 15, 2022.
36. Gattie, DK. 2022. U.S. Energy and Electric Power Policy: The National Security Imperative. *North Dakota Association of Rural Electric Cooperatives*, Bismarck, ND, January 19, 2022. [Invited Keynote]
37. Gattie DK, Massey JNK and Conrad J. 2022. UGA Energy Outlook: Security Implications of Energy Policy. The inaugural Energy Outlook for UGA's collaborative effort between the College of Engineering, the School of Public and International Affairs and the Center for International Trade & Security. Sloppy Floyd Building, Atlanta, GA. January 12, 2022.
38. Gattie, DK. 2021. U.S.-Japan-South Korea Dialogue on Energy Technologies and Great Power Competition: Renewables, Critical Minerals and Climate Diplomacy. *Energy Innovation Reform Project*, Virtual International Panel of Experts from U.S., Japan and South Korea, January 4, 2021. [Invited]
39. Gattie, DK. 2021. Wyoming's Energy Economy Panel. *Wyoming Governor's Business Forum*, Cheyenne, WY, November 17, 2021. [Invited Panel Moderator]
40. Gattie, DK. 2021. Wyoming: On the Front Lines of America's 21st Century Energy Challenges. *Wyoming Governor's Business Forum*, Cheyenne, WY, November 17, 2021. [Invited Keynote]
41. Gattie, DK. 2021. Energy and Power Generation Resource Characteristics and Reliability; Through the Lens of National Security. *Global Public Policy Foundation*, Atlanta, GA, November 12, 2021. [Invited]
42. Gattie, DK. 2021. U.S.-Japan-South Korea Dialogue on Energy Technologies and Great Power Competition. *Energy Innovation Reform Project*, Virtual International Panel of Experts from U.S., Japan and South Korea, November 8, 2021. [Invited]
43. Gattie, DK. 2021. Clean Energy Technologies and Critical Minerals. *Global America Business Institute*, Washington, DC, October 27, 2021. [Invited]
44. Gattie, DK. 2021. U.S. Energy & Climate Policy: Implications for National Security. *Oconee Rotary Club*, Watkinsville, GA, October 26, 2021.
45. Gattie, DK. 2021. Energy and Climate Policy: Implications for National Security: A US-Allied Perspective. *UGA-South Korea Visiting Scholars Program*, Athens, GA, October 18, 2021.
46. Gattie, DK. 2021. Implications of Energy and Climate Policy on the US Industrial Base. *Energy Policy Research Conference*, Boise, ID, October 15, 2021.
47. Gattie, DK. 2021. General Assembly Panel: Electric Vehicles: Road to an Electric Future. *Energy Policy Research Conference*, Boise, ID, October, 15, 2021. [Invited Panel Moderator]
48. Gattie, DK. 2021. Civilian Nuclear Power: The US Industrial Base and National Security. *Joint Nuclear Panel Workshop: National Association of Regulatory Utility Commissioners -Department of Energy*. Washington, DC, October 8, 2021. [Invited]
49. Conrad J, Gattie D, Massey JNK and McMurray S. 2021 Going Nuclear: Nuclear Cooperation and Foreign Direct Investment. *American Political Science Association Annual Meeting*, Seattle, WA, October 1, 2021.
50. Gattie, DK. 2021. US Energy and Climate Policy: Context and Realities. *National Rural Electric Cooperative Association Joint CO₂ Education and Discussion Committee*, September 27, 2021, Virtual, National Audience [Invited].
51. Gattie, DK. 2021. US Energy and Climate Policy as a National Security Issue. *Industrial Minerals Association-North America Annual Meeting*, Park City, UT, September 21, 2021. [Invited]

52. Gattie, DK. 2021. US Energy-Climate Policy and 21st Century Great Power Competition: Implications for U.S. National Security and America's Industrial Base. *Briefing for United States Congressman Andy Barr of Kentucky*, August 27, 2021, Virtual. [Invited].
