

# CURRICULUM VITAE

January 11, 2021

**NAME:** James R. Kahn

**CITIZENSHIP:** United States citizen, permanent resident status in Brazil

## **OFFICE ADDRESS:**

Economics Department  
Holekamp Hall 206  
Washington and Lee University  
Lexington, VA, 24450

Phone: (540)-458-8036

Fax: (540)-458-4007

## **EDUCATION:**

B.A. - Economics - Washington and Lee University, 1975

M.A. - Economics - University of Maryland, College Park, 1978

PhD. - Economics - University of Maryland, College Park, 1981

## **RESEARCH AND TEACHING INTERESTS**

*Environmental and Resource Economics, Environmental Studies, and Environmental Policy* with emphasis on interaction between the economic system and the environment, the role of the environment in the economic development of developing countries, sustainable development, sustainable development of resource dependent communities, fishery economics, Amazonian issues, systems of payments for environmental services, management of renewable resource systems, valuation of environmental resources, and global environmental problems.

## **PROFESSIONAL POSITIONS:**

2019 - 2020	Interim Director, Environmental Studies Program
2000 - 2017	Director of the Environmental Studies Program, Washington and Lee University
2003-present	John F. Hendon Professor of Economics
2011-present	Visiting Professor of Economics, Ph.D. Program in Fishery Sciences in the Tropics, Universidade Federal do Amazonas
2000-2003	Professor of Economics, Washington and Lee University
2000-2003	DuPont Professor of Environmental Citizenship, Washington and Lee University
2005-2006	Visiting Scholar, CNPq, Brazil

- 1992 - present Collaborating Professor, Universidade Federal do Amazonas, Manuas, Brazil
- 2001 Fulbright Scholar in Brazil
- 2000 Professor of Economics, University of Tennessee
- 1991 – 2000 Associate Professor of Economics, University of Tennessee
- 1999 – 2000 Director of Graduate Studies, Department of Economics, University of Tennessee
- 1991 – 1999 Joint appointment as Collaborating Scientist, Oak Ridge National Laboratory and University of Tennessee
- 1988 – 1991 Associate Professor of Economics, State University of New York, Binghamton, New York
- 1989 – 1990 Director, Center for Education and Social Research, SUNY-Binghamton
- 1980 - 1988 Assistant Professor, State University of New York, Binghamton, New York
- 1979 – 1980 Faculty Research Assistant, Center for Environmental and Estuarine Studies and Bureau of Business and Economic Research, University of Maryland
- 1978 – 1979 Graduate Research Assistant, Bureau of Business and Economic Research, University of Maryland
- 1976 – 1978 Graduate Teaching Assistant, Department of Economics, University of Maryland
- 1975 – 1978 Economist, Federal Energy Administration/ Department of Energy, Washington, D.C.

Citation and Ranking Information								
	2016	2017	2018	2019	2020	Total citations	2019 H-index (The largest number h such that the author has at least h publications with h citations)	i10 (i50)index (the number of publications with at least 10 (50) citations)
Scopus	111	98	104	98	107	1434	19	26 (10)
Google Scholar	259	229	227	215	213		28	47 (21)
RePec ranking: top 14% of economists in citations, top 19% in H-Index (does not include my citations in non-economics journals)								

**Authored books (4):**

*The Economic Approach to Environmental and Natural Resources*, 3<sup>rd</sup> edition, Thompson Learning/Southwestern Press, 2005.

*The Economic Approach to Environmental and Natural Resources*, 2nd edition, Harcourt Brace/Dryden Press, Fort Worth, 1998.

*The Economic Approach to Environmental and Natural Resources*, Harcourt Brace/Dryden Press, Fort Worth, 1995.

Impacto virtuoso do Pólo Industrial de Manaus sobre a proteção da floresta amazônica: Discurso ou Fato?, *Resumo executivo*, 2008, A.A.F.Rivas, J.A.Mota, J.S.C. Machado, M.B. Diniz, C.E.C Freitas, J.R.Kahn, P. Teixeira, J.O. Cândido Júnior, J.F.Oliveria Júnior, A.R. Oliveira Junior, E.D. Melo, R.R. Mourão, B.F. Rodrigues, and F.A. Nascimento, ISBN 9878561694099, Manaus: Instituto-Piatam, pp. il-88.

### **Edited Books (6):**

Research Encyclopedia of Environmental Economics, Kahn, JR (ed), Biller, Dan, Rawshan Begum and John Whitehard (assoc. eds.), Oxford University Press, published online (65 of appr 100 chapters). Print publication in 2021.

Economic Instruments to Protect the Amazon: The Manaus Industrial Pole Experience, 2009, Alexandre Rivas, James Randall Kahn, José Alberto da Costa Machado, José Aronda Mota, eds., São Paulo, Editora CRV. ISBN978-85-62480-33-1

*A Handbook on Contingent Valuation*, (co-edited with Anna Alberini, Edward Elgar Publishers, 2006.

*Does Environmental Policy Work? The Theory and Practice of Outcomes Assessment* (co-edited with David Irvin and Marie Livingston), Edward Elgar Publishers, London,. (2003)

*Technological Assessment and Zero Emissions in a Global World*. Roberto C. Villas Bôas, James R. Kahn (Eds.). IATAFI/IMAAC-UNIDO/CETEM, e-book, 146 pages, 1998ISBN 978-85-7227-239-1  
<http://200.20.105.7/imaac/Publications/Books/Zero%20Emissions%20in%20Global%20World.pdf>

*The Contingent Valuation of Environmental Resources: Methodological Issues and Research Needs* (edited with D. Bjornstad), Edward Elgar Publishing, London, 1996.

### **Refereed publications in scientific journals (55):**

CATARINO, Michel, KAHN, James, FREITAS, CEC, forthcoming, Stock assessment of *Prochilodus nigricans* (Prochilodontidae: Characiformes) by two distinct based approaches in the context of a small-scale Amazonian fishery, *Acta Ichthyologica et Piscatoria*

INOMATA, S.O., KAHN, J.R. & DE CARVALHO FREITAS, C.E 2019 "Structural and socioeconomic aspects of the peacock bass *Cichla vazzoleri* fishery performed in a large hydroelectric reservoir of the Amazon Basin". *Environmental Development and Sustainability* <https://doi.org/10.1007/s10668-019-00532-z>

- BEN SAID, Olfa, BELGACEM, Rihab, BEN GAFFAR, Boudour, BEYREM, Hamouda and KAHN, James R., 2018, Environmental and economic assessment towards effective remediation of oil residual sludge from the bottom of Tunisian refinery crude oil storage tanks, *Arabian Journal of Geosciences* ISSN: 1866-7511
- KAHN, James, REZENDE, Carlos, and VASQUEZ, William, 2017. Choice Modeling of System-Wide or Large Scale Environmental Change in a Developing Country Context: Lessons from the Paraíba do Sul River, *Science of the Total Environment* , 598:488-496,
- HURD, Lawrence, GARCEZ, Raniere, SOUSA, Flavia, COOPER, Greg, KAHN, James and FREITAS, Carlos (in Press) "Amazon floodplain fish communities: habitat connectivity and conservation in a rapidly deteriorating environment".2016 *Biological Conservation*
- REZENDE, Carlos, KAHN, James, PASSARELLI, Layra, VASQUEZ, William, 2015 An economic valuation of mangrove restoration in Brazil, *Ecological Economics*, 120, 296-302, <http://dx.doi.org/10.1016/j.ecolecon.2015.10.019>
- KAHN, James Randall, Carlos Edwar Freitas and Miguel Petrere False Shades of Green: The Case of Brazilian Amazonian Hydropower *Energies* **2014**, 7(9), 6063-6082; doi:10.3390/en7096063
- CORRÊA, Maria Angélica de Almeida, KAHN, James R. and FREITAS, Carlos Edwar, Perverse Incentives in Fishery Management: The Case of the Defeso in the Brazilian Amazon, *Ecological Economics*, DOI: 10.1016/j.ecolecon.2014.07.023, v. 106, p. 186-194, 2014.
- RIVAS, Alexandre A.F., KAHN, James R., , HURD, Lawrence E. and COOPER, Gregory, 2013. The Role of Payments for Ecological Services in the Sustainable Development and Environmental Preservation of the Rainforest: A Case Study of Barcelos, Amazonas, BR, *International Journal of Social Ecology and Sustainable Development* DOI: 10.4018/jesd.20130701024:3, 13-27
- CORREA, M.A.A ; KAHN, James R ; FREITAS, C. E.C. . A pesca no município de Coari, estado do Amazonas, Brasil. *Revista Brasileira de Engenharia de Pesca*, v. 6, p. 1-12, 2012. <http://ppg.revistas.uema.br/index.php/REPESCA/article/viewFile/365/527> ISSN 2175-3008
- CAVIGLIA-HARRIS, Jill L; CHAMBERS, Dustin; KAHN, James R. 2009, Taking the “U” out of Kuznets: A comprehensive analysis of the EKC and environmental

