

## ***Curriculum Vitae of Patricia Houle, M.S.***

Florida International University  
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### ***Education***

- 2006 Florida International University – Master of Science, Environmental Studies  
Analysis of forest vegetation structure in the Florida Everglades using airborne laser mapping
- 2005 Florida International University – Graduate Certificate in Geographic Information Systems
- 2001- Florida International University – Doctoral program courses, Department of Biological Sciences.  
2003 Concentration in chemical ecology and botany
- 1976 Massachusetts Institute of Technology – Master of Science, Nutritional Biochemistry and Metabolism. Protein biochemistry and biochemical characterization of ferritin in the rat
- 1975 Massachusetts Institute of Technology – Bachelor of Science, Life Sciences

### ***Work Experience***

Florida International University, Miami, FL

- 2014- Associate Chair, Department of Earth and Environment
- 2012- Undergraduate Program Director for Environmental Studies
- 2008- Instructor, Department of Earth and Environment  
Instructor for undergraduate classes in areas of natural and social environmental studies.  
Development and instruction of Global Learning courses.
- 2007 Adjunct Faculty, Environmental Studies Department
- 2007 Research Associate, International Hurricane Research Center  
Evaluation of effects of hurricanes and sea level rise on the pine forests of the Florida Keys
- 2006 Research Coordinator, International Hurricane Research Center  
Responsible for recruitment, instruction and data analysis for volunteer beach monitoring project
- 2004 Research Assistant, International Hurricane Research Center  
Analysis of vegetation structure of mangrove forests of Everglades National Park
- 2003 Research Assistant, GIS/RS Center  
Responsible for grant and budget management, production of metadata for geospatial web applications, and production of maps for urban planning and ecological analyses
- 2001 Graduate Teaching Assistant for undergraduate biology laboratory courses

Coulter Corporation, Miami, FL

Section Head, Research & Development

- Implementation of computerized documentation system for laboratory equipment maintenance and use, statistical methods for new biological project evaluations, chemical and biological reagent preparation methods and quality assurance testing
- Familiarity with FDA, OSHA, NIH and CDC guidelines for laboratory, chemical and biological safety and management

Baxter Diagnostics Inc., Cambridge, MA and Miami, FL

Research Group Leader

- More than 10 years experience in the development of immunodiagnostic products

- Coordinated construction of research laboratories for general chemistry and specialty labs for handling infectious agents, human blood and low-level radiation
- Supervision and mentoring of college graduates as lab assistants to learn skills that could be applied to medical device and pharmaceutical industries

### ***Awards***

Outstanding Graduate Student Award, Environmental Studies Department, Florida International University, 2006

### ***Publications and Presentations***

Florida Historical Society Annual Meeting, May, 2013. “David Fairchild, Plant Introductions and the South Florida Landscape”.

Zhang, K., Z. Cui\*, and P. Houle\*. 2012. Airborne LiDAR Remote Sensing and its Application. In Advances in Mapping from Aerospace Imagery: Techniques and Applications, edited by C. Yang and J. Li. Boca Raton, CRC Press:33-67.

Zhang, K., M. Simard, M. Ross, V.H. Rivera-Monroy, P. Houle, P. Ruiz, R.R. Twilley and K. Whelan. 2008. Airborne Laser Scanning Quantification of Disturbances from Hurricanes and Lightning Strikes to Mangrove Forests in Everglades National Park, USA. Sensors, 8, 2262-2292 at [www.mdpi.org/sensors](http://www.mdpi.org/sensors).

Houle, P.A. 2006. “Use of LIDAR for the Assessment of Landscape Structure in the Pine Forest of Everglades National Park, Master of Science in Environmental Studies, Miami, FL: Florida International University, pp. 100.

Houle, P.A., K. Zhang, M.S. Ross and M. Simard. 2006. Use of airborne LIDAR for assessment of landscape structure in the pine forests of Everglades National Park. Pages 5 in Proceedings of 2006 IEEE International Geoscience and Remote Sensing Symposium, Denver, Colorado, USA.

Zhang, K. P.A. Houle, M.S. Ross, P.L. Ruiz and M. Simard. 2006. Airborne laser mapping of mangroves on the Biscayne Bay Coast, Miami, Florida. Pages 5 in Proceedings of 2006 IEEE International Geoscience and Remote Sensing Symposium, Denver, Colorado, USA.

### ***Memberships***

Florida Historical Society