

Gauri Shankar Guha

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INTERESTS

RESEARCH: Sustainability, Environmental Impact, Health, Renewable Energy, IB Strategy.
TEACHING: Environmental & Energy, Managerial, International – Economics.

EDUCATION

Ph.D. in Energy and Environmental Economics
The Pennsylvania State University, University Park, PA 16802

Post-Graduate Diploma (MBA) in International Trade
Indian Institute of Foreign Trade, New Delhi, India.

MA in Economics
Birla Institute of Technology and Science, Pilani, Rajasthan, India.

Professional Certifications

Certified Global Business Professional (NASBITE, 2009)
Data Mining in SAS (Arkansas State University – SAS, 2002)
Computer Network Systems (Indian Institute of Management, Ahmedabad, India, 1996)
Geographic Information Systems (Space Applications Center, Ahmedabad, India, 1993)

HONORS

- *Phi Kappa Phi* Scholastic Honor Society (2015 +)
- *Beta Gamma Sigma* Business Scholastic Honor Society (2013 +)

AWARDS

- * Faculty Award for Teaching Excellence, 2015, Board of Trustees, Arkansas State University
- * Best Paper Award, 2010, Global Business Conference, Huntsville, Texas.
- * Faculty Award for Graduate Teaching Excellence, 2006, College of Business, ASU.
- * Best Paper Award, 2005, International Business & Economics Research Conference.
- * Best Paper Award, 2003, Allied Academies Annual Conference.
- * Faculty Award for Undergraduate Teaching Excellence, 2003, College of Business, ASU.
- * Norman and Ardeth Frisbey Best International Student Award, April 2001, Penn State.
- * W. La Marr Kopp International Achievement Award, April 2000, Penn State.
- * Graduate Student Leadership Service Award, March 2000, Penn State.
- * Student Paper Prize, April 1999, MEMS – 99, Ottawa, Canada.
- * ICSSR Fellowship, July 1996, Indian Council of Social Science Research.
- * UNDP Fellowship, June 1982, United Nations Development Program.
- * SV Memorial Prize for Quantitative Methods, June 1982, IIFT, India.

ANALYTICAL SKILLS AND LANGUAGES

- *Software:* IMPLAN, GAMS, LISREL, E-views, Crystal Ball.
- *Languages:* Bengali, English, Gujarati, Hindi. [Some: French, German]

PROFESSIONAL EXPERIENCE

July 2020 – present: *Professor, Arkansas State University*

Teaching: Environmental Economics (PhD); Managerial Economics, Export Policy.

Research: Renewable Energy, Economic Impacts of Unscheduled Events.

July 2009 – May 2020: *Associate Professor, Arkansas State University*

Teaching: Environmental Economics (PhD); Managerial Economics, Export Policy.

Research: Renewable Energy, International Business Leadership.

August 2001 – May 2009: *Assistant Professor, Arkansas State University*

Teaching: Environmental Economics (PhD); Managerial Economics, Management Science, (MBA); Microeconomics, Statistics (Undergraduate).

Research: Contingent Valuation, Carbon Sequestration.

August 1997 – July 2001: *Graduate Assistant, The Pennsylvania State University*

Teaching: 400 level course in energy and environmental economics.

Research: Climate Change (MARA, US EPA); Economic Impact of Earthquakes (EERI); Industrial Ecology of Steel Technologies (NSF).

June 1992 – August 1997: *Director, Agro-Climatic Planning, Government of India*

Managed the research of 24 inter-disciplinary regional teams of scientists and economists.

Translated regional endowment profiles, constraints and priorities into development programs. Formulated and implemented eco-friendly projects with stakeholder participation.

April 1989 – May 1992: *Operations Research Analyst, ACRP, Planning Commission, India*

Built a large time-series database on regional natural resource endowments and relevant socio-economic variables. Developed several econometric and programming models addressing this database that were used by policy makers in New Delhi.

January 1988 – March 1989: *Indian Institute of Management, Ahmedabad, India*

Designed an MIS system for a major warehousing corporation, with nation-wide operations.