53. Gattie, DK. 2021. U.S. Energy and Climate Policy in Context: Status and Implications. *Minnesota Rural Electric Association Energy Issues Summit*, Minneapolis, MN, August 11, 2021. [Invited Keynote]
54. Gattie, DK. 2021. The US Electric Power Sector: Issues, Challenges and Shifting Politics. *Florida Electric Cooperatives Association Summer Leadership Conference*, Jupiter, FL, August 3, 2021. [Invited Keynote]
55. Gattie, DK. 2021. US Energy Policy: All Challenges Foreign and Domestic. *Reynolds Linger Longer*, August 2, 2021.
56. Gattie, DK. 2021. A Battle of Ideas for America's Energy Future: Implications for National Security. *Brunswick Rotary Club*, Brunswick, GA, July 29, 2021.
57. Gattie, DK. 2021. US Energy and Climate Policy: Implications for National Security and America's Industrial Base. *Wyoming Mining Association 65th Annual Convention*, Gillette, WY, July 22, 2021. [Invited Keynote]
58. Gattie, DK. 2021. The US Electric Power Sector: Trends, Emerging Issues and Challenges. *Grand Canyon State Electric Cooperative Summer Meeting*, Flagstaff, AZ, July 21, 2021. [Invited Keynote]
59. Gattie, DK. 2021. Energy Security, Climate Change and Politics: America's Shifting Landscape. *Cooperative Energy Directors' Update*, Biloxi, MS, June 16, 2021. [Invited Keynote].
60. Gattie, DK. 2021. A Battle of Ideas: America's Energy Future. *Macon Rotary Club*, Macon, GA, May 10, 2021.
61. Gattie, DK. 2021. US-Korea Civil Nuclear Cooperation: An Industrial Base and Allied Security Perspective. *Global America Business Institute*, Washington DC, February 25, 2021. Expert Panel Seminar [Invited].
62. Gattie, DK. 2020. US Energy and Climate Policy: In the World As It Is. *Iowa Association of Electric Cooperatives Annual Meeting*, December 3, 2020. [Invited]
63. Gattie, DK. 2020. US Energy Policy: An Update on Current Issues and Potential Political Shifts. *Morgan County Rotary Club*, Madison, GA, December 1, 2020. [Invited]
64. Gattie, DK. 2020. Politics of Forthcoming US Energy Policy. *Reynolds Plantation Series on Global Issues*, Reynolds Plantation, GA, November 16, 2020. [Invited]
65. Gattie, DK. 2020. A Strategic View of US Nuclear Power Policy: National Security, Energy and Climate Considerations. *Global America Business Institute*, Washington DC, June 18, 2020. [Invited]
66. Gattie, DK. 2020. Reunification, Electrification, Denuclearization and Decarbonization: The Need for Long-term Energy Policy Strategy and a Potential ROK-US Alliance. *Workshop Seminar for Korean Scholars Delegation*, UGA Carl Vinson Institute, April 30, 2020. [Invited]
67. Gattie, DK. 2020. US Energy and Climate Policy in Context: Status and Implications. *Wyoming Rural Electric Association Annual Meeting*, Cheyenne, WY, February 27, 2020. [Invited Keynote]
68. Gattie, DK. 2020. US Energy and Climate Policy in the World As It is. *Presentation to Florida State Legislators*, Tallahassee, FL, February 4, 2020. [Invited]
69. Gattie, DK. 2019. U.S. Energy and Climate Policy. *The Rotary Club of Etowah*, Cartersville, GA, December 17, 2019. [Invited]
70. Gattie, DK. 2019. US Energy: Trends and Issues. *Cooperative Energy Annual Meeting*, Hattiesburg, MS, November 19, 2019. [Invited Keynote]
71. Gattie, DK. 2019. The Nuclear Equation: Does the U.S. Have One? *MEAG Power Mayors Summit*, Reynolds Plantation, GA, November 9, 2019. [Invited Keynote]
72. Gattie, DK. 2019. U.S. Nuclear Power Policy in the 21st Century: The Primacy of National Security. *Nuclear Science Week Lunch and Learn, Plant Vogtle*, Augusta, GA, October 14, 2019. [Invited]

73. †Gattie, DK. 2019. U.S. Energy, Climate and Nuclear Power Policy in the 21st Century: The Primacy of National Security. *9th Annual Energy Policy Research Conference*, Boise, ID, September 30, 2019.
