Chair’s Narrative

FY04-05 was another exciting and productive year for the department. The department had an outstanding presence at the 3rd International GIScience conference held at University College Park, Maryland in October 2004. Six faculty and five graduate students from the department participated in the conference. Max Egenhofer served as Program Chair. The program attracted over 400 attendees reflecting the interdisciplinary breadth of GIScience. The University of Maine tied with the University of California at Santa Barbara in being awarded three graduate student GIScience scholarships. In other notable successes, Silvia Nittel received a CAREER award from NSF this year. Harlan Onsrud was elected president of the Global Spatial Data Infrastructure Association (GSDI), a prestigious international body that oversees critical digital geospatial information issues. The University of Maine was awarded a second grant under the very competitive NSF IGERT program. Kate Beard serves as the PI on this five department collaborative program that will provide interdisciplinary PhD training in sensor science, engineering and informatics. Kate Beard, along with Mike Worboys, Tony Stefanidis and Neal Pettigrew from School of Marine Science received an SEIII Award from the National Science Foundation. In addition to students receiving GIScience scholarships many other graduate students were recipients of competitive awards and fellowships. Two students received outstanding presentation awards at the Atlantic Institute Student Research Conference in Quebec, two students were recipients of awards at the University of Maine Graduate Student Expo, and two students received professional society scholarship awards.

This year the department saw continued success in research activities. Faculty members were very active in submitted grants, submitting 13 proposals for a total of $6.5 million. Faculty in the department received research awards and contracts in the amount of $1,462,721. The amount of indirect dollars generated totaled $246,264.

Faculty were very active in their scholarly activities generating 51 publications in refereed outlets and making presentations at numerous national and international conferences that included 7 keynote addresses and 33 invited talks.

The department graduated the last undergraduate student from the Spatial Information Engineering degree. At the graduate level we graduated five Master students and three Ph.D students.

Undergraduate recruitment in Information Systems Engineering remains a challenge. We see this as a reflection of the program being unique and currently an unfamiliar degree option and thus one that will need persistent and focused marketing efforts. This year we have sent a mass mailing to prospective high school students in Maine and New England. We believe students in the wider New England region will find it attractive as the program qualifies as a New Regional program. We have spent the year working with a consultant to develop a new website for the department which we hope will serve well in attracting students.

We have also been concerned about fewer graduate applications. The numbers are still high from China and India but have dropped from European countries and South America. This year we worked on developing several recruitment initiatives particularly toward attracting PhD students.
We created a marketing CD for graduate students. We hosted a social event at GIScience to attract interested students and investigated other venues for recruiting such as the annual ESRI User Conference.

The big challenge for the forthcoming year will be the upcoming ABET review. We will have graduated our first seniors in Information Systems Engineering and thus will be able to apply for accreditation. We are proposing dual accreditation for the program in general engineering under EAC and in information systems under CAC.

**Department Overview**

**Staff**
FTE Faculty (8): Agouris, Beard, Egenhofer, Leick, Nittel, Onsrud, Stefanidis, Worboys
Instructors (1): Holden
Research faculty (1): Hornsby
Professional Staff (1): Noonan
Classified Staff (2): Kidder, Shaw
Post doctoral Associate (1) Croitoru

**Enrollments**

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**Graduations**

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**Teaching Indicators**

Fall 2004 – Courses taught and student credit hours

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**Total DEPARTMENT TOTAL**: 182 Cr. Hrs. Enroll, 378 Cr. Hrs. Total

**% Department Total**: 100%
Graduate Committees and Advising

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Grant Activity

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**Total Proposals: 13.36**

**Grants received FY05 July 2004 - June 2005**

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**Publication and Presentation Summary**

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<td>Other papers published</td>
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Presentations or other papers not published | 40  
---|---
Patents or patents filed | 1  
**Reviews**  
|  
Papers | 625  
Books | 7  
Proposals | 149

**Service Activity**

Sessions at National Meetings in which Faculty Participated (Other than paper presentations) (10)  
Professional Functions Arranged – (7)  
National and International Professional Committees Participation – (41)  
National and International Editorial Boards on which Faculty Served – (29)  
Campus-wide Committees on which Faculty Served – (20)  
Professional Workshops Presented – (5)  
Paid Consulting Assignments – (7)  
School Visits – (3)

**Individual Summary of Accomplishments**

It was a productive year for **Peggy Agouris** and the Digital Image Processing & Analysis Group, which continued to be supported by grants from the National Science Foundation and the National Geospatial Intelligence Agency, including a new subaward from NGA. These projects address various digital image analysis topics, including automated information extraction, change detection for geospatial database updates, and accuracy and modeling issues for large collections of geospatial datasets. As a result of her activities Dr. Agouris was invited to serve as program chair for the 2004 NSF Workshop on Information and Data Management. This year also saw the graduation of two of Dr. Agouris’ PhD students, Dr. Georgios Mountrakis and Dr. Sotirios Gyftakis, continuing their careers in academia and industry respectively. In addition, the group is enhanced by Dr. Arie Croitoru, our post-doctoral research associate, who makes substantial contributions to the digital image processing lab’s multifaceted activities.