November 1985 – December 1987: *Management Consultant, self-employed, western India*

Set up a statewide dealer network as the marketing consultant for a group of chemical and fiberglass-reinforced-plastics manufacturing companies.

July 1982 – October 1985: *Export Executive, Asian Paints, Bombay*

Export sales management for India's largest paint manufacturer.

VISITING PROFESSOR

- University of Applied Sciences, *Salzburg, Austria*. (Managerial Economics)
- Rovaniemi Polytechnic Institute, *Rovaniemi, Finland*. (Project Management)
- University of Caen Lower-Normandy, *Caen, France*. (International Economics)
- University of Duisburg-Essen, *Duisberg, Germany*. (Business Economics)

DOCTORAL STUDENTS SUPERVISED

Committee Chair (PhD Program in Environmental Sciences, Arkansas State Univ)

Charles Blaine Buckman. “Economic Analysis of Low VOC Resins for the Pultrusion FRP Industry” [2008]

Kellee Nicole Cook. “Economic Efficiency Assessment of Clean Energy Policy Initiatives”

Committee Member (PhD Program in Environmental Sciences, Arkansas State Univ)

Samuel McCord. “Bioassessment of the Effectiveness of Silviculture Best Management Practices in Arkansas: Benthic Invertebrate Surveys of Adjacent Streams.” [2006]

Aaron Archer. “Environmental Benefit-Cost Analysis of Biofuels from Crop Residuals” [2010]

Thomas J Benson. “Nest-Site Selection and Habitat-Specific Demography of Swainson’s Warblers in AR” [2010]

Bindu Kaimal. “Elemental Analysis of Bird Feathers using Laser Ablation Coupled Plasma Spectrometry” [2010]

Rodney Eugene Wright. “Environmental and Economic Implications of the Biofuel Provisions of ‘*The Energy Independence and Security Act of 2007*’ on Mississippi Delta Farms” [2015]

Maqsood Mughal. “A Statistical Approach to Optimize Parameters for Electrodeposition of In₂S₃ Films.” [2015]

Dinesh Neupane. “Habitat Utilization Patterns of Trans-Border Asian Elephant Herds in Eastern Himalayas.” [2017]

Shyam Thapa. “Optimization & Characterization of Binders, Encapsulants, Densification for Biofuel Pellets” [2017]

Joshua Vangilder. “Investigation of the Effectiveness of N, N Dimethylformamide as a Solvent for CDTE Electrodeposition” [2018]

(Note: [20xx] refers to the graduation year.)

COURSES TAUGHT

Environmental Economics (ECON 6353, ASTATE): Doctoral level environmental and natural resource economics.

Managerial Economics (ECON 6313, ASTATE): MBA class on managerial applications of techniques of economic analysis; (ECON 6313, ASTATE): UG senior business elective covering forecasting, simulation, and LP using MS-Excel.

Management Science (QM 6433, ASTATE): MBA class on applications of operations research techniques for managerial decision-making.

Global Environmental Policies (ECON 4363, ASTATE): Junior / Senior level elective; a more intuitive treatment of Environmental Economics with global cases.

Export Policies and Procedures (ECON 4143, ASTATE): Senior level capstone course for IB majors, covering management, marketing, logistics and finance.

Business Statistics (ECON 2113, ASTATE): UG introductory statistics, probability and sampling distributions, hypothesis testing, regression.

Principles of Economics (ECON 2313 – Macro, ECON 2323 - Micro, ASTATE): UG introductory microeconomics.

(Note: ASTATE is Arkansas State University)