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doi:10.1016/j.ecolecon.2008.08.006
- CASEY, James ; KAHN, James Randall ; RIVAS, A. A. F. . 2008, Willingness to accept compensation for the environmental risks of oil transport on the Amazon: A choice modeling experiment. *Ecological Economics* , doi 10.1016/j.ecolecon.2008.01.006, 67: 552-559
- RIVAS, A. A. F. ; KAHN, James Randall ; CASEY, James . A preservação ambiental é um bem de luxo? Um estudo sobre o valor de ecossistemas de várzea na Amazônia. Planejamento e Políticas Públicas (IPEA), (2007).  
<http://www.ipea.gov.br/ppp/index.php/PPP/article/viewFile/42/41>
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- CAVIGLIA-HARRIS, Jill, KAHN, James and GREEN, Trellis, 2003. Demand-Side Policies for Environmental Protection and Sustainable Use of Renewable Resources, *Ecological Economics*, 4, 119-132. doi 10.1016/S0921-8009(03)00009-0
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- CAVIGLIA-HARRIS, Jill and KAHN, James R. 2003. Carbon Annuities as a Policy to Promote Sustainable Agroforestry and Slow Global Warming, *International Journal of Sustainable Development* 6. .doi 10.1504/IJSD.2003.004217
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- CAVIGLIA, Jill, and KAHN, J.R. 2001. Diffusion of Sustainable Agriculture In the Brazilian Tropical Rain Forest: A Discrete Choice Analysis *Economic Development and Cultural Change*, 49:2, pp 311-334. doi 10.1086/452504
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- KAHN, James, and GREEN, Trellis, 2000. Demand-Side Approaches to Mitigating Open-Access Externalities: The Case of the Wild Fishery *Asian Journal of Energy and Environment*, 1:51-67. [ISSN 1513-4121](https://doi.org/10.1016/S1513-4121(00)00005-1)
- KAHN, James R. and FARMER, Amy, 1999. The Double Dividend, Second-Best Worlds, and Real-World Environmental Policy, *Ecological Economics*, Volume 30, Issue 3, pp 433-439. [doi:10.1016/S0921-8009\(99\)00005-1](https://doi.org/10.1016/S0921-8009(99)00005-1)
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- GREEN, David, KAHN, James, and GIBSON, Robert, 1999. Estimating the Rebound Effect For Household Vehicles in the US *The Energy Journal*, 20(3), 1-31. **(received award as outstanding paper in the Energy Journal in 1999).**

- FRANCESCHI, Dina, and KAHN, James. 1999. The Economic Implications for Sustainable Mining , *Analise Economica*, ano 17, no 31, 141-154.
- KAHN, James R. and D. Franceschi, 1998. The potential contribution of economics to the recovery of Northeastern forests, *Northeastern Naturalist*, 5(2), pp155-164.
- KAHN, James R., O'NEILL, R.V. and RUSSELL, C.S., 1998. Economics and Ecology: The need for detente in Conservation Ecology *Conservation Ecology* [online] 2(1): <http://www.consecol.org/vol2/iss1/art4>.
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- KAHN, James R. and McDonald, Judith, 1995. Third World Debt and Tropical Deforestation, *Ecological Economics* vol. 12, pp. 107-123.
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- SWANSON, R.L., KAHN, James R., BELL, T.M. and OHLA, J. 1991. Use Impairments and Ecosystem Impacts of the New York Bight, *Chemistry and Ecology*, vol. 5, pp 99-127, 1991.
- KAHN, James R. , 1991., The Economic Value of Long Island Saltwater Recreational Fisheries, *New York Economic Review* vol. 12, pp 3-23.
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- CLARK, David, and KAHN, James 1989. The Two Stage Hedonic Wage Approach: A Methodology for the Valuation of Environmental Amenities, *Journal of Environmental Economics and Management*, vol.16, pp106-120.
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- KAHN, James R., The Economic Damages of Beach Pollution" *Long Island Sound Update*, vol. 2, no. 5, 1989.

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- CLARK, David, and KAHN, James R. 1988. The Social Benefits of Urban Cultural Amenities, *Journal of Regional Science*, vol. 28. no 3, pp363-377.
- BALKAN, Erol and KAHN, James. 1988. The Value of Changes in Deer Hunting Quality: A Travel Cost Approach, *Applied Economics*, vol. 20, pp533-541.
- KAHN, James R. and ROCKEL, Mark, 1988. The Economic Effects of Brown Tides, *Journal of Shellfish Research*, vol. 7, no 4, pp 677-682.
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- KAHN, James R. 1987. Measuring the Economic Damages Associated with Terrestrial Pollution of Marine Ecosystems, *Marine Resource Economics*, vol. 4, pp. 193-209.
- KAHN, James R. and KEMP, W.M. 1985. Economic Losses Associated With the Degradation of an Ecosystem: The Case of Submerged Aquatic Vegetation in the Chesapeake Bay, *Journal of Environmental Economics and Management*, vol. 12, pp. 246-263.
- KAHN, James R. 1983. Congestion in Recreation: An Application of the Household Production Function with Separate Quantity and Quality Goods, *N.E. Regional Science Review*, vol. 13, pp. 35-59.
- KAHN, James R. and CUMBERLAND, J.H. 1982. The Estimation of Marginal Damage Functions: An Assessment of the Informational Requirements, *N.E. Regional Science Review*, vol. 12, pp. 1-12, 1982.

**Chapters in books (41):**

- RIVAS, Alexandre and James KAHN, forthcoming in 2021, Industrial Policy as an Environmental Policy: Forest Preservation and the Industrialization of Manaus, in Research Encyclopedia of Environmental Economics, Kahn, JR (ed), Biller, Dan, Rawshan Begum and John Whitehard (assoc. eds.), Oxford University Press, published online (65 of appr 100 chapters). Print publication in 2021.
- KAHN, James R., Alexandre RIVAS, 2014. Economia Ambiental, in *Economia e valoração de serviços ambientais utilizando técnicas de preferências declaradas*, RIVAS, A., ed. , Editora da Unversidade Federal do Amazonas, Manaus, ISBN 978-85-7401-740-2, pp 35-46.
- KAHN, James R., Alexandre RIVAS, 2014 Economia e a falha dos mercados, in *Economia e valoração de serviços ambientais utilizando técnicas de preferências*



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- KAHN. James R., Alexandre RIVAS, 2014, Intervação governamental na falha do mercado, in in *Economia e valoração de serviços ambientais utilizando técnicas de preferências declaradas*, RIVAS, A., ed. , Editora da Unversidade Federal do Amazonas, Manaus, ISBN 978-85-7401-740-2, pp 83-136.
- KAHN. James R., Alexandre RIVAS, 2014, Abordagens para a valoração econômico ambiental, in *Economia e valoração de serviços ambientais utilizando técnicas de preferências declaradas*, RIVAS, A., ed. , Editora da Unversidade Federal do Amazonas, Manaus, ISBN 978-85-7401-740-2, pp 83-136.
- ABULJA BUCHELI, M.G, and James R. KAHN, (2014) Modelagem de Escolha e Estudos Pilotos: Um Exemplo da Hidrelétrica de Balbina in *Economia e valoração de serviços ambientais utilizando técnicas de preferências declaradas*, RIVAS, A., ed. , Editora da Unversidade Federal do Amazonas, Manaus, ISBN 978-85-7401-740-2, pp 251-274
- Passareli, Layra da Silva, James R. Kahn and Carlos Rezende, 2014. Valorização de mangueiras no Brasil: o caso do Norte Fluminense, in *Economia e valoração de serviços ambientais utilizando técnicas de preferências declaradas*, RIVAS, A., ed. , Editora da Unversidade Federal do Amazonas, Manaus, ISBN 978-85-7401-740-2, pp 83-136.
- FREITAS, Carlos Edwar de Carvalho, RIVAS, Alexandre A. F., CAMPOS, Caroline Pereira SANT'ANA, Igor, KAHN, James Randall, CORREA, Maria Angélica de Almeida and CATARINO, Michel Fabiano, 2013. The Potential Impacts of Global Climatic Changes and Dams on Amazonian Fish and Their Fisheries , in *New Advances and Contributions to Fish Biology*, edited by Hakan Türker, ISBN 978-953-51-0909-9, InTech, <http://www.intechopen.com/books/new-advances-and-contributions-to-fish-biology/potential-impacts-of-global-climate-change-and-dams-on-amazonian-freshwater-fish-and-its-fisheries>, pp 175-195
- .The Sustainable Economic Development of the Indigenous and Traditional Peoples Kahn, James R and Alexander Rivas, 2010 in *Post Keynesian and Ecological Economics: Confronting Environmental Issues*, R. Holt, S. Pressman and C. Splash, eds, Edward Elgar Publishing, Aldershot, U.K, ISBN - 978-1847206688
- Kahn, James R, 2009, A mathematical Behavioral Model of the Manaus Industrial Pole, 2009, in *Economic Instruments to Protect the Amazon: The Manaus Industrial Pole Experience*, 2009, Alexandre Rivas, James Randall Kahn, José Alberto da Costa Machado, José Arounda Mota, eds., São Paulo, Editora CRV. ISBN 978-85-62480-33-1

