

NAZIA N. ARBAB

PERSONAL INFORMATION

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EDUCATION

Ph.D in Natural Resource Economics

*West Virginia
University,
Morgantown*

December, 2014. Dissertation: "Application of a Spatially Explicit, Agent-Based Land Use Conversion Model to Assess Water Quality Outcomes under Buffer Policies"

Master of Science in Applied Sociology

*University of
Texas at Dallas*

Master of Science in Economics

*Quaid-i-Azam
University*

Bachelor of Arts in Economics

*University of
Sindh*

PROFESSIONAL EXPERIENCE

2015-Current Post-doctoral Associate

*Center for
Resilient
Landscapes,
Rutgers
University*

Current major project: Estimated 95% correctly predicted conditions of a spatial distribution of Emerald Ash Borer (EAB) across 500 municipalities in NJ using machine learning algorithm.

2008-Dec 2014 Research Assistant

*Geo-spatial
Research Unit
/Davis College,
WVU*

Major project: Improved spatial potential erosion index using 500 GB of Soil Survey Geographical (SSURGO) data for the global soil map project.

2012-2013 Teaching Assistant

*Davis College,
WVU*

Taught Geographic Information Systems (GIS) courses and supervised GIS labs for:

- Foundations of Applied GIS · RESM 440 · Spring 2013
- Introduction to GIS Natural Sciences · RESM 441 · Fall 2012

2008-2010 Teaching Assistant

*Davis College,
WVU*

- Sustainable Living · RESM, DSGN, PLSC 140 · Fall 2010
- Intro Agri and Agribusiness Economics · ARE 150 · Spring 2009
- Principles of Microeconomics · ECON 201 · Fall 2008

2005-2006 Research Assistant

EPPS, UTD

Conducted archival and statistical research and drafted related interim reports

for the project entitled "Seeds of Opportunity: Climate Change Challenges and Solutions," published by the Civil Society Institute, Massachusetts.

PUBLICATIONS

Arbab, N.N, A.R Collins and J.F Conley, 2016. "**Projections of Watershed Pollutant Loads Using a Spatially Explicit, Agent-Based Land Use Conversion Model: A Case Study of Berkeley County, West Virginia,**" *Applied Spatial Analysis and Policy* 9, 1-35

Collins, A.R, and N.N Arbab. 2016. "**Empirical Estimation of Spatially Explicit Neighborhood Externalities**" *Agriculture and Human Values* (In preparation)

Arbab, N.N, J. Grabosky and P.Zipse, 2016. "**Modeling Geographic Distribution of Emerald Ash Borer (EAB) Risk in New Jersey**" *Ecological Modelling* (In preparation)

Arbab, N.N, R.Haight and J. Grabosky, 2016. "**Emerald Ash Borer (EAB) Infestation Impacts on Economic Value of Ash Trees in New Jersey**" *Ecological Economics* (In preparation)

Arbab, N.N, and J.M Hartman, 2016. "**Application of ArcSWAT Model to Estimate Water Quality Outcomes under Land Use Changes in Raritan River Watershed, New Jersey**" *Watershed management* (In preparation)

Arbab, N.N, and J.Lockwood, 2016. "**Impacts of Neighboring Land Use Conversion on Avian Biodiversity in Protected Areas: A Case Study of New Jersey Highlands**" *Ecological Applications* (In preparation)

Assisted Professor Llyod J. Dumas with the preparation of the report entitled "**Seeds of Opportunity: Climate Change Challenges and Solutions,**" published by the Civil Society Institute, Massachusetts. April 2006

CONFERENCES

Arbab, N. and J.Grabosky. 2016."Socio-ecological impacts of emerald ash borer in New Jersey." Paper presented at the International Society for Ecological Modelling Global Conference, Towson, MD, May 8-12.

Arbab, N. 2015."Spatial Analysis of Emerald Ash Borer (EAB) Spread in New Jersey." Poster presented at the Rutgers Regional Climate Symposium, New Brunswick, NJ, November 20.

Arbab, N. and A.R Collins. 2014."Spatial Logistic Methods for Spatially Explicit Neighborhood Externalities." Paper presented at the Northeast Agricultural and Resource Economics Association (NAREA). Morgantown, WV, June 1-3.

Arbab, N. and A.R Collins. 2013."Land Use Change and Spatial Externalities in Berkeley County, WV: A Spatially Explicit Agent-based Model." Poster presented at the Annual Conference of Computational Social Science Society of America (CASSA). Santa Fe, NM, August 22-25.

Arbab, N. and A.R Collins. 2013. "Patterns of Residential Development and Water Quality in Opequon Creek Watershed, Berkeley County, WV." Paper presented at the NYC Computational Economics and Complexity Workshop session at Eastern Economic Association (EEA) Annual Meetings. New York City, NY, May 9-11.

Arbab, N. and A.R Collins. 2012. "Agents Heterogeneity and its Role in Changing Land Use Patterns: An Agent Based Model of Potomac River Basin." Poster presented at the Agricultural and Applied Economics Association (AAEA) Annual Meeting. Seattle, WA, August 12-14.

Arbab, N., A.R Collins and M.P. Strager. 2012. "An Agent Based Approach for linking Land-use and Water Quality in Opequon Creek Watershed." Paper presented at the Southern Regional Science Association (SRSA) Annual Meeting. Charlotte, NC, March 21-25.

Arbab, N. and A.R Collins. 2011. "Decision Making and Land Use Change in Netlogo: An Agent Based Simulation of the Potomac River Basin." Poster presented at the Annual North American Meetings of the Regional Science Association International (RSAI). Miami, FL, November 9-12.

COMPUTER SKILLS

AGENT ANALYST, ARCGIS, ARCSWAT, C, C++, C#, E-VIEWS, IDRISI SELVA, JAVA, MATHEMATICA, MATLAB, MINITAB, NETLOGO, PYTHON, R, RePAST, SAS, S-Plus, SPSS, STATA, URBANSIM

OTHER APPOINTMENTS AND AFFILIATIONS

<i>Fellow</i>	2015-current · USDA, New York City Urban Field Station, USDA, Forest Service (FS).
<i>Member</i>	2015-current · New Jersey Emerald Ash Borer Task Force, USDA Animal and Plant Health Inspection Service (APHIS).
<i>Member</i>	Current · The New York Academy of Sciences, New York, NY.
<i>Earth Team Volunteer</i>	2015 · USDA, Natural Resources Conservation Service.
<i>Vice-President</i>	2012 · Graduate Resource Economics Club, WVU.
<i>Web Master</i>	2010 · Graduate Resource Economics Club, WVU.
<i>Vice-President</i>	2009 · Graduate Resource Economics Club, WVU.