PUBLICATIONS

Refereed Journals

- Fish, K. E., & Guha, G. S. (2020). "Towards an Electronic Medical Record System for a Rural Haitian Medical Clinic." *Journal of Strategic Innovation and Sustainability* 15(4), 15-20.
- Guha, Gauri S. 2020. "A General Equilibrium Analysis of Electricity Lifeline Losses Following a Debilitating Earthquake in Memphis, Tennessee." *Journal of Economic Insight* 46(2): xx-xx.
- Guha, Gauri S. and Kelly E. Fish. 2018. "Measuring Requisite Expatriate Personality Traits: A Partial Validation of the Bird and Osland Global Leadership Model." *International Leadership Journal* 10 (3): 91 – 108.
- Fish, Kelly E. and Gauri S. Guha. 2018. "Strategies for Enhancing IB Leadership Skills in the Arkansas Delta Region – A Decision Science Approach." *Journal of Leadership, Accountability, and Ethics* 15(1): 51 – 59.
- Wright, Rodney, Terry Griffin, Gauri S. Guha, and Jennifer Bouldin. 2018. "Economic Investigation of Crop Selection in the Southern Mississippi River Basin." *Journal of the American Society of Farm Managers and Rural Appraisers*, Spring 2018.
- Fish, Kelly E. and Gauri S. Guha. 2016. "A Confirmatory Analysis of Leadership Traits Perceived by US Expatriates." *International Research Journal of Global Business Development* 5(1): 50-56.
- Guha, Gauri S. and Rodney Wright. 2016. "A Simulation of the Economic Impacts of Negative Externalities from Farm Management Practices in Northeast Arkansas." *Journal of Business Administration*, Spring 2016.
- Relyea, Clint W., Sandra Liliana Tejada, Kelly E. Fish and Gauri S. Guha. 2011. "Laissez Faire and International Trade: A Critique of the Proposed United States–Colombia Free Trade Agreement." *Journal of International Business Research* 10(1): 47 – 58.
- Stewart, Patrick A., Gauri S. Guha and George Ogendi. 2009. "Fields, Flooding and Fuming: Public Opinion about Mosquito Control in Craighead County, Arkansas." *Arkansas Review*, 40(2): 133-140.
- Fish, Kelly E. and Gauri S. Guha. 2008. "Determining Growth Inducing Parameters from a Neural Network Model of Regional Exports." *Southwest Review of International Business Research*, 19(1): 85–88.
- Archer, Aaron, Gauri S. Guha, Jason Self and Robert Engelken. 2008. "Cost and Carbon Savings from Innovative Conversion of Agricultural Residues." *Energy Sources B: Economics, Planning, and Policy*, 3(1): 103–108.
- Guha, Gauri S. 2008. "A Concurrent Evaluation of Trends in Commodity Exports, Economic Growth and Environmental Quality in the United States." *International Business and Economic Research Journal* 7(1): 125–130.
- Segall, Richard, Gauri S. Guha and Sarath Nonis. 2008. "Data Mining of Environmental Stress Tolerances for Plants." *Kybernetes: The International Journal of Systems & Cybernetics* 37(1): 127–148.

- Guha, Gauri S. 2008. "Affirmative Climate Action in the United States: Emerging Issues, Adaptation and Mitigation Initiatives." *Forum on Public Policy*, 3(4): 313–324.
- McCord, Samuel, Rich Grippo and Gauri S. Guha. 2007. "Effects of Subsample Size on Seasonal and Spatial Comparisons of Stream Macroinvertebrate Communities." *Journal of Environmental Monitoring and Assessment*, 135(1-3): 409-422.
- Guha, Gauri S. 2005. "Simulation of the Economic Impact of Regionwide Electricity Outages from a Natural Hazard Using a CGE Model." *Southwestern Economic Review*, 32(1): 101–124.
- Bouldin, Jennifer, Nate A. Bickford, Bill Stroud and Gauri S. Guha. 2004. "Tailwater Recovery Systems for Irrigation – Benefit / Cost Analysis and Water Resource Conservation Technique in Northeast Arkansas." *Journal of the Arkansas Academy of Science* 58: 23–31.
- Baral, Anil and Gauri S. Guha. 2004. "Trees for Carbon Sequestration or Fossil Fuel Substitution: the Issue of Cost vs. Carbon Benefit." *Biomass & Bioenergy* 27(1): 41–55.
- Guha, Gauri S., Anil Baral, Sarath Nonis and Richard Segall. 2004. "The Potential of Biotechnology: Promises, Perils and Perplexities – A Survey of Impacts on Relevant Economic Sectors." *Economics and Economics Education Research Journal* 5(2): 107–132.
- Nonis, Sarath, Gauri S. Guha and Richard Segall. 2004. "The Impact of Consumer Attitudes about Bioengineering on Purchase Behavior Intentions: Moderating Effects of Innate Consumer Innovativeness and Anxiety." *Journal of Business & Economic Research*, 2(5).