- Kahn, Janes R. 2009. O Modelo Comportamento Matemática do Pólo Industrial do Manaus, 2009, PP-75-87, in Instrumentos Econômicos para a Proteção da Amazônia: A Experiência do Pólo Industrial de Manaus, Rivas, Mota and Machado, Eds. São Paulo: Editora CRV. ISBN 978-85-62480-23-2.
- Princípios Teóricos sobre instrumentos econômicos e a gestão ambiental, 2008, A.A.F. Rivas, J.R.Kahn and R.R. Mourão, in Valoração e instrumentos Economicos aplicados au Meio Ambiente: Alternativas para Proteger a Amazonônia, A. Rivas, C.E. Freitas and R.R. Mourão, eds, Manaus: Instituto PIATAM isbn 9788668684105, pp 15-28.
- A contribuição potencial da avaliação econômico para o processo de tomado de decisão, 2008, James R. Kahn, in Valoração e instrumentos Economicos aplicados au Meio Ambiente: Alternativas para Proteger a Amazonônia, A. Rivas, C.E. Freitas and R.R. Mourão, eds, Manaus: Instituto PIATAM isbn 978-86-68684-10-5, pp 29-37
- A preservação ambiental é um bem de luxo? Um estudo sobre o valor de ecossistemas de várzea na Amazônia, Alexandre Rivas, James F. Casey and James R. Kahn, in Valoração e instrumentos Economicos aplicados au Meio Ambiente: Alternativas para Proteger a Amazonônia, A. Rivas, C.E. Freitas and R.R. Mourão, eds, Manaus: Instituto PIATAM isbn 978-86-68684-10-5, pp 79-88. (reprint of 2007 IPEA article)
- Introduction (with Anna Alberini, in *A Handbook of Contingent Valuation*, Kahn and Alberini, eds, Edward Elgar Publishers, 2006.
- Conclusions (with Anna Alberini, in *A Handbook of Contingent Valuation*, Kahn and Alberini, eds, Edward Elgar Publishers, 2006.
- An introduction to choice modeling for non-market valuation, (with Steven Stewart), in *A Handbook of Contingent Valuation*, Kahn and Alberini, eds, Edward Elgar Publishers, 2006
- Self-regulation strategies and co-management of fishery resources in the Amazon Basin (with Freitas and Rivas), in *Ecosystems and Sustainable Development V*, WIT Press: Southampton UK, pp 511-516. ISBN 1-84564-013-6, 2005
- Valuing Biodiversity in a Rural Valley, (with Steve Stewart, et al), in *Economics and Ecological Risk Assessment: Applications to Watershed Management*, R Bruins and M. Heberling, eds., ISBN 9781566706391 CRC Press: New York, 2005.
- Conclusion (co-authored with Irvin and Livingston), *Does Environmental Policy Work? The Theory and Practice of Outcomes Assessment* (co-edited with David Irvin and Marie Livingston), Edward Elgar Publishers, London, 190-95, (2003)

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Trade-off Based Indicators of Environmental Quality, in *Does Environmental Policy Work? The Theory and Practice of Outcomes Assessment* (co-edited with David Irvin and Marie Livingston), Edward Elgar Publishers, London,. 38-54, (2003)

Toward a Forest Capital Index (with Wilcox and Smallwood), in D.J. Rapport, W.L. Lasley, D.E. Rolston, N.O. Nielsen, C.O. Qualset, and A.B. Damania (eds.) *Managing for Healthy Ecosystems*, Lewis Publishers, Boca Raton, Florida USA. 2003.

Stated Preference Approaches to the Measurement of the Value of Biodiversity (with R. O'Neill and S. Stewart) in *Valuation of Biodiversity Benefits: Selected Studies*, Organization of Economic Cooperation and Development, Paris: ISBN 92-64-19665-X, 2001 (also available at [http://chm.moew.government.bg/nnp/upload/Common/Baurle\\_literature\\_NOF/Local%20Publish/OECD\\_Valuation\\_biodiv\\_benefits.pdf](http://chm.moew.government.bg/nnp/upload/Common/Baurle_literature_NOF/Local%20Publish/OECD_Valuation_biodiv_benefits.pdf))

Integrating Ecological Complexity into Economic Incentives for Sustainable Use of Amazonian Rainforests (with McCormick and Nogueira), in *Climate Change and Forest Management in the Western Hemisphere*, Mohammed Dore (ed), Haworth Press: Binghamton, NY, 2001 (reprint of 2000 *Journal of Sustainable Forestry Article* )

Environmental Policy and Sustainable Development: Implications for Materials and Mining (with Dina Franceschi) in *Technological Challenges Posed by Sustainable Development: The Mineral Extraction Industries*, Roberto Villas Boas and Lelio Fellows Filho, eds. CYTED/IMAAC/UNIDO, Madrid. 2000.

Third World Debt and Tropical Deforestation" (with J. McDonald) reprint of 1995 *Ecological Economics* paper in *Ecosystems and Nature* (vol 1), R. Kerry Turner, ed., Edward Elgar Publishers, London, 37-44, 1999.

"The Value of Changes in Deer Hunting Quality: A Travel Cost Approach," (with Erol Balkan) reprint of 1988 *Applied Economics* paper in *Environmental Valuation*, Kenneth G. Willis, K.J. Button, and Peter Nijkamp, eds., Edward Elgar Publishers, London, 325-341, 1999.

Introduction (with R Villas Boas), in *Zero Emissions and Technology Assessment: Implications for Developing Countries*, James R. Kahn and Roberto Villas Boas ed. IATAFI, Oslo, Norway, 1998.

The Role of Valuation in Assessing Alternative Technologies and Environmental Change. in *Zero Emissions and Technology Assessment: Implications for*

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"The Role of Economic Factors in Tropical Deforestation" (with J. McDonald) in *Tropical Forest Remnants: Ecology, Management and Conservation of Fragmented Communities*, edited by W. Lawrence, R. Bierregaard Jr., and C. Moritz, University of Chicago Press, Chicago 1997. 9780226468983

Characteristics of Environmental Resources and Their Relevance for Estimating Value," (with D. Bjornstad) in *The Contingent Valuation of Environmental Resources: Methodological Issues and Research Needs*, edited by D. Bjornstad and J. Kahn, Edward Elgar Publishing, London, 1996. 978-1858983219

"Structuring a Research Agenda for Estimating Environmental Values," (with D. Bjornstad) in *The Contingent Valuation of Environmental Resources: Methodological Issues and Research Needs*, edited by D. Bjornstad and J. Kahn, Edward Elgar Publishing, London, 1996.

"International Debt and Deforestation " (with J. McDonald) in *The Causes of Tropical Deforestation*, edited by Katrina Brown and David Pearce, University College London Press, 1994. 0774805110

"Global Warming Potential and Other Effects of CO<sub>2</sub>", in *Estimating Externalities of Coal Fuel Cycles* (R. Lee, ed.) McGraw Hill, Inc. for Oak Ridge National Laboratory and Resources for the Future, 1994.

An Overview of the Economic Impacts of Floatable Wastes on Fisheries, Tourism and Marine Recreation", in *Floatable Wastes in the Ocean: Social, Economic and Public Health Implications*, L. Swanson, ed., SUNY-Stonybrook, 1993.

"Debt and the Economic Incentive to Deforest," *Annals of Forest '92 and ECO/URBS 1992*, (with J. McDonald), edited by Jean Dubois 1992.

"Atrazine Applications and Chesapeake Bay Fisheries", in *Farming and the Countryside: An Economic Analysis of External Costs and Benefits*, N. Hanley, ed., C.A.B. International, Oxford, UK, 1991. 0 85198 713 3

"Economic Incentives for the Control of Toxic Wastes: A Mass Balance Approach to a Deposit Refund System," in *Location and Management of Special Facilities*, M. Chatterjie, ed., Gower, London, 1987.

"An Analysis of Energetic and Economic Values Associated with the Decline of Submerged Aquatic Vegetation in the Chesapeake Bay," (with W. Boynton, et

al.) in *Energy and Ecological Modelling, Developments in Environmental Modelling*, Mitsch, Bosserman and Klopated (eds.), Elsevier Scientific Publishing Co., 1983.

**Papers in proceeding volumes (17):**

RIVAS, A. F.; B. F. RODRIGUES; R. R. Mourão e J. KAHN. 2008. *Estimativa de valor de recursos ambientais na região do lago de Manacapuru*. In: Anais da Conferência do subprograma de Ciência e Tecnologia – SPC&T Fase II/PPG7.

Protecting the Environment for the Sake of Protecting the Environment: Evidence of Existence Value from the Ribeirinho Communities of Amazonas, Brazil (with Alex Rivas) in Proceedings of the Ninth Biennial Conference of the International Society for Ecological Economics, December 2006

Economic Incentives, Direct Controls and Ecosystem Management of Fisheries: Out with the Old and in with the New, (with Alex Rivas) in Proceedings of the Ninth Biennial Conference of the International Society for Ecological Economics, December 2006

Protecting the Environment for the Sake of Protecting the Environment: Evidence of Existence Value from the Ribeirinho Communities of Amazonas, Brazil , with James Casey and Alexandre Rivas, *Proceedings of Third World Congress of Environmental and Resource Economics*, Kyoto, Japan, July, 2006.

Road Building and Environmental Preservation in Amazonia: Turning an Environmental Liability into an Environmental Asset, with Alexandre Rivas, *Proceedings of Third World Congress of Environmental and Resource Economics*, Kyoto, Japan, July, 2006.

Estimativa de valor de não-uso dos recursos ambientais na área de atuação da Petrobras na Amazonia, 2005, (com Rivas e Casey) em Anais 2005, Primeiro Congresso Internacional PIATAM-Ambiente, Homem, Gás e Petróleo, (Estimation of the non-use value of environmental resources in the area of Petrobras activity in Amazonia (extended abstract) with Rivas and Casey, in 2005 Annals of the First International Congress of PIATAM: The Environment, Humans, Gas and Petroleum, Rivas and Carvalho (eds.) () ISBN 8574012076, 2005.

Economic incentives, direct controls and ecosystem management of fisheries: Out with the old and in with the new, In *Fish Communities and Fisheries*, Proceedings of the 6th International Congress on the Biology of Fish, Ce Freitas, M Petrere, A. Rivas and Don Mackinley, eds, Manaus, AM. 2005.