74. Gattie, DK and Araujo, K. 2019. Decision-Making for Energy Utilities in the Current Policy Environment. *9th Annual Energy Policy Research Conference*, Boise, ID, September 30, 2019. [Invited Panel Moderator]
75. Gattie, DK. 2019. Leadership in the Era of Decarbonization. *Idaho National Laboratory's Energizing the Modern Age Symposium*, Idaho Falls, ID, August 14, 2019. [Invited Panel Moderator].
76. Gattie, DK. 2019. U.S. Energy: America Needs a Bigger Map. *Reynolds Plantation Series on Global Issues*, Reynolds Plantation, GA, August 6, 2019. [Invited]
77. Gattie, DK. 2019. U.S. Electric Power Sector: Trends and Emerging Issues in Context. *Florida Electric Cooperatives Association Summer Leadership Conference*, Clearwater, FL, August 1, 2019. [Invited Keynote]
78. Gattie, DK. 2019. New Nuclear Capital. *U.S. Nuclear Industry Council*, Washington, DC, July 16-17, 2019. [Invited Participant]
79. Gattie, DK. 2019. Energy Markets, Energy Trade and National Security. *Department of Energy Fellows Seminar*. University of Georgia, Athens, GA, July 12, 2019. [Invited]
80. Gattie, DK. 2019. National Security Implications of a Declining U.S. Nuclear Power Sector. Savannah River Site Intern Symposium, Aiken, SC, July 10, 2019. [Invited]
81. Gattie, DK. 2019. U.S. Power Sector: Current Trends and Emerging Issues. *Cooperative Energy 2019 Directors' Update*, Biloxi, MS, June 19, 2019. [Invited Keynote].
82. Gattie, DK. 2019. Reunification, Electrification, Denuclearization and Decarbonization: The Need for Long-term Energy Policy Strategy and a Potential ROK-US Alliance. *Workshop Seminar for Korean Scholars Delegation*, UGA Carl Vinson Institute, May 29, 2019. [Invited]
83. Gattie, DK. U.S. Power Generation: Current Status and Emerging Issues. *Distribution and Transmission Automation Group*, Augusta, GA, May 16, 2019. [Invited Keynote]
84. Gattie, DK. 2019. National Security Implications of U.S. Nuclear Power in the 21st Century. *Citizens for Nuclear Technology Awareness*, Aiken, SC, May 9, 2019. [Invited Keynote]
85. Gattie, DK. 2019. Reunification, Electrification, Denuclearization and Decarbonization: The Need for Long-term Energy Policy Strategy and a Potential ROK-US Alliance. *Workshop Seminar for Korean Scholars Delegation*, UGA Carl Vinson Institute, March 21, 2019. [Invited]
86. Gattie, DK. 2019. Reunification, Electrification, Denuclearization and Decarbonization: The Need for Long-term Energy Policy Strategy and a Potential ROK-US Alliance. *Workshop Seminar for Korean Scholars Delegation*, UGA Carl Vinson Institute, February 8, 2019. [Invited]
87. Gattie, DK. 2019. U.S. Power Generation: Current Disposition and Emerging Issues. *Keynote Address to PowerSouth Board of Trustees Update*, Miramar Beach, Florida, January 24, 2019. [Invited Keynote]
88. Gattie, DK. 2018. U.S. Nuclear Power in the 21st Century. *International Plotters*. Presented at Athens Country Club, December 11, 2018.
89. *Gattie, DK, Massey JNK. 2018. U.S. Nuclear Power and Global Order in the 21st Century: Will America Retain Its Leadership? *International Security Studies Section of the International Studies Association*, Purdue University, West Lafayette, Indiana, November 9-11, 2018.
90. Gattie, DK. 2018. Overview of U.S. Power Generation. *Alabama Energy Tour*, Energy Institute of Alabama, Birmingham, AL, November 8, 2018. [Invited]
91. Gattie, DK. 2018. Global Energy, Nuclear Power and Competing Interests. *Security and Strategic Trade Management Academy*, University of Georgia, Athens, GA, October 24, 2018. [Invited]
92. Gattie, DK. 2018. U.S. Nuclear Power in the 21st Century: National Security and Climate. *Denver Law School* (Guest lecture by teleconference), October 11, 2018.

93. Gattie, DK. 2018. U.S. Energy Policy in the World as it Is. *Guest Lecture in International Affairs course in the School of Public and International Affairs*, UGA, October 4, 2018.