***** *Journal publications while based in India* *****

- "Towards an Environment Friendly Agriculture," *Yojana* July 1995.
- "Emerging Water Scenario in Gujarat," *Anvesak*, 25 (1): 131–134. 1995.
- "An Area Allocation Model for States by Agro-Climatic Subregions," *ARPU Technical Paper # 20*, Planning Commission, New Delhi. 1993. (with D. Basu).
- "Spatial Analysis of Agro-processing Industries in India," *Anvesak*, 24 (2). 1994. (with N. Mathur).
- "Resource Planning in Regionalized Framework: The Agro-Climatic Regional Planning Model," *Anvesak*, 23 (1). 1993.
- "Econometrics of Long-Term Growth: Trade-Offs with Inflation," *Economic & Political Weekly* 28 (42): pp 2276–2281. 1993. (with Y. Alagh).
- "Evaluation of Minor Irrigation Development in India in the Context of Agro-climatic Resource Regions," *Anvesak*, 22 (1). 1992. (with S. Joshi).
- "Planning for Difficult Land and water Regimes – A Case for Integrated Watershed Development in Panchal, Gujarat," *Anvesak*, 21 (2): pp 145–150. 1991.
- "Forestry in India: Which Way Now?" *ARPU Technical Paper # 18*, Planning Commission, New Delhi. 1991.

“Crop Input Plan: Irrigation and Fertilizer Projections based on the Agro-Climatic Regional Planning Exercise,” *ARPU Technical Paper # 11*, Planning Commission, New Delhi. 1990. (with D. Basu and S. Joshi).

Books

Conflict Management of Water Resources. UK, Ashgate. 2002. (Co-edited with M. Chatterji and S. Arlosorrof).

Agro-climatic Regional Planning in India, New Delhi, Concept Publishing Company. 1996. (Co-edited with D. Basu).

Economic Dimensions of Sardar Sarovar. New Delhi, Har Anand Publishers. 1995. (Authored with Y. Alagh, R. Desai, and S. Kashyap).

Book Chapters

“Carbon Offset Potential of Biomass-Based Energy,” in Elizabeth E. Hood, Peter Nelson and Randy Powell (Editors), *Plant Biomass Conversion, First Edition*: 303 – 319, New York, John Wiley & Sons Inc., 2011.

“Sustainable Climate Action in the United States – Issues, Adaptation and Mitigation Initiatives,” in Professor Ruth Reck, University of California, Davis (editor), *Climate Change and Sustainable Development*: 329 – 41, New York, Linton Atlantic Books Ltd., 2010.

“Computable General Equilibrium Modeling of Electric Utility Lifeline Losses from Earthquakes,” in Y. Okuyama and S. Chang (eds.), *Modeling Spatial and Economic Impacts of Disasters*, Berlin Heidelberg: Springer-Verlag. 2004. (with A. Rose).

“Output, Employment and Poverty Issues in the Context of Agro-climatic Regional Planning,” in G.K. Chadha and A.N. Sharma (eds.), *Growth, Employment and Poverty – Change and Continuity in Rural India*, New Delhi, Vikas Publishing House. 1997 (with N. Mathur).

“Planning for Globalization and Sustainability,” in R Kapila and U Kapila (eds.), *Indian Economy Update*, New Delhi, Academic Foundation. 1996. (with N. Mathur and Y. Swaroop).

“Agro-climatic Regional Planning Models for Agricultural Planning and Policy Analysis in India,” in J Rosenhead and A Tripathy (eds.), *Operational Research for Development*, New Delhi, New Age International (P) Limited Publishers. 1996. (with D. Basu, J. Shah and A. Tripathy).

“A Decision Model for Program Selection at Regional Level,” in BN Yugandhar and A Mukherjee (eds.), *Readings in Decentralized Planning Vol 1*, New Delhi, Concept Publishing Company. 1991. (with D. Basu).