Boa Viagem Erosion Prevention and Beach Nourishment Project, *Proceedings of the II Congresso Sobre Planejamento e Gestão das Zonas Costeiras dos Países de Expressão Portuguesa*, (with Monica Costa) October 2003.

The Economics of Natural Resource Exploitation, (with Dina Franceschi), proceedings from *Workshop sobre Meio Ambiente, Buzios*, CETEM, August 12-14 1998,

The Economic Implications of Sustainable Mining Within the Paradigm of Sustainable Development, (with Dina Franceschi), proceedings from *Mineracao e Desenvolvimento Sustentavel, Ouro Preto Workshop*, CANMET/CETEM, March 23-25 1998

"The New York Value of Chesapeake Striped Bass" (with R. Buerger) published in "Proceedings of Third Annual Conference on the Economics of Chesapeake Bay Management, Annapolis, MD, pp389-411, 1987.

"Comparison of Socioeconomic Characteristics of Saltwater Recreational Anglers in New York State", (with R. Buerger) in *Proceedings of N.E. Recreation Research*, 1989.

"The Conflict Between Commercial and Recreational Fishing", (with R. Buerger) in *Proceedings of Fourth Annual Association of Environmental and Resource Economists Workshop: Marine and Sports Fisheries Economic Valuation and Management*, Seattle, Washington, 1988.

The Economic Damages From Herbicide Pollution in Chesapeake Bay published in *Proceedings of First Annual Conference on the Economics of Chesapeake Bay Management*, Annapolis, MD, 1985.

Measuring the Economic Damages Associated with Terrestrial Pollution of Marine Ecosystems", *Proceedings of the Second Annual Association of Environmental and Resource Economists Workshop: Marine Pollution and Environmental Damage Assessment. 1986*

"Economic Issues Associated with Brown Tides and Similar Environmental Perturbations", in *Proceedings of the Emergency Conference on "Brown Tide" and Other Unusual Algal Blooms*, SUNY-Stony Brook, 1986.

"The Measurement and Management of the Economic Impacts of Hydropower on Sport Fisheries," in *Proceedings of 1981 Lake Champlain Basin Environmental Conference*.

#### **Selected Technical Reports and Monographs (7):**

RIVAS, A. A. F. ; KAHN, James Randall . *Economia Ambiental e dos Recursos Pesqueiros*. Manaus: Editora da Universidade Federal do Amazonas, 2006 (Cartilha).

Políticas Públicas para o Uso Sustentável dos Recursos Naturais do Médio Rio Negro (Barcelos Amazonas Brasil): Economia do Meio Ambiente e da Pesca (with Alexandre Rivas), Manaus: Editora Universidade Federal do Amazonas, 2006.

*Characteristics and Criteria for Environmental Decision-Making: Implications for Materials Policy*, Technical Report CETEM/IMAAC, <http://w3.cetem.gov.br/imaac/publicat.html>, 98 pages, 2001

The Development of Markets and Market Incentives for Sustainable Forestry: Application to the Brazilian Amazon, Organization for Economic Cooperation and Development, Environment Directorate, ENV/EPOC/GSP/BIO/(2001/6)/FINAL, 46 pages, 28 March 2002. [http://www.oalis.oecd.org/oalis/2001doc.nsf/c5ce8ffa41835d64c125685d005300b0/abc91129a37b59b9c1256b8a00456d70/\\$FILE/JT00123345.PDF](http://www.oalis.oecd.org/oalis/2001doc.nsf/c5ce8ffa41835d64c125685d005300b0/abc91129a37b59b9c1256b8a00456d70/$FILE/JT00123345.PDF)

Instrumentos Econômicos e Fiscais para Regulação do Setor Elétrico na Amazônia (com Rivas, Barreto e Viera), Agência Nacional de Energia Elétrica (Aneel), Rede de Centros de Excelência em Regulação de Mercados (Cerme), 2000

An evaluation and critical analysis of international forest concession systems, Governo do Estado do Amazonas, Gabinete do Governador, Instituto de Proteção Ambiental do Amazonas, October 14, 1998

The Economic Value of Long Island Saltwater Recreational Fishing (1991), New York Sea Grant Institute, SUNY-Stonybrook Press

### **FULL COURSES TAUGHT AT FOREIGN UNIVERSITIES (20 hours or more)**

Universidade Federal do Amazonas, Ph.D. and Masters Programs in Fishery Science taught 30 hour course in Fishery Economics (in Portuguese-July 2019)

Universidade Federal do Amazonas, Ph.D. and Masters Programs in Fishery Science taught 30 hour course in Fishery Economics (in Portuguese-July/August 2017)

Universidade Federal do Amazonas, Ph.D. and Masters Programs in Fishery Science taught 30 hour course in Fishery Economics (in Portuguese-July/August 2016)

Universidade Federal do Amazonas, Ph.D. and Masters Programs in Fishery Science, taught 30 hour course in fishery economics (in Portuguese-July 2015)

Universidade Federal do Amazonas, Ph.D. and Masters Programs in Fishery Science, taught 30 hour course in fishery economics (In Portuguese-August 2014)

Universidade Federal do Amazonas, Ph.D. and Masters Programs in Fishery Science, taught 20 hour course in scientific writing in English (In Portuguese-August 2014)

Universidade Federal do Amazonas, Ph.D. and Masters Programs in Fishery Science, taught 30 hour course in Natural Resource Economics (in Portuguese-July 2013)

Universidade Federal do Amazonas, Ph.D. and Masters Programs in Fishery Science, taught 30 hour course in Fishery Economics (in Portuguese- August 2013)

Universidade Federal do Amazonas, Ph.D. and Masters Programs in Fishery Science, taught 30 hour course in Natural Resource Economics (In Portuguese-June 2012)

Universidade Federal do Amazonas, Ph.D. and Masters Programs in Fishery Science, taught 30 hour course in Fishery Economics (In Portuguese-August 2012)

Universidade Federal do Amazonas, Ph.D. and Masters Programs in Fishery Science, taught 30 hour course in Natural Resource Economics (In Portuguese-June 2011)

Universidade Federal do Amazonas, Ph.D. and Masters Programs in Fishery Science, taught 30 hour course in Fishery Economics (In Portuguese-August 2011)

Universidade Federal do Amazonas, taught 20 hour course in Global Environmental Governance (in Portuguese-July 2003)

Universidade Santa Ursula, Rio de Janeiro, Brazil taught 45 hour course in Masters Degree program on Natural Resource Economics (In English July-August 2001)

Universidade do Amazonas, Manaus Brazil: 30 hour course in environmental valuation taught in post-graduate specialization program in environmental impact assessment, In English-December, 1996).

Universidade do Amazonas, Manaus, Brazil: 30 hour course in environmental economics taught in Masters of Environmental Sciences Program, (In English-April, 1996).

### **SHORT COURSES TAUGHT AT FOREIGN UNIVERSITIES (less than 20 hours)**

Universidade Federal do Rio Grande do Sul, taught 15 hour course to economics graduate students (August 2015) (in English)

Universidade Estadual do Norte Fluminense, taught 15 hour course to master's and PhD students in the economics of coastal ecosystems. (in Portuguese July 2011)

Universidade Federal do Amazonas, taught 16 hours segment in MA program in sustainable development, "Choosing our Energy Future" (in Portuguese-August 2007)

Universidade Federal do Rio de Janeiro (COPPE) and Centro do Tecnologia Mineral, taught 16 hour course, "Choosing our Energy Future (in Portuguese-July 2007).



Universidade Estadual do Norte Fluminense taught 15 hour course in Environmental Economics (in Portuguese-July 2005)

Universidade Federal do Pernambuco, Recife, Brazil, taught 12 hour course on environmental economics in Oceanography Department (In Portuguese-August 2002)

Universidade Federal do Pernambuco, Recife, Brazil, taught 12 hour course on environmental economics in Oceanography Department (in Portuguese-August 2001)

Universidade Federal do Ouro Preto, Escola das Minas, Ouro Preto, Brazil, taught 12 hour course on cost-benefit analysis (in Portuguese-August 2001)

Universidade do Amazonas, Manaus Brazil: Taught six hours in environmental economics module of Masters in Environmental Sciences program. Topics included “macro-economics and the environment” and “economics of global warming) in English-May 2001)

Universidade do Amazonas, Manaus, Brazil: taught eight hour course in Fundamental Elements of Environmental Decision-Making (March 2000)

Universidade Estadual do Norte Fluminense, Campos, Brazil : taught eight hour course in Fundamental Elements of Environmental Decision-Making (in English March 2000)

Universidade do Ouro Preto, Escola das Minas, Ouro Preto, Brazil: One day course in cost benefit-analysis taught to students in mineral engineering and engineers from mining companies in the area, (In English March, 1998).

## **INVITED LECTURES**

2019 2019 Federal University of Rio Grande do Sul, presented Survey research to support sustainable development in remote areas of the Brazilian Amazon: A choice-modeling approach

2019 VA Tech Survey research to support sustainable development in remote areas of the Brazilian Amazon: A choice-modeling approach

2019 Hamilton College The Demise of Ecosystems: Economic Activity or Bad Policies

2018- ISIMM - Institut Supérieur d'Informatique et de Mathématiques de **Monastir**, **Monastir**, Tunisia, talked about economic aspects of the Anthropocene.

