

**Latha Malar Baskaran**

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**Education:**

M.S in Geography, Pennsylvania State University, 2003  
Bachelor of Engineering in GeoInformatics, Anna University, India, 2001

**Work Experience:**

Geographical Information Systems (GIS) Analyst at the Oak Ridge National Laboratory, TN  
(*September 2003 to present*): Working on several projects that involve managing geographical data, performing quality checks on data, land use and land cover modeling, remote sensing, statistical analysis, habitat modeling and mapping.

Research Assistant at the Pennsylvania State University, PA (*August 2001 to July 2003*): Data analyst at the Human-Environment Regional Observatory (HERO) to study environmental and socio-economic factors affecting land use and land cover changes in Centre County, PA. Worked at the Center for Integrated Regional Assessment (CIRA) and was involved in analyzing the uncertainty in maps derived from remote sensing imagery using statistical procedures and spatial visualization methods.

Intern at the Institute of Remote Sensing (IRS), India (*June 1999 to August 1999*): Compiled various socio-economic and demographic data as a supplement to geographical data in a GIS for a project involving the preparation of a Panchayat (Sub District) Resource Information System.

Intern at the M. S. Swaminathan Research Foundation, India (*December 1998 to January 1999*): Assisted in preparing map products for the Information Village Project

**Projects:**

DAAC: Oak Ridge National Laboratory Distributed Active Archive Center (*March 2006 to present*) (<http://www.daac.ornl.gov/>): Applying quality checks to data sets (Ex. MODIS satellite data, climatic data) that are to be archived at ORNL DAAC.

RSim: A regional simulation model to explore impacts of resource use and constraints (*September 2003 to May 2006*) (<http://www.esd.ornl.gov/programs/SERDP/RSim/>): Managing geographical data in RSim. Performed model calibration and assisted in implementation of land cover, water quality and habitat sub models. A gopher tortoise habitat model was created for this project.

Integration of Ecological Information (*September 2003 to March 2006*): Land management categories relating to conservation, restoration and preservation of environmental features and relating to military planning efforts in Fort Benning were mapped using GIS.

Masters thesis work on Analyzing the effects of topography on remote sensing imagery (*January 2002 to August 2003*): This study analyzed the influence of topography-induced variations on the classification accuracy of thematic maps.

Undergraduate thesis work on Environmental Impact Assessment of a Coastal Roadway in India using GIS and Remote Sensing (*January 2001 to May 2001*): Land use and land cover changes, socio-economic changes, air and water quality changes etc. were analyzed before and after construction of the road.

**Training:**

ArcGIS 9: The complete Geographic Information System. Training seminar by ESRI. Knoxville, TN, October, 2004.

Image Classification techniques for the development of accurate, detailed, quantitative land cover data. Workshop at the APPRS Annual Conference, Denver, CO, May 2004.

Grid based map analysis techniques and modeling. Workshop at the APPRS Annual Conference, Denver, CO, May 2004.

Two-week training camp at Survey of India, Hyderabad, India, December 2000. The training included survey techniques such as third order triangulation, trilateration using a total station, contour chasing and preparation of a large scale map using Plane table.

**Computer Skills:**

GIS Packages: ArcInfo 3.x, ArcView 3.x, ArcView 8.x, ArcView 9.x including ArcMap, ArcToolbox, ArcGIS Spatial Analyst, Geostatistical Analyst and 3D Analyst

Image Processing Software: ERDAS Imagine 8.5, ER Mapper 6.3, ENVI

Languages: C, C++ and Java

Others: MS Office Suite, SPSS, AutoCAD 2000

Operating Systems: SUN Solaris (Unix), Windows XP, 2000, 98, 95 and NT

**Publications:**

Baskaran, L., V. Dale, W. Birkhead, and R. Efroymsen. 2006. Habitat modeling within a regional context: An example using Gopher Tortoise. *American Midland Naturalist*. 155: 335-351.

Baskaran, L., V. Dale, C. Garten, D. Vogt, C. Rizy, R. Efroymsen, M. Aldridge, M. Berry, M. Browne, E. Lingerfelt, F. Akhtar, M. Chang and C. Stewart. 2006. Estimating land-cover change in RSim: Problems and constraints. *Proceedings for the American Society for Photogrammetry and Remote Sensing 2006 Conference*, Reno, NV, May 1-5 2006.