Over the past year **Dr. Kate Beard** continued as Department Chair. Development of the undergraduate program in Information Systems Engineering was one priority for the year. The curriculum was modified to meet course changes in new media and computer science. Several new graduate and undergraduate recruitment efforts were initiated including development of a new SIE website. Dr. Beard was involved with the development of several new research proposals and continuation of current research projects. She and several collaborators from five different departments submitted and were awarded an IGERT grant in Sensor Science, Engineering, and Informatics. She initiated work on a new NSF collaborative grant with physical oceanography and the GoMOOS project. She continued work on gazetteer development for the Intelligent Spatial Technologies grant from the National Geospatial Intelligence Agency. She continued to serve on the executive committee overseeing the
Functional Genomics IGERT grant from NSF, a collaborative training program with biological sciences, the Jackson Laboratory and Maine Medical Center Research Institute (MMCRI). Dr. Beard served on several graduate advisory committees for Masters and PhD students within the department, on several graduate committees for students in other departments on campus, as well as examiner for two external PhD dissertations and three masters’ theses. She was an invited keynote speaker for the UK GIS Research Symposium held this year in Glasgow Scotland. She made several presentations at national and international meetings including GIScience 2004 and the CODATA International Symposium in Berlin. She served on international, national and statewide review committees and served on several campus wide committees. She taught GIS Applications and co-taught the undergraduate design course with Connie Holden in the spring semester.

During FY05, Max Egenhofer oversaw a research enterprise with active research grants totaling over $5 Mio. He graduated his 12th PhD (Dr. Jorge Campos) and co-advised to completion another two MS candidates. Dr. Egenhofer organized three international professional meetings as Program Chair, including GIScience 2004, the third meeting in a conference series that he initiated in 2000, which has become the premier scientific conference on geographic information science; the Ninth International Symposium on Spatial and Temporal Databases (SSTD 2005), and the newly initiated Conference on GeoSpatial Semantics (GeoS 2005). During summer 2004 he held an appointment as visiting faculty at the Westfälische-Wilhelms Universität in Münster, Germany. He has been appointed as visiting faculty at the University of Stuttgart in Germany. He has been appointed as Chair of the Steering Committee for the Symposium on Spatial and Temporal Databases, and chaired the Scientific Advisory Committee of Instituto de Engenharia de Estruturas, Território e Construção, Lisbon. He also served as the Chief Technology Officer of Intelligent Spatial Technologies, LLC and submitted one patent application.

Constance Holden continued working on the GenoSIS (Genome Information System) project and the Virgin Islands National Park project. She is Co-PI with Dr. John Vetelino on two projects funded by the National Science Foundation – the GK-12 project and the RET (Research Experience for Teachers). Connie taught ISE 102, ISE 201 and SIE 509 for the fall semester and ISE 112 and ISE 260 for the spring semester.

During the past year, Kathleen Hornsby has been focusing her research on topics that relate to modeling events in dynamic geospatial domains. She has graduated one masters student in the area of event ordering and currently has another masters student who will complete his thesis research (event-based notifications) in the summer 2005. These efforts have led to more ideas for research and additional proposals will be submitted on topics that have developed from this work. She was lead author or co-author on four publications accepted in refereed conference proceedings including GIScience 2004 and COSIT 2005. She has been asked to serve on the UCGIS Model Curricula Project Advisory Board.

Alfred Leick continues development of GPS-GAP courses. He has developed strategy for GPS-GAP gift account and succeeded in obtaining initial donations. He continues GPS-GAP publicity and outreach work both nationally and internationally.
Silvia Nittel is in her fourth year as an assistant professor. She continued to focus her research activities on the area of data management for ad-hoc geosensor networks. The main objective of her current work is spatial data analysis techniques for the estimation of environmental phenomena using small-scale ad-hoc sensor networks. She also extended her work to data stream management for sensor data streams and information dissemination strategies in mobile ad-hoc geosensor networks. In 2005, Dr. Nittel received an NSF CAREER award, which provides funding for 5 years and support for several PhD students. Dr. Nittel has been involved in the submission of the successful NSF IGERT program “Sensor Science Engineering and Informatics” that was submitted under the lead of Dr. Beard. The multidisciplinary PhD program will start in Fall 2005 and Dr. Nittel is involved in teaching several sections of this program as well as the co-lead lecturer on the new Sensor Testbed course. She currently supervises three PhD students and one master’s student.