2018 - Presented a seminar to the Faculty of Sciences at the University of Carthage in Bizerte, Tunisia, Economic Activity or Bad Policies: Rent-seeking and the demise of ecosystems

2018 - Presentation to Bizerta Maritime Association, an umbrella organization of people concerned about coastal environmental problems, in Bizerte, Tunisia, presented “The economics of global climate change”.

2017- Universidade Federal do Amazonas, in June. I presented “The implications of the Trump Presidency for the Environment in the US and the world.

2016- Universidade Federal do Rio Grande do Sul, in August. I presented “Coase, Pigou, and the Anthropocene: Implications for Environmental Policy”

2015-Universidade Federal do Rio Grande do Sul, in August I presented False Shades of Green: The Case of Brazilian Amazonian Hydropower, in November I presented the Future of Amazonian Rainforests.

2014- Universidade Estadual do Norte Fluminense, presented False Shades of Green: The case of Amazonian Brazilian Hydropower

2013- Centro do Tecnologia Mineral, Rio de Janeiro, presented Reflections of a Gringo Amazonense: Sustainable Development in Highly Intact Areas of Amazonia

2010-Universidade Federal do Amazonas-Global Climate Change Policy-Post-Copenhagen (in Portuguese)

2010-Universidade Estadual do Norte Fluminense- Choice Modeling and the Recuperation of the Rio Paraiba do Sul

2009- Universidade Federal do Amazonas-Economic Incentives for Environmental Preservation.

2009- University of Tennessee, Department of Ecology, Presented Integrating Ecological Complexity into Economic Incentives,

2007- Universidade Federal do Amazonas – Global Climate Change: Where do we go from here, August 2007 (in Portuguese)

2007- Universidade Federal Rio De Janeiro – Global Climate Change: Where do we go from here, July 2007 (in Portuguese)

2006 - University of North Carolina-Charlotte, Beyond Kyoto: A Tax-Based System for the Global Reduction of Greenhouse Gases and Protecting the Environment for

- the Sake of Protecting the Environment: Evidence of Existence Value from the Ribeirinho Communities of Amazonas, Brazil
- 2006 - Davidson University-Davidson, NC: What is the future of the Amazon Rainforest?
- 2006 -University of Virginia, Road Building and Environmental Preservation in Amazonia: Turning an Environmental Liability into an Environmental Asset
- 2006 – Universidade Federal do Amazonas (presentation in Portuguese): Current Issues in Climate Change
- 2005-Universidade Federal do Rio Grande do Sol, (presented in Portugues) Is Environmental Preservation a Luxury Good? Evidence from the Ribeirinho Communities of Amazonas, Brazil
- 2005- Marine Biological Laboratory, Woods Hole, MA, presented a synthesis of my work on sustainable forestry
- 2004- Universidade Federal do Amazonas, (presented in Portuguese)It is broke, so fix it: Rethinking the Kyoto Protocol
- 2004- Universidade Federal do Rio Grande do Sol, (presented in Protuguese), It is broke, so fix it: Rethinking the Kyoto Protocol
- 2004-Tec-Monterrey, Monterrey Mexico, presented three papers: It is broke, so fix it: Rethinking the Kyoto Protocol; Ecosystem Management in Fisheries; Rethinking Forestry Economics
- 2003- Universidade Nova de Lisboa, presented “The Contribution of Environmental Valuation to the Decision-Making Process at Workshop on “Policy and Corporate Responsibility: Managing Environmental Risks
- 2003- Fairfield University, presented “Economic Incentives for Protection of Amazonian Rainforests.
- 2003- Duke University, Nicholas School of the Environment, presented “Rethinking Forestry Economics”
- 2001 - Appalachian State University, presented Ecological Complexity, Economic Incentives, and the Preservation of Amazonian Rainforests
- 2001 - James Madison University, presented Ecological Complexity, Economic Incentives, and the Preservation of Amazonian Rainforests
- 2001 - Rochester Institute of Technology, presented Ecological Complexity, Economic Incentives, and the Preservation of Amazonian Rainforests

- 2000 - University of Tennessee, presented Sustainable Development and the Preservation Of Amazonian Rainforests
- 1999 - Universidade Nova de Lisboa (Lisbon, Portugal)- presented “Performance Bonding as a Continuous Economic Incentive for Environmental Improvement.”
- 1999 - Universidade do Amazonas (Manaus, Brazil) - presented “Performance Bonding as a Continuous Economic Incentive for Environmental Improvement”
- 1999 - Agência Nacional de Energia Elétrica (Brasilia) - presented Environmental Regulation of Electric Utilities and Its Implications for Brazil
- 1999 - Instituto Brasileiro do Meio Ambiente (Manaus) - Presented “Economic Incentives for Environmental Protection”
- 1999 - Universidade Tecnical do Amazonas (Manaus) - Presented “Economic Incentives for Environmental Protection”
- 1999 - Universidade Estadual do Campenas (Unicamp) (Campenas, Brazil) - Presented “Economic Incentives for Environmental Protection”
- 1999 - Instituto Proteção Ambiental - Amazonas (Manaus) - Presented “Economic Incentives for Environmental Protection”
- 1999 - Universidade Cândido Mendes (Rio de Janeiro) - Presented “Economic Incentives for Managing Open-Access Resources”
- 1999 - Alumnae College, Washington and Lee University - gave lectures on South American economic and sustainable development in Amazonia to alumnae program
- 1999 - Visiting Scholar in Residence, Washington and Lee University-three days of talks to faculty and students
- 1998 - Colgate University, presented “Integrating Ecological Complexity into Economic Incentives for Sustainable Use of Amazonian Rainforests” and “Demand Side Policies for Environmental Protection and Sustainability”. Made several additional presentations in undergraduate classes.
- 1998 - Universidade Federal do Rio Grande do Sol, Porto Allegre, Brazil, presented “Integrating Ecological Complexity into Economic Incentives for Sustainable Use of Amazonian Rainforests”
- 1998 - Universidade Santa Ursula, Rio de Janeiro, Brazil, presented “Integrating Ecological Complexity into Economic Incentives for Sustainable Use of Amazonian Rainforests”

- 1997 - Colgate University-presented “Ecosystem Stability as a Source of Economic Scarcity” to Economics Department, presented two lectures to the university community, “Demything the Relationship between the Economy and the Environment” and Sustainable Economic Development of the Brazilian Amazon
- 1997 - Symposium on the Recovery and Future of the Northeastern Forest, Connecticut College, presented “The Potential Contribution of Economics to the Recovery of Northeastern Forests
- 1996 - Washington and Lee University: presented two lectures, a general public lecture on “Demything the Relationship between the Economy and the Environment, and a lecture to the economics department on Demand-Side Approaches to Mitigating Open-Access Externalities: The Case of Aquaculture and the Wild Fishery)
- 1996 Instituto Nacional de Pesquisas da Amazonia (National Institute for Research on the Amazon), Manaus, Brazil - presented Trade-Off Based Indices of Environmental Quality - An Environmental Analogue to GDP.
- 1996 Centro de Tecnologia Mineral, Conselho Nacional de Desenvolvimento Cientifico e Tecnolgico (Center for Mineral Technology, National Council for the Development of Science and Technolgy (Brazilian Equivalent of NSF), Rio de Janeiro, Brazil-presented “The Environment, the Economy and Sustainable Development”.
- 1996 Mining in Latin American, Scottsdale Arizona, sponsored by Institute for the Americas and Colorado School of Mines, and US Bureau of Mines. Presented “Environmental Protection, Economics and Mining in Latin America and participated in Panel Discussion on Environmental Regulations and Investment in the Mining Sector: Finding the Appropriate Balance
- 1995 - Virginia Tech-presented Trade-off Based Indices of Environmental Quality - An Environmental Analogue to GDP.
- 1995 - University of Kentucky-Trade-off Based Indices of Environmental Quality - An Environmental Analogue to GDP.

### **INVITED PRESENTATIONS AT CONFERENCES**

2019 \_fesPIM, (expo on sustainability of the Industrial Pole of Manaus), presented a keynote talk, The Industrial Pole of Manaus: A sustainable pathway to economic development and environmental protection

2019 Aquasalt research workshop (EU), Zaragosa, Spain, presented Environmental Valuation of the Impacts of Agriculture on Aquifers and Coastal Lagoons

- 2017- International Conference on Hydroecology: For security of aquatic ecosystems and society, I presented an invited Keynote Address entitled: Economic Activity or Bad Policies: Degradation of Aquatic Ecosystems, March 20-24, Campos dos Goytascas, Brazil
- 2017- Conference of the US Society of International Economics, I gave the Presidential Address entitled: Economic Activity or Bad Policies: The Demise of Aquatic Ecosystems, St Paul, MN.
- 2013- XX Congresso Brasileiro de Economia 2013, Manaus, Brazil, presented Desenvolvimento Sustentável e Preservação Ambiental em áreas florestais altamente intactas da Amazônia: Desafios e Oportunidades (Sustainable Development and Environmental Preservation in highly intact areas of the Amazon Rainforest: Challenges and Opportunities)
- 2013- Making Conservation Sustainable: Institutional Design and the Natural Environment (workshop co-sponsored by the National Fish and Wildlife Foundation, Vanderbilt Law School and UVA Law School), invited expert
- 2011- LOICZ (Land-Ocean Interface in the Coastal Zone) Open Science Conference: Global Systems, Climate Change and Sustainability, presented keynote address: Think Globally but Model Locally: The Use of Panel Data in Estimating Behavioral Models of the Relationships Between Human Behavior and Environmental Change
- 2011-INCT/CNPq Simpósio Internacional Sobre a Transferência de Materiais na Interface Continente – Oceano, Fortaleza, Brasil, presented Modelagem das Escolha e a Recuperação do Rio Paraíba do Sul (choice modeling and the restoration of the Rio Paraíba do Sul
- 2010- Workshop on Public Policies for Sustainable Use of Fishery Resources in the Middle Rio Negro, In Barcelos. presented, Natural Resources and Sustainable Development in Barcelos.
- 2009-III Seminário Internacional Amazônia: Desafios e Potencialidades para a Amazônia do Século XXI, Third international Seminar on the Amazon: Challenges and Possibilities, December 2009. Belem, Para, Brazil, presented “COP-15, Usos das terras, e a floresta Amazônica”
- 2008-FIPSE/CAPES Project Directors meeting, presented Global Climate Change, Policy and the FIPSE/CAPES Consortia
- 2008-IV Feira Internacional da Amazônia - FIAM 2008, presented two papers, Princípios Teóricos sobre instrumentos econômicos e a gestão ambiental and A contribuição potencial da avaliação econômica para o processo de tomada de decisão (in Portuguese)