Baskaran, L., V. Dale, and W. Birkhead. 2005. Habitat modeling within a Regional Simulation Model (RSim) environment, *Proceedings for Fourth Southern Forestry and Natural Resource Management GIS Conference*, Athens, GA, December 16-17, 2004.

Dale, V., D. Druckenbrod, L. Baskaran, M. Aldridge, M. Berry, C. Garten, L. Olsen, R. Efroymsen, and R. Washington-Allen. 2005. Vehicle impacts on the environment at different spatial scales: Observations in west central Georgia, USA. *Journal of Terramechanics*. 42: 383-402.

Dale, V., M. Aldridge, T. Arthur, L. Baskaran, M. Berry, M. Chang, R. Efroymsen, C. Garten, C. Stewart, and R. Washington-Allen. 2006. Bioregional Planning in Central Georgia. *Futures*. 38:471-489.

Efroymsen, R., V. Dale, L. Baskaran, M. Chang, M. Aldridge, and M. Berry. 2005. Planning transboundary ecological risk assessments at military installations. *Human and Ecological Risk Assessment*. 11: 1193-1215.

Tran, L., S. T. Jarnagin, C. G. Knight and L. Baskaran. 2004. Mapping spatial accuracy and estimating landscape indicators from thematic land-cover maps using fuzzy set theory, 173-188. In R.S. Lunetta and J. G. Lyon (Eds) *Remote Sensing and GIS Accuracy Assessment*, CRC Press, Boca Raton, FL.

Baskaran, L. 2003. Analyzing the effects of topography on remote sensing imagery. Masters Thesis. Department of Geography, Pennsylvania State University, University Park, PA.

**Presentations:**

Baskaran, L., V. Dale, C. Garten, D. Vogt, C. Rizy, R. Efroymsen, M. Aldridge, M. Berry, M. Browne, E. Lingerfelt, F. Akhtar, M. Chang and C. Stewart. 2006. Estimating land-cover

change in RSim: Problems and constraints. Presentation at the American Society for Photogrammetry and Remote Sensing 2006 Conference, Reno, NV, May 2006.

Baskaran, L., V. Dale, and W. Birkhead. Habitat modeling within a Regional Simulation Model (RSim) environment, Presentation at the Fourth Southern Forestry and Natural Resource Management GIS Conference, Athens, GA, December 2004.

Baskaran, L. Applications of GIS and Remote Sensing: The Regional Simulation Model (RSim) case study. Presentation at the Plateau PC Users Group, Inc in Crossville, TN, October 2004.

Baskaran, L. GIS and Remote Sensing today and an example of a research application – RSim. Invited presentation at the Plateau PC Users Group, Inc at Crossville, TN, October 2004.

Baskaran, L., V. Dale, M. Aldridge, M. Berry, M. Chang, R. Efroymsen, C. Garten, C. Stewart, RSim: A Regional Simulation to Explore Impacts of Resource Use and Constraints. Poster presentation at the Georgia URISA GIS/IT Conference at Peachtree City, GA, September 2004.

Baskaran, L. Remote Sensing applications to water resources. Guest lecture at the GEOG 421: Water Resources course. Pennsylvania State University, University Park, PA, Spring 2003.

#### **Conferences Attended:**

American Society for Photogrammetry and Remote Sensing (ASPRS) Annual Conference, Reno, NV. May 2006.

Interagency Gopher Tortoise Workshop, Fort Gordon, GA, June 2005.

Southern Forestry and Natural Resources GIS Conference, Athens, GA, December 2004

Georgia URISA GIS/IT Conference, Peachtree City, GA. September 2004.

American Society for Photogrammetry and Remote Sensing (ASPRS) Annual Conference, Denver, CO. May 2004.

Civilization 2000, Anna University, Chennai, India. March 2000.

#### **Awards and Honors:**

University Gold Medal for overall academic excellence in 4 years of Undergraduate Study

University Gold Medal for obtaining the highest GPA in the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> years of Under graduation