94. Gattie, DK. 2018. *Iran's Nuclear Program*, Expert Panelist. John Quincy Adams Society, UGA Chapter, Athens, GA, September 18, 2018.
95. *Gattie, DK, Darnell JL, Massey JNK, Starks B. 2018. First Principles of U.S. Nuclear Power Policy for 21st Century Geopolitics. *8th Annual Energy Policy Research Conference*, Boise, ID, September 6, 2018.
96. Gattie, DK. 2018. Nuclear Power in America With 21st Century Characteristics. *Reynolds Plantation Series on Global Issues*, Reynolds Plantation, GA, August 2, 2018. [Invited]
97. Gattie, DK. 2018. U.S. Energy Production and Power Generation: In the World As It Is. *Rotary Club of Marietta*, Marietta, GA, August 1, 2018.
98. Gattie, DK. 2018. Current Status of U.S. Power Generation: States, Markets, Rates and Profiles. *Jackson Electric Membership Corporation*, Jefferson, GA, July 24, 2018. [Invited]
99. Gattie, DK. 2018. Global Energy, Nuclear Power and Competing Interests. *Department of Energy Fellows Seminar*. University of Georgia, Athens, GA, July 16, 2018. [Invited]
100. Gattie, DK. 2018. Spent Nuclear Fuel Management: International Perspective and National Security Implications. *Southeastern Association of Regulatory Utility Commissioners*, Charleston, SC, June 10-13, 2018. [Invited]
101. Gattie, DK. 2018. Why a Sustainable America Will Be Nuclear Powered. *Expert Panel for Nuclear Energy Assembly and Supplier Expo*, Atlanta, GA, May 21-23, 2018. [Invited]
102. Gattie, DK. 2018. Understanding the Relationship Between Energy, Industry and Security: Global Energy, Nuclear Power and Competing Interests. *Security and Strategic Trade Management Academy*, University of Georgia, Athens, GA, April 18, 2018. [Invited]
103. Gattie, DK. 2018. U.S. Energy Policy in Context. *Guest Lecture in Environmental Politics course in the School of Public and International Affairs*, UGA, April 12, 2018.
104. Gattie, DK, Darnell JL, Massey JNK. 2018. The Future of Nuclear Power. *North American Young Generation in Nuclear*, UGA Chapter, Athens, GA, April, 11, 2018.
105. Gattie, DK. 2018. Nuclear R&D Infrastructure and Workforce Development. *Expert Panel for Nuclear Research and Development Summit*, Washington, DC, March 5-9, 2018. [Invited]
106. Gattie, DK. 2018. U.S. Energy Policy—Beyond the Politics. *Guest Lecture in Politics of Current Events course in the School of Public and International Affairs*, UGA, February 22, 2018.
107. Gattie, DK, Schepis. 2018. Net-Metering Costs and Benefits. *Alabama Energy Day*, Energy Institute of Alabama, Montgomery, AL, February 6, 2018. [Invited]
108. Gattie, DK. 2017. U.S. Energy Policy: Beyond the Politics of Climate Change. *UGA Arch Conservative Fall Lecture*, University of Georgia, October 25, 2017. [Invited]
109. Gattie, DK. 2017. An America Without Nuclear Power. *7th Annual Energy Policy Research Conference*, Park City, Utah, September 7-8, 2017.
110. Gattie, DK. 2017. A Battle of Ideas for America's Energy Future: A Focus on the Electric Power Sector. *Contemporary Global Issues II*. Reynolds Plantation Series on Global Issues, Reynolds Plantation, GA, August 16, 2017. [Invited Workshop with Seminar]
111. *Gattie DK, *Schepis L. 2017. Net-metering: Costs, Customers and a Smarter Way Forward. *Southern States Energy Board Legislative Briefing*, Biloxi, MX, July 29, 2017. [Invited]
112. Gattie DK. 2017. The Future of Nuclear Power in America: A Focus on National Security. *Southeastern Association of Regulatory Utility Commissioners*, June 12, 2017. [Invited]
113. Gattie DK. 2017. CO₂, Electricity and Water: A Call for Next-Generation Nuclear & Co-Generation. *SEC Academic Conference*, Mississippi State University, March 28,

- 2017.