- 2006 - Seventh International Conference on Clean Technologies for the Mining Industry, presented Ecological Economics of Clean Mining, Buzios, Brazil, October, 2006.
- 2005-First Annual International PIATAM Congress, Manaus, BR, presented (in Portuguese) Complexidade Ecológica e o Processo Económico (Ecological complexity and the economic process)
- 2005 - Associated Colleges of the South, presentation on our US/Brazil Consortium for Environmental Studies
- 2005- Southern Economic Association Meeting, organized two sessions on Ecological Economics, presented Second-Level Externalities: Spillover Costs and Benefits Associated with the Internalization of Externalities
- 2005 - National Center for Ecological Analysis and Synthesis, Santa Barbara, participated in national panel workshop to develop a research agenda in the area of ecosystem service-based management of ecosystems. Wrote joint paper which has been accepted by *Bioscience*
- 2005- Annual Meeting of FIPSE/CAPES project directors, lead discussion session on environmental projects, invited participant in closed discussion on the future of US/Brazil cooperation in higher education.
- 2004 - Associated Colleges of the South, presentation on incorporating student research into the environmental studies curriculum
- 2002 - Instituto Superior de Psicologia Aplicada, Lisboa, Portugal Colloquium on "Environmental Ethics and Sustainable Development," presented Integrating Economic and Ecological Concepts in the Development of Sustainable Policies.
- 2001 - OECD International Workshop on Market Creation for Biodiversity Products and Services (Paris) presented The Development of Markets and Economic Incentives for Sustainable Forestry: Application to the Brazilian Amazon
- 2000 - Jornadas Iberoamericanas Sobre Cierre De Minas, Huelva, Spain, presented Improving Environmental Compliance in Mine Closure: The Case for a System of Performance Bonds
- 1999 - The International Materials Assessment and Application Center of the United Nations Industrial Development Organization (IMAAC/UNIDO) conference on mining and the environment (Porto, Portugal) - presented "Mining, the Environment and Sustainable Development"
- 1999 - OECD Workshop on Benefit Valuation of Biodiversity Resources (Paris) - presented Stated Preference Measures and the Value of Biodiversity

- 1998 - Mining, Investment and the Environment, organized by the Institute of Americas, USAID and Colorado School of Mines, Lima, Peru, presented “Mining and Protection of the Environment: Economic Issues Associated with Performance Bonding”.
- 1998 - Mining, the Environment, and Sustainable Development, organized by Centro de Tecnologia Mineral, Ouro Preto, Brazil, presented “The Economics of Sustainability and its Implications for Sustainable Mining”
- 1997 - International Association for Technology Assessment and Forecasting Institutes, Zero Emissions and Technology Assessment: Implications for Developing Countries, Rio de Janeiro and Buzios, Brazil, presented the Role of Valuation in Assessing Alternative Technologies and Environmental Change.
- 1997 - Dimensões Humanas Da Mudança Climática Global E Do Manejo Sustentável Das Florestas Das Américas: Uma Conferência Interamericana (The Human Dimensions of Global Climate Change And Sustainable Forest Management in The Americas), Brasília, presented “Integrating Ecological Complexity into Economic Incentives for Sustainable Use of Amazonian Rainforests” (with McCormick and Nogueira)

**PARTICIPATION IN CONFERENCES AND MEETINGS (organized sessions and contributed papers):**

- 2019 meetings of the US Society of Ecological Economics, joint meeting with the Ecological Society of America, presented Survey research to support sustainable development in remote areas of the Brazilian Amazon: A choice-modeling approach
- 2018: Southern Economic Association Meetings, Washington DC, Nov 19-20. I organized two sessions for the US Society for Ecological Economics and presented Economic Valuation of Bioremediation,
- 2018: International Society for Ecological Economics, Puebla, Sept 8-10, Presented Mexico Integrating Economic, Energy and Environmental Policy in Tunisia;
- 2017: World Recreational Fisheries Conference, I presented two papers:” Sport fishing management for environmental protection and sustainable development: An Application to the middle Rio Negro” and “A Perfect Storm: The Collapse of Quality of Life in Remote Regions of Amazonia”, Victoria, Canada
- 2016 World Fisheries Congress (Busan, Korea) I presented “Beyond Food Security: The Role of Small Scale Fisheries in the Sustainable Development of Resource Dependent Communities”



- 2016 International Society of Ecological Economics (Washington, DC), I presented “Limitations to the privatization of environmental quality: The case of Guanabara Bay in Rio de Janeiro” and “The Future of Brazilian Ecosystems: Is the cup half full, half empty or bone dry”
- 2015- joint meetings of the Canadian and US Societies for Ecological Economics, presented “Choice-Modeling of Environmental Trade-offs in Subsistence Economies: Lessons from the Brazilian Coast and Rainforests” and Community Based Sport Fishing as a means of Sustainable Development in Remote Regions.
- 2014 – International Institute of Fishery Economics and Trade Conference, Brisbane, Australia, presented “Community-Based Sport Fishing as a Sustainable Development Path in Remote Regions in Developing Countries”.
- 2014 – World Recreational Fishing Conference, Campinas, Brazil, presented “Sport fishing as a path to sustainable development in remote and intact areas: Possibilities and Challenges”
- 2013- Center for Natural Resource Economics & Policy Meetings, New Orleans, presented , “Valuation of the Rio Paraiba do Sul Ecosystem
- 2012-Southern Economic Association Meetings, New Orleans, presented A bio-economic model of small-scale fisheries in a highly intact area of the Brazilian rainforest,” and “Perverse Incentives in Fishery Regulation: The Closed Season in Coari, Amazonas, Brazil.
- 2012-International Society of Ecological Economics /Rio +20, Rio De Janeiro, presented “The folly of following previous paths to growth: the case of Brazil and hydroelectric power (co-authored by Freitas, Petreire and Filizola) and “A bioeconomic model of sustainable small-scale fisheries in a highly intact area of the Brazilian Amazon” (co-authored by Freitas, Hurd, Petreire and Rivas).
- 2011- LIGE 2011 Conference (Green Economy: Legal & Institutional Implications) in Manaus, AM, Brazil. I attended and Alex Rivas presented our co-authored paper, An experiment of Payments for Ecological Services and Sustainable Development in Barcelos, Amazonas, BR and
- 2010- Regional Science Association International Meetings in Denver. *Payments for Ecological Services and Sustainable Development in Barcelos, Amazonas, BR.*
- 2009-Climate Change: Global Risks, Challenges and Decisions (scientific conference to advise Copenhagen COP-15) in March 2009 in Copenhagen presented: A more comprehensive approach to an international treaty on greenhouse gas emissions: Biofuels, land-use and developing country participation

- 2009- North American Association for Fishery Economics Forum, Newport, RI in May 2009, presented: *Rethinking Fishery Economics*,
- 2009- Meetings of the Brazilian Society for Ecological Economics, in Cuiaba, MT, Brasil, August 2009 my co-author presented two papers, Economic Incentives for the Preservation of the Amazon, and Preferences of Fishermen in Manacapuru, Amazonas.
- 2008- Southern Economic Association-Washington D.C. Presented "Rethinking Fishery Economics.
- 2007 – U.S. Society for Ecological Economics, Biennial Meetings New York, NY - organized symposium on Energy, Social Responsibility and Sustainable Development in Amazonia
- 2007 – First Washington and Lee University/Petrobras Conference on Environment, Lexington, VA, organized entire conference.
- 2006- International Society of Economics, Biennial Meetings, New Delhi, India, presented, Road Building and Environmental Preservation in Amazonia: Turning an Environmental Liability into an Environmental Asset (with Alex Rivas) and Economic Incentives, Direct Controls and Ecosystem Management of Fisheries: Out with the Old and in with the New (with Alex Rivas); Participant in Symposium on Economic Growth and Environmental Conservation: Conflict or Concord?
- 2006 World Congress of Environmental and Resource Economics, Kyoto, Japan, presented Protecting the Environment for the Sake of Protecting the Environment: Evidence of Existence Value from the Ribeirinho Communities of Amazonas, Brazil and Road Building and Environmental Preservation in Amazonia: Turning an Environmental Liability into an Environmental Asset
- 2004- World Fishery Congress, Manaus, Brazil. Presented Economic Incentives, Direct Controls and Ecosystem Management of Fisheries: Out with the Old and in with the New
- 2004- Annual Meeting of FIPSE/CAPES project directors, lead discussion sessions on environmental projects, developing language programs, and constructing memoranda of understanding, Florianopolis, BR.
- 2003- Annual Meeting of FIPSE/CAPES project directors, lead discussion session on environmental projects, Miami.
- 2003- US Society for Ecological Economics, presented "Rethinking Forestry Economics" Saratoga Springs, NY