“A Model of Growth and Prices in the Indian Economy,” in Y. Alagh, R. Mody and R. Desai (eds.), *Stability and Development: Essays in Honor of Prof DT Lakdavalva*, New Delhi, Har Anand. 1991. (with Y.K. Alagh).

Conference Proceedings

“Strategies for Enhancing IB Leadership Skills in the Arkansas Delta Region – A Decision Science Approach,” *Proceedings of the South Western Decision Sciences Institute Conference, Federation of Business Disciplines*, Little Rock, AR, March, 2017 (with Kelly Fish).

“Modeling the Economic Impact of Sectorally Differentiated Supply Availabilities of Electricity – A CGE Analysis of Lifeline Losses Following a Potential Earthquake in Memphis, TN,” *Southwestern Society of Economists, Federation of Business Disciplines*, Little Rock, AR, March, 2017.

“A Confirmatory Analysis of the Perception of Leadership Traits by US Expatriates,” *Global Business Development Institute, 20th International Conference*, Las Vegas, October 2015.

“An Evaluation of Best Management Practices in Agriculture in Northeast Arkansas to Minimize Negative Externalities,” ACTEB Annual Conference, September 25, 2015, University of the Ozarks. (with Rodney Wright)

“Exploring Heterogeneity in the Perception of Leadership Traits caused by Location and Ethnicity,” *Association for Global Business, Annual Conference*. (with Kelly E. Fish and Clint W. Relyea) (2013).

“Increasing Intercultural Effectiveness through a Global Citizenship Approach,” *Administrative Issues Journal*. (with Kelly E. Fish and Clint W. Relyea) (2013).

"Towards the Measurement of Global Leadership Threshold Traits," *Southwest Review of International Business Research [Proceedings of the Academy of International Business, U.S. Southwest Chapter 2012 Annual Conference, Feb 29 – Mar 03, 2012, New Orleans, LA.]*, 23 (1), 273 – 280. (with Kelly E. Fish and Clint W. Relyea) (2012).

“Insights into Undergraduate IB Curriculum Development,” *The International Academy of Business and Public Administration Disciplines Conference Proceedings*, Vol. 7, No. 3, 52-59, 2010. (with Clint Relyea and Kelly Fish).

“Impact of Laissez Faire in International Trade: A Critique of The Proposed United States – Colombia Free Trade Agreement,” *Global Business 2010 Conference*, Huntsville, TX, April 09 – 10, 2010. (with Clint W. Relyea, Sandra Liliana Tejada and Kelly E. Fish)

“Global Perspectives on Pollution Control,” Annual Meeting of the *Southwestern Society of Economists, Federation of Business Disciplines*, Houston, March 04 – 08, 2008. (with S. Combs)

“Simulation of Carbon Credits in Arkansas from Different Climate and Economic Scenarios,” *Missouri Valley Economic Association*, 44th Annual Meeting, Kansas City, MO, October 25-27, 2007.

“Climate Change – Issues and Affirmative Action in the United States” *Oxford Roundtable on Global Warming and Sustainable Development*, Oxford Union Chamber, Oxford, UK, August 12-17, 2007.

“Economic Impacts of Controlling Agriculture-Related Phosphorus Runoff in Eastern Arkansas,” *Southern Economics Association (SEA) 2006 Annual Conference*, Charleston, SC, November 18 – 21, 2006. (with R. Wright.)

“Modeling the Economic Impacts of Sectorally Differentiated Supply Availabilities of Electricity – A CGE Analysis of Lifeline Losses Following a Potential Earthquake in Memphis,

Tennessee,” *Southern Economics Association (SEA) 2006 Annual Conference*, Charleston, SC, November 18 – 21, 2006. (with A. Rose.)

“The ‘Green Oilfields’ of Arkansas – a Note on Local Bioenergy Opportunities,” *Annual Meeting of the Arkansas College Teachers of Economics & Business*, Conway, AR, October 6, 2006.

“Estimating the Value of a Public Good – Contingent Valuation of Mosquito Control in Jonesboro, AR,” *Missouri Valley Economic Association 41st Annual Meeting*, October 2004.

