

## Curriculum Vitae

# Hartwig Henry Hochmair

- Current Affiliation**      **Assistant Professor (Tenure Track)**      7/2008-  
Fort Lauderdale Research and Education Center - Geomatics Program  
University of Florida  
3205 College Ave.  
Ft. Lauderdale, FL 33314-7799  
hhhochmair@ufl.edu
- Education**      **Dr. technicae (PhD, honors)**      6/2002  
Institute for Geoinformation, Technical University of Vienna  
Thesis title: The Wayfinding Metaphor - Comparing the Semantics of Wayfinding in the Physical World and the WWW  
Advisors: Andrew U. Frank, Werner Kuhn
- Dipl.-Ing. (MSc)**      10/1998  
Institute of Geodesy and Geophysics, Department of Applied Geodesy and Engineering Geodesy, Technical University of Vienna  
Thesis title: Convergence measurements in the New Austrian Tunneling Method (NATM) - Ways of graphic visualisation and their relation to tunnel-mechanics (in German)  
Advisor: Thomas Wunderlich
- Mag. art. (MA)**      6/2000  
Institute for Composition and Electroacoustics, University for Music and Performing Arts Vienna  
Thesis title: User interface design and programming of an interactive sound generator (in German)
- Previous Professional Appointments**      **Assistant Professor (Tenure Track)**      8/2004-6/2008  
Department of Geography  
St. Cloud State University, Minnesota
- Post-doctoral researcher**      3/2003-7/2004  
Department of Informatics and Mathematics, Cognitive Systems Group  
University of Bremen
- Research and teaching fellow**      3/1999-2/2003  
Institute for Geoinformation, Technical University of Vienna
- Professional Activities**      **Referee:** *International Journal of Geographic Information Science (IJGIS)*, *The Professional Geographer*, *Spatial Cognition and Computation*, National Science Foundation (NSF)
- Program committee member:** Münster Geoinformation Days 2004, Spatial Cognition Conference 2004 and 2006, GIScience Conference 2006, AGILE International Conference on Geographic Information Science 2007 and 2008, AIMS - AI in mobile systems workshop 2007, COSIT 2007 (Conference on Spatial Information Theory), International Conference on Data Engineering (ICDE) 2009

**Awards and Grants**

Measuring the Structure of Multi-Modal Transportation Networks for the Prediction of Travel Behavior and System Performance in Florida (Contract with Florida Department of Transportation, with David Levinson, \$ 133,118)	2008-2010
UF Minigrant for distance delivery in teaching, research, and education (\$ 2,000)	2008
Bicycle Knowledge Explorer (BiKE) -- An Interactive Web Application for Broward County Bicycle Route Planning (Contract with Broward County, with Jennifer Fu, \$ 135,000)	2008-2009
Best poster award (ACM-GIS 2007, Seattle, WA)	2007
SCSU University Short-Term Faculty Improvement Grant (\$ 898)	2006
SCSU University Research Faculty Improvement Grant (\$ 4,810)	2006
SCSU University Researcher Fund "Applied GIS in environmental science and urban planning" (\$ 3,000)	2006
ESF travel grant (EURESCO, Bad Herrenalb, Germany)	2003
ESRI Student Award (COSIT 2001, Morro Bay, Ca, USA)	2001
Young researcher prize (GISRUK 2000, York, UK)	2000

**Teaching Experience****Teaching of lectures/seminars (University of Florida)**

SUR 5625 GIS Analysis Spring 2008

**Teaching of lectures/seminars (Saint Cloud State University)**

GEOG 630 Seminar VBA programming in ArcGIS	2006
GEOG 438 Geodesy and Adjustment Computation	2006-2007
GEOG 436 GPS-GIS integration	2005-2006
GEOG 336 Control and Geodetic Survey	2005
GEOG 335 Land Surveying	2004
GEOG 316 GIS	2004-2007
GEOG 216 Principles of Geographic Information Science	2006-2007
GEOG 250 Map Fundamentals	2004-2005
Geoinformation sources (TU Vienna, Austria)	2000-2002
Evaluation of a GIS (TU Vienna, Austria)	2002

**Guest lecturer (U Münster, Germany)**

Geoinformation sources and data quality 2002

**Teaching of field courses and lab exercises (TU Vienna, Austria)**

Field course GIS	1999-2002
Surveying for environmental planners	2000-2002
Surveying for architects	2001-2002
Geodetic drawing	2001-2002