- 2003- Southern Economic Association meetings, New Orleans, presented On the scarcity value ecosystem services and organized 4 sessions (jointly with John Whitehead).
- 2003-I Seminario de Propriedade intelectual, ciência e conhecimentos tradicionais da Amazônia (First Conference on intellectual property rights, science and traditional knowledge of Amazonia).
- 2003- presentation on obtaining external funding at meeting of Associated Colleges of the South Environmental Initiative, Atlanta.
- 2002 - Southern Economic Association, presented “Rethinking Forestry Economics and “Choice Model and Contingent Valuation Estimates of the Value of Ecosystem Attributes” Organized SCREE Sessions.
- 2002- presentation on obtaining external funding at meeting of Associated Colleges of the South Environmental Initiative, Furman University.
- 2001 - Southern Economic Association, presented "A Case for Carbon Taxes" (with Dina Franceschi), "First World Agricultural Subsidies and Third World Sustainable Development" (with Gilda Sa da Albuquerque), and Choice Models of Ecosystem/Economy Tradeoffs in the Clinch River Valley (with Steve Stewart and Amy Wolfe), organized SCREE Program, chaired session
- 2000 - Southern Economic Association, organized SCREE sessions, chaired session
- 2000 - International Society for Ecological Economics, Canberra, Australia, presented three papers
- 1999 - Southern Economic Association: Organized three sessions, presented Can Joint Implementation Lead to Global Agreement on Greenhouse Gas Emissions: A Preliminary Analysis of the Potential for Trade (with Dina Franceschi and M. Dore)
- 1999 - American Economic Association Meetings, presented Diffusion of Sustainable Agriculture in the Brazilian Tropical Rain Forest: A Discrete Choice Analysis (W. Jill Caviglia)
- 1998 - International Society for Ecological Economics, Santiago Chile, presenting Integrating Ecological Complexity into Economic Incentives for Sustainable Use of Amazonian Rainforests (with McCormick and Nogueira)
- 1998 - Southern Economic Association, Baltimore, MD, presented Sustainability in Economies Dependent on Exhaustible Resource: The Intersection between Amazonian Sustainability and Mineral Development (with D. Franceschi)
- 1998 - World Congress of Environmental and Resource Economists, Venice, presented “Integrating Ecological Complexity into Economic Incentives for Sustainable

Use of Amazonian Rainforests” (with McCormick and Nogueira) and “Methods for Aggregating Performance Indicators”

- 1997 - Southern Economic Association Meetings, Atlanta, presented “Integrating Ecological Complexity into Economic Incentives for Sustainable Use of Amazonian Rainforests” (with McCormick and Nogueira), moderator of panel discussion on teaching environmental and resource economics
- 1997 - Canadian Society for Ecological Economics, Hamilton, Ontario, presented Ecological Stability as a Source of Economic Scarcity
- 1996 - Southern Economic Association Meetings, presented Biophysical Constraints and Economic Value (with R.V. O’Neill), presented Valuing Southern Appalachian Forests (w Peter Maynard), organized sections for Southern Appalachian Committee on Resource and Environmental Economics
- 1996 - World Fisheries Congress, Brisbane, Australia, presented “Demand-Side Approaches to Mitigating Open-Access Externalities: The Case of Aquaculture and the Wild Fisheries” (with T. Green)
- 1995 - Southern Economic Association, organized sections for Southern Appalachian Committee on Resource and Environmental Economics, presented two papers, “Strict Environmental Policy: Microeconomic and Macroeconomic Justifications?” with A. Farmer and J. McDonald; "Demand-Side Approaches to Mitigating Open-Access Externalities: The Case of Aquaculture and the Wild Fisheries" (with T. Green)
- 1995 - American Economic Association, presented two papers, Conjoint Analysis as a Method of Measuring Use and Non-Use Values of Environmental Goods (with Peter Maynard) and Trade-off Based Indices of Environmental Quality - An Environmental Analogue to GDP.
- 1994 - Southern Economic Association meetings, presented Conjoint Analysis as a Method of Measuring Use and Non-Use Values of Environmental Goods (with Peter Maynard).
- 1994 - Wilderness Areas, Regional Planning, and the Quality of Life, conference sponsored by University of Kentucky and *Growth and Change* - presented "Square Pegs and Round Roles: Can the Economic Paradigm be used to Value the Wilderness."
- 1994 - American Economic Association, member of organizing committee for Association of Environmental and Resource Economics sessions, organized and chaired session on contingent valuation.
- 1993 - National Acid Precipitation Assessment Program Conference on Economic Issues in Acid Deposition, presented "Measuring the Benefits of Mitigating Acid Deposition: Past Experience, Future Directions.

- 1993 - Southern Economic Association meetings, organized three sessions in environmental economics, presented "Trade-off-Based Indicators of Environmental Policy: An Environmental Analogue to GNP."
- 1993 - American Economic Association, member of organizing committee for Association of Environmental and Resource Economists sessions, organized and chaired session on global environmental issues.
- 1992 - Southern Economic Association meeting - presented "The Appropriateness of Willingness to Pay Methodologies in the Formulation of Environmental Policy" chaired session on Contingent Valuation and Environmental Economics
- 1992 - Southern Regional Science Association presented "The Appropriateness of Willingness to Pay Methodologies in the Formulation of Environmental Policy"
- 1991 - Southern Economic Association - presented "Third World Debt and Tropical Deforestation"
- 1991 - American Association for the Advancement of Science, presented "Marine Debris" in a session on economics of estuarine management.
- 1991 - Eastern Economic Association, presented "Third World Debt and Tropical Deforestation, Chaired session on regional environmental problems
- 1990 - American Agricultural Economics Association, discussant in sessions on recreation valuation models
- 1989 - Southern Economic Association, presented "The Equilibrium Distribution of Population and Wages in A System of Cities", Discussant in sessions on demographic and urban economics.
- 1988 - Association of Environmental and Resource Economists Fourth Annual Workshop: Marine and Sports Fisheries Economic Valuation, presented "The Conflict Between Commercial and Sport Fishing.
- 1988 - New York State Chapter of American Fisheries Society, Binghamton, NY, presented "The Economic Costs of the Moratorium on Striped Bass in New York State" (with R. Buerger)
- 1988 - Eastern Economic Association, Boston, MA, organized session on economics of coastal resources and presented "The Conflict Between Commercial and Recreational Fishing" (with R. Buerger)
- 1988 - Regional Science Association-presented "The Regional Economic Impact of Long Island Saltwater Recreational Fisheries"
- 1987 - New York State Chapter of American Fisheries Society, Utica, NY, presented "The Economic Value of Saltwater Recreational Fishing in Long Island"

- 1987 - National Shellfisheries Association, Halifax, Nova Scotia, presented "The Economic Effects of Brown Tides."
- 1987 - Third Annual Conference on Economics of Chesapeake Bay Management, Annapolis, MD, presented "The New York Value of Chesapeake Striped Bass"
- 1987 - Southern Economic Association, discussant in sessions on urban public policy and housing economics
- 1986 - Association of Environmental and Resource Economists workshop on Marine Pollution and Environmental Damage Assessment, Narragansett, Rhode Island, presented "Measuring the Economic Damages Associated with Terrestrial Pollution of Marine Ecosystems."
- 1986 - New York State Interagency Task Force "Emergency Conference on Brown Tides and other Unusual Algal Blooms" presenter and workshop leader.
- 1985 - Estuarine Research Federation Conference, Durham, N.H., presented "The Functional Relationship Between Economic Damages and The Loss of Submerged Aquatic Vegetation in Chesapeake Bay.
- 1984 - Planning Conference on Economics of Chesapeake Bay, panel member.
- 1984 - N.E. Regional Science Association Meetings, Buffalo, presented "The Economic Value of Great Lakes Sport Fisheries: A Revealed Preference Approach to Valuing Recreational Site Attributes."
- 1984 - Southern Economic Association meetings, Atlanta discussant in session on the economics of technological change and presented "The Economic Value of Great Lake sport fisheries: A Revealed Preference Approach to Valuing Recreational Site Attributes."
- 1983 - North East Regional Science Association Meetings, New York, presented "The Estimation of Marginal Damage Functions: An Assessment of the Information Requirements.
- 1983 - North East Regional Science Association Meetings, New York, discussant in session on input-output modeling.
- 1983 - Southern Economic Association Meetings, Washington, D.C. chaired session in issues in housing markets and presented the following papers: "An Examination of the Interdependence of the Marginal Products of Baseball Players, or is Reggie really Overpaid?" (with W. Herrin). "Optimal City Size in Terms of Compensation Wage Differentials," (with H. Ofek and D. Clark). "The Economics of Plant Quarantine: Towards a More Efficient Regulatory Scheme (with Robert P. Kahn).

1981 - Southern Economic Association Meetings, New Orleans discussant in session on local public finance.

1981 - American Economic Association Meetings, Washington, D.C. discussant for plenary session of Association of Environmental and Resource Economists.