“Public Perceptions of Biotechnology Products – A Case Study of Mountain Home, AR,” *Allied Academies Fall Conference*, October 2004. (with L Dale).

“An Environmental Marginal Analysis of Styrene in the FRP Industry,” *Proceedings of the International Academy of Business and Public Administration Disciplines*, May 2004. (with C Buckman).

“An Input-Output Analysis of Biotech Impacts on the State of Arkansas,” *Southwestern Society of Economists Annual Conference*, Orlando, Mar 2004. (with A. Rose, S. Nonis and R. Segall)

“Earthquake Preparedness – An Assessment of Business Perceptions of Risks in Memphis, TN,” *Proceedings of the South Western Decision Sciences Institute Conference*, Orlando, Mar 2004. (with A. Syamil, A. Rose and J. Webb)

“Data Mining for Assessment of Environmental Stress Factors on Plant Genomics,” *Proceedings of the SW Decision Sciences Institute Conference*, Orlando, Mar 2004. (with R. Segall, S. Nonis)

“Marketing’s Role in Creating Value in the Biotechnology Industry,” *Proceedings of the American Marketing Association*, February 2004. (with Nonis, S., R.S. Segall)

“General Equilibrium Analysis of Electricity Lifeline Losses from a Natural Hazard,” *Southwestern Society of Economists (SSE) Annual Conference*, Houston, March 2003.

“Exploring Carbon Sequestration as a Climate Change Mitigation Strategy - Analysis of Arkansas Forests,” *Southern Economics Association (SEA) 2002 Conference*, New Orleans, November 2002. (with A. Baral).

“The Vulnerability of Forest-Based Economies to Climate Change: A CGE Analysis of the Mid-Atlantic Region of the United States,” *The 2001 Open Meeting of the Human Dimensions of Global Environmental Change Research Community*, Rio de Janeiro, Oct 6 – 8, 2001. (with A. Rose and S. Liao).

“Computable General Equilibrium Modeling of Electric Utility Lifeline Losses from Earthquakes,” *Southern Economic Association (SEA) 2000 Conference*, Washington DC, November 2000. (with A. Rose).

“Estimating the General Equilibrium Economic Impacts of Climate Change on Forests of the Mid-Atlantic Region of the U.S.,” *International Symposium on Development Policies*, Indira Gandhi Institute of Development Research, Mumbai, July 2000. (with A. Rose and S. Liao)

“A Translog Cost Function of the US Steel Industry,” *Proceedings of the Mineral Economic and Management Society Conference*, Ottawa, April 1999.

“A Model for Development Planning at Local Levels through Output Effect Simulation,” *Second International Conference on OR for Development (ICORD II)*, Rio de Janeiro, August 1996.

“Integrated Environmental and Economic Planning of Mountain Areas: the Agroclimatic Regional Planning Approach,” *International Conference of Planners and Experts, International Center for Integrated Mountain Development (ICIMOD)*, Kathmandu, July 1996.

“An Operational Research Approach to Sustainable Resource Allocation,” *International Federation of Operations Research Societies (IFORS)*, 1996, Vancouver, July 1996. (with J. Shah and A. Tripathy).

“AGROBASE: An Integrated Information Management System Developed for Agro-Climatic Regional Planning,” *National Seminar on Information Technology for Agriculture and Development*, Computer Society of India, Ahmedabad, India. 1991. (with D.N. Basu).

Technical / Consulting Reports

Economic Impact of the Hampson Archeological Museum, Wilson, Arkansas. Demand projection under alternate scenarios and corresponding regional economic benefits analysis; submitted to the Lee Wilson Company, Wilson, AR; July 2014.

Economic Impact of the Arkansas State University, Jonesboro. A study of the regional economic impact of the operations of the Arkansas State University and economic activities of its employees, students and visitors, based on a linear equilibrium model; submitted to the Office of the Chancellor, Arkansas State University; May 2014.

FUNDED RESEARCH PROJECTS / GRANTS.

Capacity Building for Global Leadership: A Global Business Citizenship Approach.