114. Gattie DK. 2017. Carbon in Context and a Call for Nuclear Power. *Georgia Climate Change Coalition Forum on Advanced Nuclear Reactors*, Athens, GA, March 24, 2017. [Invited]
 115. *Gattie DK, *Schramski JR. Access to Energy and Critical Questions for Sustainability. *Foundation Fellows Chapel Lecture*, Athens, GA, February 24, 2017.
 116. *Gattie DK. 2016. Climate Change, Energy Poverty, Economic Aspirations, and Reliable Electricity: An Unprecedented Set of Constraints. *6th Annual Energy Policy Research Conference*, Santa Fe, NM, September 8-9, 2016.
 117. *Gattie DK. 2015. Conflicts of an Ecological Framework for Sustainability in an All-Renewable Energy Economy: The Case of Energy Storage. *5th Annual Energy Policy Research Conference*, Denver, CO, September 10-11, 2015.
 118. *Gattie DK. 2015. Limitations and Constraints of Renewable Energy in an Industrial Economy. *Annual Meeting and Technical Conference of the Southern Section Air & Waste Management Association*. Callaway Gardens, GA, August 19-21, 2015.
 119. *Gattie DK. 2015. *Power Generation, Environmental Emissions and Energy Policy*. School of Environment, Tsinghua University, Beijing, China, August 11, 2015.
 120. *Gattie DK. 2015. Limitations and Critical Issues of Renewable Energy in an Industrial Economy: Storage. *Association of Environmental Engineering & Science Professors Research and Education Conference*. Yale University, New Haven, CT, June 13-16, 2015.
 121. *Gattie DK. 2014. Ecological Limits and Constraints of Renewable Energy in an Industrial Economy. Presentation to Southern Co. Services, Birmingham, AL, October 24, 2014.
 122. *[†]Gattie DK. 2014. The New Energy Economy: Challenges and Perspectives of a Downstream Energy State. *4th Annual Energy Policy Research Conference*, San Francisco, CA, September 4-5, 2014.
 123. *Schramski JR, Jacobsen KL, Brown JH, Gattie DK. 2014. The Metabolism of Mankind: Thermodynamically Out of Balance, Unifying Ecology Across Scales: The role of Nutrients, Metabolism, and Physiology. *Gordon Conference*, University of New England, Biddeford ME, July 20-25, 2014.
 124. Choi I, *Hong YC, Kellam N, Gattie DK. 2012. Promoting second-year engineering students' epistemic beliefs and real-world problem solving abilities through case-based e-learning resources. *Annual Conference of the American Society for Engineering Education*, San Antonio, TX, June 9-13, 2012.
 125. *Gattie DK. 2011. Environmental Engineering: Traditional Standards and New Direction for the Next Generation. *Invited Lecture for the Facultad de Ingeniería, Universidad de Costa Rica*, San Jose, Costa Rica, October 25, 2011.
 126. *Wan J, Hester N, Li K, Gattie DK, Schramski JR, Jambeck J. 2011. Life Cycle Comparison of Two RO Concentrate Reduction Technologies. *Georgia Water Resources Conference*, Athens, GA, April 11-13, 2011.
 127. *Schramski JR, Patten BC, Gattie DK, Kazanci C. 2011. Indirect Effects and Distributed Control in Ecosystems. *Institute for Biological Engineering Annual Conference*, Atlanta, GA, March 5, 2011.
 128. *Choi I, Hong YC, Kellam NN, Gattie DK, Gay M. 2010. Ongoing design of a case-based E-learning system promoting engineering students' personal epistemology and real-world problem solving abilities: A formative evaluation. *World Conference on E-Learning in Corporate, Government, Healthcare, & Higher Education*. 15th Annual Conference, Orlando, FL.
 129. *Schramski JR, Rutz ZJ, Gattie DK. 2010. Simulating trophically balanced agriculture. *International Society of Ecological Modelling*, Madrid, Spain.
 130. *Schramski JR, Tollner EW, Gattie DK, Patten BC, Jambeck JR. 2010. Interdisciplinary modeling in engineering and ecological compartmental analysis: Case study of ecosystem energetic. *International Society of Ecological Modellers*, Quebec City, October 6, 2010.