**MS Thesis Advises**

Richard Anthony (completed):  
Thesis title: Coordinate Versus Physical Location of Public Land Survey Monuments

John Dahl (completed):  
Thesis title: United States General Land Office Historical Surveying Instructions and Their Influence on Surveys of the 3rd and 4th Correction Lines, 4th Principal Meridian, Minnesota

Neal Niemiec (completed):  
Thesis title: Integration of CAD, GIS and BIM technologies

Nana Dei (completed):  
Thesis title: Controlling Access to Data and Resources in a Web-based Campus GIS

<b>Departmental Committees</b>	Departmental representative in the assessment committee of College of Social Science (COSS) 2005-2007 Member of Curriculum Committee 2005-2006 Member of Faculty Position Search Committee 2005,2007
<b>Industry Experience</b>	<b>Surveying Engineer</b> 10/1998-02/1999 Surveying Office Hochmair, Zell am See, Austria <b>Partnership</b> Partner in "Surveying Office Hochmair and partners Ltd." 01/2001-present
<b>Memberships</b>	Member of Broward County MPO Bicycle Pedestrian Advisory Committee (BPAC) 06/2008-present Minnesota Society of Professional Surveyors (MSPS) 01/2005-present Association of American Geographers (AAG) 09/2006-present Affiliate of the Transportation Research Board (TRB) 12/2006-present
<b>Publications</b>	<u>Articles in Refereed Journals:</u> Hochmair, H. H., Büchner, S. J., and Hölscher, C. (2008). Impact of Regionalization and Detour on ad-hoc Path Choice. <i>Spatial Cognition and Computation</i> , 8 (3), 167-192. Hochmair, H. H. (2007). Dynamic Route Selection in Route Planners. <i>Kartographische Nachrichten</i> , 57 (2), 70-78. Hochmair, H.H. and Lüttich, K. (2006). An Analysis of the Navigation Metaphor - and Why it Works for the World Wide Web. <i>Spatial Cognition and Computation</i> 6 (2), 235-278. Hochmair, H. H. (2005). Investigating the Effectiveness of the Least-angle Strategy for Wayfinding in Unknown Street Networks. <i>Environment and Planning B, Planning and Design</i> , 32 (5), 673-691. Hochmair H.H., Frank A.U. (2002). Influence of estimation errors on wayfinding-decisions in unknown street networks - analyzing the least-angle strategy. <i>Spatial Cognition and Computation</i> 2 (4): 283-313.  <u>Book Sections and Conference Proceedings (Full Paper Review):</u> Hochmair, H. and Navratil, G. (2008). Computation of Scenic Routes in Street Networks. In A. Car, G. Griesebner and J. Strobl (Eds.), <i>Geospatial Crossroads@GI_Forum '08: Proceedings of the Geoinformatics Forum Salzburg</i> (pp. 124-133). Heidelberg: Wichmann. Hochmair, H. H. (2008). Grouping of Optimized Pedestrian Routes for Multi-Modal Route Planning: A Comparison of Two Cities. In L. Bernard, H. Pundt and A. Friis-Christensen (Eds.), <i>The European Information Society - Taking Geoinformation Science One Step Further</i> (Springer Lecture Notes Series on Geo-Information, pp. 339-358). Berlin: Springer. Hochmair, H. H. (2008). Effective User Interface Design in Route Planners for Cyclists and Public Transportation Users: An Empirical Analysis of Route Selection Criteria. <i>Transportation Research Board - 87th Annual Meeting</i> , (proceedings on CD-ROM). Washington, D.C. Hochmair, HH (2008). PDA-Assisted Indoor-Navigation with Imprecise Positioning: Results of a Desktop Usability Study. In L. Meng, A. Zipf & S. Winter (Eds.), <i>Map-based Mobile Services - Interactivity, Usability and Case Studies</i> (pp. 228-247). Berlin: Springer. Hochmair, H. H. (2007). Optimal Route Selection with Route Planners: Results of a Desktop Usability Study. In H. Samet, M. Schneider and C. Shahabi (Eds.), <i>Proceedings of the 15th ACM international Symposium on Geographic Information Systems</i> (pp. 312-315, short paper). New York, NY: ACM. Hochmair, H.H. and Fu, J. (2006). User Interface Design for Semantic Query Expansion in Geo-data Repositories. In J. Strobl, T. Blaschke and G. Griesebner (Eds.), <i>Angewandte Geoinformatik 2006 - Beiträge zum 18. AGIT-Symposium Salzburg</i> (pp. 236-245). Heidelberg: Wichmann.