1979 - "Creating an Agenda for Regulatory Research," Public Interest Economics Foundation, Berkeley Springs, WV, workshop member

**UNIVERSITY GRANT ACTIVITY (as PI or Co-PI):**

O uso de modelos comportamentais como suporte para o desenvolvimento sustentável em um região bem preservada da Amazônia (The use of behavioral models to support sustainable development in a highly intact region of Amazonas) FAPEAM (Foundation to support research in the state of Amazonas), R\$49,000 (US\$ 18,000), May 2015-May 2017)

Zoneamento das pescarias para promover o desenvolvimento sustentável e minimizar os conflitos entre as pescarias em Barcelos, AM. Fishery zoning to support sustainable Development and minimize conflict among fisheries in Barcelos) FAPEAM (Foundation to support research in the state of Amazonas), R\$350,000 (US\$ 129,000), May 2015-May 2017)

Sustainability Post-Doctorate Fellow Grant, Andrew Mellon Foundation, July 1 2009-June 30, 2011. \$129,000

Enhancing Place-Based Learning in Environmental Studies at Washington and Lee University, Andrew Mellon Foundation, June 2008 to May 2012, \$600,000.

Energy, Environment and Sustainable Development: The Central Role of the United States and Brazil, Fund for the Improvement of Post-Secondary Education (USDOE), September 2007 to September 2011,\$ 205,000.

The Environment, Economic Development and Quality of Life Nexus: Complementary Activities, Fund for the Improvement of Post-Secondary Education (USDOE), September 2004 to September 2006, funding for complimentary activities \$75,000

The Environment, Economic Development and Quality of Life Nexus: An Interdisciplinary Approach to Undergraduate Education, Fund for the Improvement of Post-Secondary Education (USDOE), September 2001 to September 2005, \$208,000.

Integrated Decision-Making in Reservoir Operations (Tennessee Valley Authority through subcontract with University of Tennessee) \$23,000 December 1, 2001 to April 1 2002

A Trade-off Weighted Index Approach to Integrating Economics and Ecological Risk Assessment USEPA-NCEA Cooperative Agreement on Research on Methods for Integrating Ecological Economics and Ecological Risk Assessment, Feb. 1999-Jan 2001, \$175,000.

"External Debt and Tropical Deforestation" (with J. McDonald) Cooperative Agreement with U.S. E.P.A., October 24, 1989 - October 23, 1990, \$25,300.

"Economic Damages from Pollution in the New York Bight", subcontract from SUNY-Stony Brook (Primary Contractor is Dynamac Corporation who has contract with U.S. E.P.A. as part of the New York Bight Restoration Plan) June 1, 1988 to December 31, 1988, \$9,300.

"Proposal Development Grant" New York Sea Grant Institute, \$4,960, Oct. 1984 - Dec. 1984.

"The Economics of Long Island Coastal Recreational Fisheries," New York Sea Grant Institute and New York Department of Environmental Conservation: May 1985-December 1987, \$181,000.

An Economic Valuation Model for Great Lakes Sport Fisheries," New York Sea Grant Institute, \$21,442. Sept. 1983-Aug. 1984.

#### **ORNL CONTRACT RESEARCH ACTIVITY:**

- |             |   |
|-------------|---|
| 1999-2000   | The Role of Transportation and Transportation Policy in Sustainable Development   |
| 1997-1998   | Estimating the Rebound Effect for Household Vehicles in the US-Department of Transportation                                     |
| 1996-2000   | Environmental Thresholds and Economic Value (DOE Integrated Assessment of Global Climate Change Program)                        |
| 1995        | The Effect of Chemical Weapons Disposal Programs on Property Values (DOD)   |
| 1995        | Pricing Strategic Petroleum Reserve Oil, an Application of the Hedonic Pricing Model (DOE-Strategic Petroleum Reserve Program)  |
| 1994-1998   | Developing a Methodology for Assessing the Social Benefits of Agency for Toxic Disease Registry and Substances (ATSDR) Programs |
| 1994        | Concept Analysis of In-Vehicle Signing (Federal Highway Adm.)   |
| 1993 - 1995 | "Workshop on Contingent Valuation" (Department of Energy)   |
| 1991 - 1994 | "External Costs of Fuel Cycles" (DOE)   |



- 1993 - 1994 "Measuring the Benefits of Acid Deposition Control (NAPAP/DOE)
- 1993 - 1994 "Assessment and Operating Plans for Evaluating the Acid Rain Provisions of the 1990 Clean Air Act Amendments" (NAPAP/EPA)
- 1993 - 1994 "The Incorporation of Environmental Costs Into U.S. Army Project Evaluation (U.S. Army Construction and Engineering Research Laboratory)

**PARTICIPATION IN RESEARCH PROJECTS FUNDED BY BRAZILIAN SOURCES (DIRECTED BY BRAZILIAN COLLEAGUES):**

- 2010-present: Understanding complex systems: the fisheries management as a promoter of sustainable development, environmental protection and social welfare in the middle Rio Negro 2010-present
- 2009-2012 Economic valuation of Taruma river basin, Manaus-AM
- 2007-2008 Economic Instruments to Protect the Amazon: the Manaus Industrial Pole Experience
- 2006-2009 Strategic intelligence of the petroleum industry in the Amazon
- 2006-2010 Non-use value estimation of environmental resources in the Manacapuru lake region
- 2005-2009: Academic research to improve environmental decisions at the traditional Amazonian community level (project director)
- 2005-2006: Public policies for sustainable use of fisheries resources in Negro river - Phase I
- 2005-2008 Monitoring of areas under influence of Petrobras oil and gas exploration: risks and environmental impact assessment of the petroleum industry in the State of Amazonas (project director)
- 2001-2003 Potential impacts of petroleum and gas transportation in the Amazon: risk assessments, contingent plans and strategies to recover impacted areas

**PHD DISSERTATIONS SUPERVISED AS CHAIR**

**SUNY-Binghamton**

- David E. Clark, 1986  
 Thomas J. White, 1989  
 Larry P. Capone, 1992  
 Darlington Didia, 1993

**University of Tennessee**

- W. Michael Fletcher, 1994  
 Thomas Yoder, 1995  
 Peter W. Maynard, 1996  
 Scott Rickard 1997  
 Alexandre Rivas 1998

Jill Caviglia 1998  
Dina Franceschi, 1999

**Universidade Federal do Amazonas:**

Maria Angelica Correa in progress

Ingrid Rafaela de Almeida Lopes in progress

**PHD DISSERTATIONS SUPERVISED AS COMMITTEE MEMBER**

**SUNY-Binghamton**

R. P. Parcels  
Leonides Papas  
Somalia Kewa  
Alfred Ntoko  
William Herrin

**Universidade Federal do São Paulo**

Maria Laura Barreto, 2000

**University of Tennessee**

Martin King, 1995  
Jeffrey Collins, 1996  
Thomas Sadler, 1998  
Amatta Diabata, 2000  
Aubrey Meyer 2000

**Univerisdade Nova da Lisboa**

Anna Salgueiro (2003)

**Universidade Federal do Amazonas:**

Sandrelly Inomata in progress  
Fabiana Calacina in progress

**AWARDS AND HONORS:**

- Rotary International Graduate Fellowship, 1975.
- SUNY Faculty Research Fellowship, 1981.
- SUNY-Binghamton University Award for Excellence in Undergraduate Teaching, 1988
- Chancellor's Award (SUNY System-wide) for Excellence in Teaching, 1988.

- International Collaborator, Environmental Sciences Center, University of Amazonas, Manaus, Amazonas, Brazil, 1992 - 1999
- Collaborating Professor, Environmental Sciences Center, University of Amazonas, Manaus, Amazonas, Brazil, 1999-present.
- University of Tennessee Faculty Development Award, 1996
- Four time nominee for Outstanding Teacher, College of Business Adm., University of Tennessee (1992-1998)
- Scientific Adviser to the Pan American Committee on Mining, Metallurgy and Materials (COPAM) (1998-present)
- Scientific Advisor to the International Materials Assessment and Application Center of the United Nations Industrial Development Organization (IMAAC/UNIDO) (1998 to present)
- Outstanding Paper of the Year, *The Energy Journal*, 1999.
- Fulbright Fellowship, Brazil, 2001
- Visiting Professor/Fellow, Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq-The Brazilian national science foundation), 2005-2006

**OFFICES HELD IN PROFESSIONAL ORGANIZATIONS:**

Secretary-Treasurer, US Society for Ecological Economics, 2005-2006  
 President, Southern Committee for Resource and Environmental Economics (formerly Southern Appalachian Committee for Resource and Environmental Economics), 1995 to present  
 Secretary-Treasurer, Resource Policy Consortium, 1997 to 2000  
 Associate Editor, Southern Economic Journal, 1997 to 2001  
 Program Committee Member, Association for Environmental and Resource Economics, 1992-1994  
 Steering Committee Member, US Society for Ecological Economics

**REFEREEING ACTIVITY:**

Journal of Environmental Management, Journal of Environmental Economics and Management, Environment and Resource Economics, Bioscience, Southern Economic Journal, Marine Resource Economics, Applied Economics, Eastern Economic Review, Growth and Change, Land Economics, Conservation and Biodiversity, Silva Fennica, Review of Regional Studies, Ecological Economics, Journal of Economic Education, Futures, Journal of Transportation Statistics, Journal of Post-Keynesian Economics, Futures, Latin American Research Review, Policy Forum, Natural Resource Forum, Various State Sea Grant Programs, National Science Foundation, Department of Energy: Economics of Global Climate Change Program, Environmental Protection Agency, Fund for the Improvement of Post-Secondary Education (Department of Education).