

# KATHERINE A. JOSEPH

## Curriculum Vitae

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EDUCATION	Virginia Polytechnic Institute and State University Blacksburg, Virginia M.S. Forestry May 2005 GPA 3.9/4.0	Virginia Polytechnic Institute and State University Blacksburg, Virginia B.S. In Forestry and Natural Resource Recreation December 2002 GPA 3.7/4.0, Magna cum Laude
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THESIS	Comparison of Segment and Pixel Based Non-Parametric Classification of Land Cover in the Amazon Region of Brazil Using Multitemporal Landsat TM/ETM+ Imagery  <i>Advisor:</i> Randolph H. Wynne
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RESEARCH INTERESTS	Remote sensing and GIS applications in natural resources including land use classification and natural resource modeling. Spatial technologies as a general natural resource management tool.
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RELEVANT EXPERIENCE	<u>Research Assistant/Teaching Assistant</u> Virginia Tech, Blacksburg, VA August 25, 2003-Present (excluding June 2004 – July 2004) (20 hours per week) <ul style="list-style-type: none"><li>• Assist in remote sensing and geographic information systems (GIS) aspects of a socioeconomic study in the Amazon region of Brazil</li><li>• Utilize ArcMap 8.3 (ArcMap, Arc Toolbox, and Arc Catalog) to manage and create GIS data</li><li>• Prepare and classify remotely sensed imagery using Erdas Imagine 8.5-8.7, ENVI, eCognition, and CART 5.0</li><li>• Perform geometric and radiometric corrections, data reduction techniques, image classification, and accuracy assessment.</li><li>• Assist in the teaching of Forest Photogrammetry and Spatial Data Processing Laboratory and Recreation Field Studies</li></ul>
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GIS Analyst (Volunteer) USFWS, Blackwater National Wildlife Refuge, Cambridge, MD  
June 2004 – July 2004 (16 hours per week)

- Employed ArcMap 8.3 (ArcMap, Arc Toolbox, and Arc Catalog) to manage and create GIS data
- Performed on-screen digitizing using ArcMap
- Created metadata in ArcCatalog 8.3
- Collected field data with global positioning system for incorporation into a GIS
- Created maps for use in field research

Research Experience for Undergraduates (REU) Harvard University, Cape Cod NS  
May 28, 2003-August 22, 2003 (Full Time)

- Co-designed sampling protocol and research of a Black Locust (*Robinia pseudoacacia*) in Cape Cod NS
- Analyzed historical and recent aerial photographs to delineate Black Locust stand boundaries
- Integrated of historical stand data into a GIS
- Assisted with field work relating to an exotic plant species study in Cape Cod NS

Engineer Tech I Virginia Polytechnic Institute and State University, Blacksburg, VA  
January 6, 2003 – May 16, 2003 (Full Time)

- Assist in remote sensing and geographic information systems (GIS) aspects of a socioeconomic study in the Amazon region of Brazil
- Used ArcMap 8.3 to manage and create GIS data
- Prepared and classified remotely sensed imagery using Erdas Imagine 8.5 software, including image registration.
- Worked as a part of a multidisciplinary team
- Assisted in the preparation of materials for use in publications and scientific presentations

## Joseph CV

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<b>TEACHING EXPERIENCE</b>	Graduate Teaching Assistant, Forestry Faculty, Virginia Tech, Blacksburg, VA Fall 2003 and Fall 2004 (Forest Photogrammetry and Spatial Data Processing)
	Graduate Teaching Assistant, Forestry Faculty, Virginia Tech, Blacksburg, VA Spring 2004 (Outdoor Recreation Field Studies)

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<b>AWARDS AND ACTIVITIES</b>	American Society for Photogrammetry and Remote Sensing- President Fall 2003-Present Grand National Waterfowl Association Graduate Scholarship 2004-2005 Virginia Tech Office of GIS and Remote Sensing Research Symposium: Poster Presentation, 3 <sup>rd</sup> place, April 2004 Natural Resource Recreation Society- Fall 2001-Present Golden Key National Honor Society- Spring 2001-Present National Student Exchange, Oregon State University, Corvallis, OR, Fall 2000 Valedictorian, Cambridge-South Dorchester HS, Cambridge, MD, 1998
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<b>PUBLICATIONS</b>	Von Holle, B., K.A Joseph, E.F. Largay R.G. Lohnes 2005. in press. Facilitations between the introduced nitrogen-fixing tree, <i>Robinia pseudoacacia</i> , and nonnative plant species in the glacial outwash upland ecosystem of Cape Cod, MA. Biodiversity and Conservation.
	Joseph, K.A, Wynne, R.H., Browder, J.O., and Summers, P. 2004. Multitemporal Farm System Pathway Classification in the Amazon Basin. Proceedings: American Society of Photogrammetric Engineering and Remote Sensing 2004 Annual Conference. Denver, Colorado, May 24-28, 2004. (digital)

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<b>PRESENTATIONS</b>	Poster presentation – Joseph, K.A., Wynne, R.H., Browder, J.O., and Summers, P. 2005. 2005 Virginia GIS and Remote Sensing Research Symposium. Blacksburg, VA, April 2005.
	Illustrated paper presentation- Joseph, K.A., Wynne, R.H., Browder, J.O., and Summers, P. 2005. Land Use Classification in the Amazon Region of Brazil Using Interannual Landsat Imagery. Association of American Geographers 2005 Annual Conference. Denver, Colorado, April 5-9, 2005.
	Paper presentation- Wynne, R.H., Browder, J.O., Joseph, K.A., and Summers, P.M. 2005. Remotely Sensing the Farm-System-Type Continuum in the Brazilian Amazon. Association of American Geographers 2005 Annual Conference. Denver, Colorado, April 5-9, 2005.
	Poster presentation- Joseph, K.A, Wynne, R.H., Browder, J.O., and Summers, P. 2004. Multitemporal Farm System Pathway Classification in the Amazon Basin. Proceedings: American Society of Photogrammetric Engineering and Remote Sensing 2004 Annual Conference. Denver, Colorado, May 24-28, 2004.
	Poster presentation- Joseph, K.A, Wynne, R.H., Browder, J.O., and Summers, P. 2004. Mapping Farm System Pathways with Multitemporal Landsat Imagery in the Amazon Region of Brazil. 2004 Virginia GIS and Remote Sensing Research Symposium. Blacksburg, VA, April 9, 2004.

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<b>REFERENCES</b>	Dr. Randolph H. Wynne 319 Cheatham Hall Virginia Polytechnic Institute and State University Blacksburg VA 24060 (540) 231-7811 • wynne@vt.edu
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## Joseph CV

REFERENCES Dr. James B. Campbell Jr.  
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