[Associate Director]

Arkansas State University’s (ASU) International Business Resource Center (IBRC) seeks to build global leadership capacity throughout the Arkansas Delta Region (ADR) by implementing a program wherein students learn first-hand the role of global business citizenship. The program also enhances capacity for trade with China through its curriculum enhancements and outreach activities. The IBRC has partnership agreements with economic and trade development agencies to implement the outreach portion of the grant.

Sponsor: **Title VI, BIE Program, U.S. Department of Education, 2009–2011.**

Amount: \$376,791 (includes \$186,996 institutional match).

Curriculum Completion & Program Globalization.

[Associate Director]

Arkansas State University’s International Business Resource Center (IBRC) seeks to expand the success of the 2004-06 BIE grant by completing international business (IB) curriculum development, globalizing a study abroad program that benefits students and faculty and, furthering the capabilities of Arkansas Delta Region (ADR) businesses to engage in international trade; particularly with China and India. The IBRC has partnership agreements with economic and trade development agencies to implement the outreach portion of the grant.

Sponsor: **Title VI, BIE Program, U.S. Department of Education, 2006–2008.**

Amount: \$382,000 (includes \$203,000 institutional match).

Business Outreach & Institutional Skill Development.

[Associate Director]

Arkansas ranks low in the US in the export sector due to fear of uncertainty, lack of awareness of global opportunities and absence of a supply of workforce. Creation of an International Business Resource Center (IBRC) will provide stepping stones towards building capacity for exports from the NE Arkansas region by training students and faculty, and by providing International Business (IB) development skills to businesses.

Sponsor: **Title VI, BIE Program, U.S. Department of Education, 2004–2006.**

Amount: \$330,000 (includes \$165,000 institutional match).

Bio-Pharmaceuticals: Assessment Of Economic And Environmental Issues

[Principal Investigator.]

Formal investigation of the important economic and environmental consequences of the potential development of biopharmaceuticals in Arkansas. Growing therapeutic proteins in plants is a new way to produce medicines. There is environmental as well as health concerns about the possibility of gene migration in the field and mixing of transgenic produce with normal produce in harvest and post-harvest stages. On the other hand, the potential economic prosperity appears to be equal or greater than the recent IT revolution. The fundamental research question is whether the new development will really improve quality of life and that of the environment?

This study creates perceptual maps for the target market and evaluates the potential environmental risks and benefits.

Sponsor: Arkansas Biosciences Institute, 2003–04.

Amount: \$250,000.

Comparisons of Global Leadership Traits among Egyptian and US Business Professionals

[Principal Investigator.]

This project proposes to increase awareness and understanding of Middle East people by conducting a study in Cairo that includes Egyptian business professionals. This research has two goals: **(a)** to use the “Global Leadership Traits Scale” to measure and compare the traits of *humility, integrity, inquisitiveness* and *resilience*. **(b)** to survey US expatriate business professionals in Cairo and compare with domestic US professionals to validate the scale.

Sponsor: Middle Eastern Studies Committee, Arkansas State University, 2011–12.

Amount: \$11,700.

Mid-Atlantic Regional Assessment [Research Associate.]

The MARA is a multi-year multi-institute study of the impacts of climate variability and change on the mid-Atlantic region, as part of the US Global Change Research Program. Several specializations were involved in studying how to reduce the vulnerabilities of species and communities from a changing climate; and how to improve decision-making. I worked with climatologists and forest scientists and built an integrated climate-economy model that dynamically optimizes forest values over time, given climate change vectors. (US EPA, PI: Dr Ann Fisher, 2000–2001.)

Multidisciplinary Center for Earthquake Engineering Research [Research Associate]

A multi-departmental NSF center for appraisal of earthquake risk, economic losses, social implications, and to suggest retrofitting measures. I used fragility curves supplied by structural engineers to design an entire economy “general equilibrium” model to estimate economic impact

and suggest mitigation policies. (NSF Center since 1986, Director Dr George Lee, 1997–98 and 1999–2001.)

