

## Nancy Wiegand Scientist

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### PROFESSIONAL PREPARATION

University of Wisconsin-Madison	<b>Mathematics</b>	<b>Bachelor of Science</b>
University of Wisconsin-Madison	<b>Land Resources</b>	<b>Master of Science</b>
Institute for Environmental Studies, Title: “ <i>Ecological Data Analysis Using a Relational DBMS</i> ”		
University of Wisconsin-Madison	<b>Computer Sciences</b>	<b>Master of Science</b>
University of Wisconsin-Madison	<b>Land Resources</b>	<b>Doctor of Philosophy</b>
Environmental Studies Interdisciplinary degree with a focus on Computer Science DBMS		
Title: “ <i>OODBMS Technology for Feature-Based Geographic Information Systems</i> ”		
University of Wisconsin-Madison	<b>DBMS/Civil Engineering</b>	<b>Postdoctoral Studies</b>
Research in OODMS, GIS, and Engineering applications		

### APPOINTMENTS

**Scientist**, Land Information and Computer Graphics Facility, UW-Madison, 1998 to present.  
**Assistant Professor of Computer Science**, Edgewood College, Madison, WI, 1996-97.  
**Lecturer**, Department of Computer Sciences, University of Wisconsin-Madison, five years  
Courses taught: **Data Base Management Systems (CS564)**; Introduction to **Data Structures**.  
**Assistant Professor of Computer Science**, University of Wisconsin-Platteville.  
**Graduate Assistantships**: Department of Computer Sciences, UW-Madison.  
**Programmer**, various UW-Madison Depts & DBMS programmer at the Joiner Co.

### AWARDS

**National Science Foundation Digital Government Grant**, EIA0091489, July 15, 2001 to Dec. 31, 2004.  
“Integrating Metadata Development, XML, and DBMS Search and Query Techniques in a Wisconsin Land Information System”, Co-PIs: Isabel Cruz (Univ. of Illinois at Chicago) and Stephen Ventura (UW-Msn).  
**National Science Foundation Information and Data Management (IDM), Research Planning Grant**, 9/97-8/99, “Advanced OODBMS Conceptual Modeling for GIS and Other Applications”.  
**UW-Madison Professional Development Grant**, Travel, 2000.  
**American Association of University Women, American Fellow**, Doctoral study support, 1993-94.  
**Regents of the University of Wisconsin, Vilas Fellow**, Stipend, 1992

### SELECTED PUBLICATIONS (CHRONOLOGICAL)

Wiegand, N. and Zhou, N. “Ontology-Based Geospatial Web Query System”, To appear as a chapter in a book resulting from the Next Generation Geospatial Information (NG2I) Workshop, Boston, MA, October 2003, Taylor & Francis.

Wiegand, N. “Querying Metadata Over the Web to Locate Geospatial Data”, In Proceedings of GIScience 2004 Extended Abstracts and Poster Summaries, October, pp. 224-226.

Wiegand, N., Book review on (Spatial Databases with Application to GIS by Philippe Rigaux, Michel Scholl, and Agnes Voisard, Morgan Kaufmann, 2002), SIGMOD Record, Vol. 32, No. 4, December 2004, pp. 111-112.

Wiegand, N.; Zhou, N.; and Cruz, I.F. “A Web Query System for Heterogeneous Geospatial Data”, In Proceedings Scientific and Statistical Database Management (SSDBM), July, 2003, pp. 262-265.

Wiegand, N.; Zhou, N.; Cruz, I. and Sunna, W. “Resolving Schema and Value Heterogeneities For XML Web Querying”, Semantic Integration Workshop at the International Semantic Web Conference (ISWC), Sanibel Island, Florida, October 20, 2003, Demo paper, pp. 149-153.

Wiegand, N.; Zhou, N.; Cruz, I.; and Rajendran, A. “Querying Heterogeneous Land Use Data Over the Web”, GIScience 2002 Abstracts, M. Egenhofer and D. Mark (Eds.), Sept. 2002, pp. 207-210.

Cruz, I. F.; Rajendran, A.; Sunna, W.; and Wiegand, N. “Handling Semantic Heterogeneities Using Declarative Agreements”, ACM GIS, November 2002, pp. 168-174.

Wiegand, N. “Investigating XQuery for Querying Across Database Object Types”, SIGMOD Record,

- Volume 31, Number 2, June 2002, pp. 28-33.
- Wiegand, N., Adams, T. M., and Vonderohe, A. "OODBMS Implementation Model of a Linear Referencing System", *URISA Journal*, 1998, 10(2):36-45.
- Wiegand, N., Adams, T. M., and Vonderohe, A. "Exploring ODMG 2.0 to Define an OODBMS Implementation for a Linear Referencing Model", In *Resource Guide for Implementation of Linear Referencing Systems in Geographic Information Systems*, Bureau of Transportation Statistics, U.S. DOT, 1998.
- Wiegand, N. and Adams, T. M. "Comparative Logical and Physical Modeling in Two OODBMSs", *Applied Computing Review*, ACM Journal, 1994, 6(2):27-32.
- Wiegand, N. and Adams, T. M. "Using Object-Oriented Database Management for Feature-Based Geographic Information Systems", *URISA Journal*, (Urban and Regional Information Association), 1994, 6(1):19-34.