 131. *Schramski JR, Gattie DK, Rutz ZK, Li K, Jambeck JR, Rabe J. 2010. Modeling a trophically balanced thermodynamic economy: Considerations of energy networks in a fossil fuel free economic and corresponding ecological system. *International Society of Ecological Modellers*, Quebec City, October 6, 2010.
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132. *Kellam NN, *Walther J, Gattie DK. 2009. An adaptive response model to describe emergent engineering education system properties. *Research in Engineering Education Symposium*, Melbourne School of Engineering, Palm Cove, Qld, Australia, July, 2009.
133. *Gattie DK, Kellam NN. 2008. Engineering education as a complex system. *Complexity Science and Educational Research Conference*, Athens, GA, February 3-5, 2008.
134. Kellam NN, Gattie DK. 2008. Developing a systems understanding of education through ecological concepts. *Complexity Science and Educational Research Conference*, Athens, GA, February 3-5, 2008.
135. *Tanner HS, Mullen J, Gattie DK, Houston J, Bramblett J. 2008. Determining cost and treatment effective soil combinations in bioretention cells for storm water management. *AEES Annual Meeting*, Blacksburg, VA, June 9-13, 2008.
136. *Kellam NN, Babcock AA, Gattie DK. 2008. The engineering learning environment: A proposed model. *ASEE International Meeting*, Pittsburg, PA, June 22-25, 2008.
137. *Kellam NN, Gattie DK. 2008. The engineering learning environment and it's level of complexity in an American Mechanical Engineering program. *Research in Engineering Education Symposium*, Davos, Switzerland, July 7-10, 2008.
138. *[†]Schramski JR, Patten BC, Kazanci C, Gattie DK, Kellam NN. 2008. Revealing ecosystem energetic through the Reynolds Transport Theorem in Ecological Network Analysis. Third Workshop on Ecological Network Analysis. Athens, GA, April 23-25 2008.
139. *[†]Kellam NN, Gattie DK, Kazanci C. 2007. A network model of distributed and centralized systems of students. *Frontiers in Education*. Wisconsin, October, 2007.
140. *Kellam NN, Gattie DK. 2007. A systems approach to teaching engineering design to non-engineers. *American Society of Engineering Education*, Hawaii, June, 2007.
141. *Gattie DK, Schramski JR. 2007. Environs, ascendancy, exergy and emergy: System-level properties for ecosystem analysis and the need for synthesis in ecological engineering. *AEES Annual Conference*. Manhattan, KS, May 23-25, 2007.
142. *Kellam NN, Gattie DK, Peters W. 2007. Niche construction as an analog for improving educational systems. 2007. *Complexity Science and Educational Research Conference*, Vancouver, BC, Canada, February 18-20, 2007.
143. Gattie DK. 2006. Ecological Systems Analysis: The Modeling Problem. *ASABE International Meeting*. Portland, OR, July 2006.
144. *Gattie DK, Foutz TL. 2006. Development and Assessment of Critical Thinking Skills for Engineering Students. *ASEE International Meeting*, Chicago, IL, June 18-21, 2006.
145. Gattie DK. 2006. Analysis of Ecosystem Properties and Function: Issues of Modeling. *AEES Annual Meeting*, Berkeley, CA, April 13-14, 2006.
146. *[†]Gattie DK, Turk HJ. 2006. Informing Ecological Engineering through Ecological Network Analysis. *Invited Presentation at the Ecosystem Networks Workshop*, University of Copenhagen, Copenhagen, Denmark, June 7-10, 2006.
147. Gattie DK. 2005. Systems and Engineering Ecology. UGA Faculty of Engineering Annual Meeting. Athens, GA, October 24, 2005.
148. *[†]Gattie DK, Schramski JR, Bata SA. 2005. Ecological Network Analysis: An analytical methodology for mathematically deriving holistic ecosystem properties. *ASAE International Meeting*. Orlando, FL, July 2005
149. *[†]Gattie DK, Wicklein RC. 2005. Curricular value and instructional needs for infusing engineering design into K-12 Technology Education. *ASEE International Meeting*, Portland, OR, June 11-15, 2005.
150. *Gattie DK, Tollner EW. 2005. Developing student insight into living systems through network analysis. *ASEE International Meeting*, Portland, OR, June 11-15, 2005.