- Hochmair, H.H. (2006). Filling the Gaps in Keyword-based Query Expansion for Geodata Retrieval. In W. Kainz, A. Riedl and G. Elmes (Eds.), *Progress in Spatial Data Handling* (pp. 263-278). Berlin: Springer.
- Hochmair, HH (2005). Ontology Matching for Spatial Data Retrieval from Internet Portals. In M. A. Rodríguez, I. F. Cruz, S. Levashkin & M. J. Egenhofer (Eds.), *First International Conference on Geospatial Semantics (GeoS 2005)* (LNCS 3799, pp. 166-182). Berlin: Springer.
- Hochmair, H.H. and Rinner, C. (2005). Investigating the Need for Eliminary Constraints in the User Interface of Bicycle Route Planners. In A. G. Cohn and D. M. Mark (Eds.), *Conference on Spatial Information Theory (COSIT'05)* (LNCS 3693, pp. 49-66). Berlin: Springer.
- Hochmair, H.H. and Karlsson, V. (2005). Investigation of preference between the least-angle strategy and the initial segment strategy for route selection in unknown environments. In C. Freksa, M. Knauff, B. Krieg-Brückner, B. Nebel and T. Barkowsky (Eds.), *Spatial Cognition IV* (LNAI 3343, pp. 79-97). Berlin: Springer.
- Hochmair H.H. (2004). Decision support for bicycle route planning in urban environments. In F. Toppen, P. Prastacos (Eds.), *Proceedings of the 7th AGILE Conference on Geographic Information Science*. Crete University Press, Heraklion, Greece, pp. 697-706
- Hochmair, H.H. (2004). Towards a classification of route selection criteria for route planning tools. In P. Fisher (Ed.), *Developments in Spatial Data Handling* (pp. 481-492). Berlin: Springer.
- Hochmair H.H. , Raubal M. (2002). Topologic and Metric Decision Criteria for Wayfinding in the Real World and the WWW. *Spatial Data Handling (SDH'02)* (proceedings on CD-ROM), Ottawa
- Hochmair H.H. (2001). Adapting One's Mental Model: An Essential Process for Successful Navigation in an Environment. In P Halls (Ed.), *Spatial Information in the Environment, Innovations in GIS 8*. Taylor & Francis, London, pp. 147-163
- Hochmair, H.H. & Frank, A. U. (2001). A Semantic Map as Basis for the Decision Process in the WWW Navigation. In D. R. Montello (Ed.), *Conference on Spatial Information Theory (COSIT'01)* (LNCS 2205, pp. 173-188). Berlin: Springer.

#### Conference Proceedings (Full Paper with Abstract Review):

- Dei, N. Y., Hochmair, H. H., and Chen, J. Q. (2008). *Controlling Access to Data in a Web-based Campus GIS*. ESRI Education User Conference, San Diego, CA.

#### Articles in Non-Refereed Journals:

- Hochmair, H. H. (2004). "Vienna Soundwalk": A Soundscape Information System. *Soundscape: The Journal of Acoustic Ecology*, 5 (1), 26-27.

#### Refereed Conference Abstracts:

- Hochmair H.H. (2003). *Aspects of feedback in using mobile devices for wayfinding*. Euresco Conference on Modelling for Wayfinding Services, Bad Herrenalb (Germany)
- Hochmair H.H. (2000). *Adapting One's Mental Model: An Essential Process for Successful Navigation in an Environment* (extended abstract). GISRUk 2000, York (Great Britain)
- Hochmair H.H. (2000). *Comparing cognitive maps for wayfinding tasks in the real world and the web*. International Conference of Spatial Cognition, Rome (Italy). Pabst
- Hochmair, H. H. (2000). *'Least Angle' Heuristic: Consequences of errors during navigation*. GIScience, Savannah, Georgia, USA. University of California Regents.

Book reviews:

Hochmair, H. H. (2008). Book review of: Kennedy, M (2006). "Introducing Geographic Information Systems with ArcGIS". *The Professional Geographer*, 60 (2), 293-294.