Industrial Ecology of Steel Technologies [Research Associate]

Evaluation of alternate steel technologies based on the criteria of effectiveness of environmental regulations, and economic efficiency. I developed a process-wise emissions database and a cost function. (NSF, PI: Dr T Considine, 1998–99.)

FUNDED RESEARCH / GRANTS OUTSIDE THE UNITED STATES

Re-Appraisal of the Narmada River Valley Project [Co- Principal Investigator]

Economic analysis of the Narmada River Project in India, with a World Bank estimated completion cost exceeding \$ 4.5 billion - one of the largest ever public projects. The reassessment task included evaluating environmental and human resettlement costs, as well as welfare impacts from cropping pattern and other landuse changes. The task interfaced civil engineers and agronomists, with economists. (World Bank, 1993–94.)

Agro-Climatic Regional Planning [Project Director]

This was a project of sustainable growth in the rural sector. The country was delineated into homogenous regions based on climate, land and water profiles. Detailed landuse strategies were developed consistent with local priorities and demonstration projects were initiated with stakeholder participation. Coordinated 2000 scientists, engineers, economists, bankers and civil administrators who were involved in this national project. (Govt. of India, 1992–97.)

SERVICE AND OUTREACH ACTIVITIES

Professional services

- Associate Editor, International Journal of Environmental Economics and Statistics.
- Reviewer, Southwestern Economic Review.
- Executive Committee NASBITE – recognizing International Trade Achievements

Newspaper Articles

- “Ordinary people can fight climate change,” *Jonesboro Sun*, Feb 27, 2007.
- “Arkansas has ‘green oil’ fields,” *Jonesboro Sun*, Oct 22, 2006.
- “Global training will become necessary as China, India gain power,” *Jonesboro Sun*, Dec 04, 2005.
- “Where in the world is Arkansas selling?” *Jonesboro Sun*, Mar 06, 2005.
- “Exports can have local impact,” *Jonesboro Sun*, Oct 17, 2004.
- “Globalization and environment,” *Jonesboro Sun*, Feb 29, 2004.
- “The buzz about biotech,” *Jonesboro Sun*, Oct 05, 2003.
- “Developments in pharming,” *Jonesboro Sun*, Feb 23, 2003.
- “Alaska drilling has drawbacks,” *Jonesboro Sun*, Sep 15, 2002.
- “Businesses adapting to climate,” *Jonesboro Sun*, May 12, 2002.
- “Fall is lesson in enronomics,” *Jonesboro Sun*, Feb 03, 2002.
- “Economic emergency ahead,” *Jonesboro Sun*, Oct 07, 2001.

Institutional Committees

- General Education Committee, Arkansas State University, since 2018
- Chair, “*International Task Force*”, Arkansas State University, 2016–18
- Faculty Handbook Committee, Arkansas State University, 2010–15. [Chair 2011-12]
- Faculty Senate, Arkansas State University, 2003–05.
- Graduate Programs Committee for Environmental Sciences Program, since 2003.
- Steering Committee for New Program (PhD / MS) in Biosciences, ASU, 2003–04.
- International Students Committee, Arkansas State University, 2003–08; 2014–19
- Undergraduate Curriculum Committee, COB, 2010–12 [Chair, 2011–12]
- International Business & Outreach Committee, COB, 2004–2016. [Chair 2012–13].
- Planning Committee, College of Business, ASU, 2004–11.
- Graduate Programs Committee, College of Business, ASU, 2002–06; 2014.

Community Outreach

- Study abroad tour of India – March 2012.
- Presented an EXPORT UNIVERSITY for new exporters in Arkansas, January 2012.
- Study abroad tour of China – June 2011.
- Organized a 3 day Workshop on Exporting Techniques, in Little Rock, Oct 2010.
- Public lecture (*pro-bono*) to Arkansas farmers on Carbon Credits – Feb 2009.
- Public lecture (*pro-bono*) on US Sub Prime Crisis, Duisburg, Germany – July 2008.
- Led a 24 person delegation to China for 10 days in June 2008.
- Organized and facilitated a 39 person delegation to China for 10 days in May 2007.
- Led a 27 person delegation to China for 10 days in June 2006.