151. *[†]Tollner EW, Gattie DK. 2005. Extending thermodynamic concepts from the microscopic nonliving system to the macroscopic living system. *ASEE International Meeting*, Portland, OR, June 11-15, 2005.
152. *[†]Gattie DK, Schramski JR, Bata SA. 2005. Analysis of microdynamic environ flows in an ecological network. *AEES Annual Meeting*, Columbus, OH, May 18-20, 2005.
153. *Gattie DK. Ecological Network Analysis. 2005. *AEES Annual Meeting*, Columbus, OH, May 18-20, 2005.
154. *Wicklein RC and *Gattie DK. 2005. Engineering design focus for Technology Education. *ITEA Annual Conference*, Kansas City, MO, April 2-5, 2005.

155. *Hill RB, *Wicklein RC, *Gattie DK, and Thompson SA. 2005. Optimization: It's not Engineering design without it. *ITEA Annual Conference*, Kansas City, MO, April, 2005.
156. *Gattie DK, Foutz TL. 2005. Systems and engineering ecology: A basis for developing fundamental ecological engineering sciences. *IBE Annual Meeting*, Athens, GA, March 4-6, 2005.
157. *Gattie DK, Schramski JR, Bata SA. 2005. Holistic analysis of ecosystem properties and complexity. *IBE Annual Meeting*, Athens, GA, March 4-6, 2005.
158. *Turk HJ, Gattie DK. 2005. Propagation of indirect causality by enfolded network transmittances. *IBE Annual Meeting*, Athens, GA, March 4-6, 2005. [Dr. Gattie is directing Mr. Turk's doctoral research]
159. *Tollner EW, Gattie DK. 2005. Lagrangian and Eulerian perspectives on network analyses. *IBE Annual Meeting*, Athens, GA, March 4-6, 2005.
160. *Borrett SR, Gattie DK, Patten BC, Whipple SJ, Schramski JR, Bata S. 2004. Throughflow decomposition and indicators of ecosystem complexity in Network Environ Analysis. *Ecosystem Complexity Workshop*, Bled Slovenia, September 25-26, 2004.
161. *Thompson SA, Wicklein RC, Gattie DK, Hill R. 2004. *First Annual UGA Engineering Conference*, Athens, GA, October 28, 2004.
162. *[†]Gattie DK, Schramski JR, Borrett SR, Patten BC, Whipple SJ. 2004. Network (Output) Environ Analysis of a nitrogen flow model. *First Annual UGA Engineering Conference*, Athens, GA, October 28, 2004.
163. *[†]Gattie DK, Patten BC. 2004. Systems and engineering ecology. *First Annual UGA Engineering Conference*, Athens, GA, October 28, 2004.
164. *Gattie DK, Foutz TL. 2004. The network construct as a foundation for developing ecological engineering science, *First Annual UGA Engineering Conference*, Athens, GA, October 28, 2004.
165. *Patten BC, Gattie DK, Whipple SJ, Schramski JR, Borrett SR, Turk HJ, Fath BD. 2004. Environs and Network Environ Analysis: Introduction and Overview. *European Conference on Ecological Modelling*, Bled, Slovenia, Sept. 29-Oct. 1, 2004.
166. *[†]Gattie DK, Schramski JR, Borrett SR, Patten BC, Turk HJ. 2004. Network Environ Analysis of a Seven-Compartment Model of Nitrogen Flow in the Neuse River Estuary, USA: Steady-state Analysis. *European Conference on Ecological Modelling*, Bled, Slovenia, Sept. 29-Oct. 1, 2004.
167. *[†]Schramski JR, Gattie DK, Patten BC, Whipple SJ, Borrett SR, Fath BD. 2004. Distributed Control in the Environ Networks of a Seven-Compartment Model of Nitrogen Flow in the Neuse River Estuary, USA: Static Analysis. *European Conference on Ecological Modelling*, Bled, Slovenia, September 29-October 1, 2004.
168. Schramski JR, *Gattie DK, Patten BC, Bata SA, Whipple SJ, Borrett SR, Fath BD. 2004. Distributed Control in the Environ Networks of a Seven-Compartment Model of Nitrogen Flow in the Neuse River Estuary, USA: Time Series Analysis. *European Conference on Ecological Modelling*, Bled, Slovenia, September 29-October 1, 2004.
169. *Gattie DK, Tollner EW. 2004. Network Environ Analysis: A Rigorous and Formal Basis for an Ecological Engineering Science. *ASAE*, Ottawa, Canada, July 2004.
170. *[†]Gattie DK. 2004. Extending fundamental systems ecology into an engineering program of study: A focus on first principles at the graduate level. *ASEE*, Salt Lake City, UT, June 2004.
171. *Gattie DK, Tollner EW. 2004. Development of the University of Georgia Campus as an Urban Ecosystem Learning Laboratory. *ASEE*, Salt Lake City, UT, June 2004.
172. *Gattie DK, Schramski JR, Borrett SR, Patten BC, Turk HJ, Whipple SJ. 2004. Analysis of Ecosystem as a Network of Environments. *AEES*, Fayetteville, AR, 2004.
173. *Gattie DK, Foutz TL, Tollner EW. 2004. The Network Construct as a Foundation for Building an Ecological Engineering Science. *AEES*, Fayetteville, AR, June, 2004.
174. *Tanner HS, Gattie DK, 2004. Ecological Engineering: Science to Policy. *AEES*, Fayetteville, AR, June, 2004.
175. *Millington HK, Gattie DK. 2004. Developing Ecologically Sound Engineering Design Criteria for Small Stream Crossings to Provide Adequate Fish Passage. *AEES*, Fayetteville, AR, June 9-12, 2004. [Dr. Gattie directed Ms. Millington's M.S. Thesis]
176. *Turk HJ, Gattie DK. 2004. Toward Understanding Ecological Self-Design through

- Network Environ Analysis and Design Theory. *AEES*, Fayetteville, AR, June, 2004.
177. *Wicklein RC, *Gattie DK. 2004. Bridges to Engineering. *ITEA*, Albuquerque, NM, March, 2004.
 178. Gattie DK, 2004. The Need for the Engineering Method in Technology Education. *Keynote Address for the Technology Education Collegiate Association Annual Meeting*, Virginia Beach, VA, February, 2004.
 179. *Tollner EW, Gattie DK. 2004. Graduate Opportunities in Ecological Engineering at UGA: Micro-, Meso-, Basin Scales. *AEES*, Fayetteville, AR, June 9-12, 2004.
 180. *Gattie DK. 2003. Watersheds or ecosystems? The need for an integrated approach to assessment analysis and management. *Georgia Urban Forestry Council*, Madison, GA, August 2003.
 181. Gattie DK, *Smith MC, Winger PV, Smith HM, Byne FW, Collins JV. 2003. Integrated watershed assessments by linking biological metrics to physical habitat attributes and landuse characterization, *ASAE*, Las Vegas, Nevada, July 27-30, 2003.
 182. Gattie DK. 2003. Environmental and ecological aspects of engineering. *NSF Summer Institute. UGA College Ag. and Environ. Sciences*, Athens, GA, July, 2003.
 183. *Gattie DK, Smith MC, Rosemond A. 2003. Development of ecological engineering education at the University of Georgia. *ASEE* Nashville, TN, June 2003.
 184. *Gattie DK, Tollner EW. 2003. Integrating engineering, ecological and environmental design concepts into a capstone senior design project. *ASEE*, Nashville, TN, June 2003.
 185. *Gattie DK. 2003. Ecology and Engineering. NSF Brides to Engineering Summer Institute, College of Education and Faculty of Engineering, UGA, Athens, GA, June, 2003.
 186. *Gattie DK, Borrett SR, 2003. Indirect Effects in Transport Networks. *AEES*, College Park, MD, May 2003.
 187. *[†]Gattie DK, Tollner EW, Collins JV. 2003. Integrating design criteria for management of urban ecosystems. *GA Water Res. Conf.*, Athens, GA, March 2003.
 188. *[†]Tanner Smith HM, Gattie DK, Smith MC, Byne FW, Collins JV. 2003. Gaps in Watershed Assessments in Georgia: Observations and Suggested Changes. *GA Water Res. Conf.*, Athens, GA, April 2003.
 189. *Gattie DK, Borrett SR. 2003. Network Indirect Effects in Transport Networks: Integral Elements of System Complexity. *IBE*, Athens, GA, January, 2003.
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