Harlan Onsrud has continued to build visibility within international forums for the University of Maine and the College of Engineering. Locations where he gave invited talks included Santiago Chile, Cairo Egypt, Melbourne Australia, Columbia University and the United Nations. He continues to be active with the U.S. National Research Council currently serving on a Study Committee addressing “Confidentiality Issues Arising from the Integration of Remotely Sensed and Self-Identifying Data” and as an invited speaker for another study on “Planning for Catastrophe: A Blueprint for Improving Geospatial Data, Tools and Infrastructure”. He continued his research with graduate students on location privacy and on the commons of geographic data and services. In August 2004 he organized with Silvia Nittel the international “Location Privacy Workshop: Individual Autonomy as a Driver of Design” held on Schoodic Penninsula. In November 2004 he organized with others a state-wide conference on “Copyright, Scholarship, and the Case for Open Access: Conference on the Intellectual Commons” which was held on the University of Maine campus. In February 2005, Professor Onsrud was elected president of the Global Spatial Data Infrastructure Association (GSDI) that will continue to take him to various parts of the globe. He continued to teach and develop his courses on Information Ethics and Information Systems Law. He also began preparing new materials for a graduate course on the responsible conduct of research and a new undergraduate capstone course.

Dr. Anthony Stefanidis and his group of graduate students continued to work on motion imagery and analysis and spatiotemporal analysis, supported by grants from NSF and the National Geospatial-Intelligence Agency (NGA). The projects address image analysis in spatiotemporal applications, especially in the context of geosensor networks, with distributed optical sensors capturing fragments of dynamic events. In this direction we had a number of papers published in journals and refereed conferences, and a student graduated with her MS degree. Furthermore, this year saw the release of a co-edited book on the topic of geosensor networks.

Mike Worboys contributed to two successful research proposal submissions to the National Science Foundation and continued to work on an existing NSF project. He has hosted several visitors and further developed his relationship with the Ordnance Survey of Great Britain, bringing in funding for two other department members to do some short-term work. Mike has had several refereed journal publications and continued his activities as an international researcher.
Awards Received

Jin Guang, PhD student of Silvia Nittel, Most Innovative Paper, Atlantic Institute, Quebec, May 2005.

Kristin Eickhorst, PhD student of Peggy Agouris, received a Summer 2005 Graduate Research Fellowship.

Yohei Kurata, PhD Student of Max Egenhofer, Structure and Semantics of Arrows in Diagrams, Winner of Third Prize in the category “Engineering Posters” at UMaine’s 2005 Graduate Research Exposition.

Tony Stefanidis received a “Dean’s Award of Excellence” by the College of Engineering, University of Maine, 2004.

Harris Georgiadis, PhD student of Tony Stefanidis received the Z/I Imaging Scholarship Award from ASPRS, the American Society for Photogrammetry and Remote Sensing.

Caixia Wang, PhD student of Tony Stefanidis received a University of Maine Graduate Research Assistantship and a Summer 2005 Graduate Research Fellowship.

Harlan Onsrud was appointed by the National Research Council to the Study Panel on Confidentiality Issues Arising from the Integration of Remotely Sensed and Self-Identifying Data.

Harlan Onsrud was elected President of the Global Spatial Data Infrastructure Association, Cairo, Egypt, April 17, 2004 (http://gsdi.org)

Harlan Onsrud was an invited scholar to the University of Melbourne, June 1-18, 2005.

Jim Campbell, PhD student of Harlan Onsrud, selected as author of one of two “Best Student Papers” of 2004-2005 by the Northeast Chapter of the American Society for Information Science and Technology.

Jim Campbell, PhD student of Harlan Onsrud, took first place in the Oral Presentation category at the University of Maine Graduate Student Expo, April 2005.

Visitors Hosted by Faculty

David Caduff, Research Assistant and doctoral candidate at the University of Zürich, Switzerland, 1 week, joint work on paper submission and advising on his PhD, hosted by Max Egenhofer
Dr. Renato Barrera, retired Software Developer from Microsoft’s database group, 2 days, exploration of collaboration and adjunct appointment as graduate faculty, hosted by Max Egenhofer.

Dr. Jayant Sharma, Technical Director for Spatial Products Development at Oracle, several visits, to arrange collaborations between NCGIA and Oracle Spatial Group in Nashua, NH and joint publications, Max Egenhofer.

Dr. Yoshito Tobe, Professor, Denchi University, Tokyo, 1 day, October 2004, Invited Talk, hosted by Silvia Nittel.

Allan Doyle, CEO International Interfaces, Boston, MA, 1 day, October 2004, Invited Talk, hosted by Silvia Nittel.

Dr. Rajendra Bose, Postdoc, Edinburgh University, 2 days, October 2004, Invited Talk, hosted by Silvia Nittel.

Dr. Stephen Winter, Senior Lecturer, University of Melbourne, 2 weeks, October 24-November 7, 2004, Collaboration on Joint Research Projects, hosted by Silvia Nittel.

George Cho, Associate Professor, School of Resources, Environmental and Heritage Sciences, University of Canberra, November 6-December 31, 2004, visiting scholar on sabbatical collaborating with Harlan Onsrud.

Research and Innovation Department, Ordnance Survey of Great, Britain, 3 days, April 2005, Discussion with the research group regarding research projects, hosted by Mike Worboys.

Dr. Anthony Galton, Reader, University of Exeter, UK, April-May, 2005, Research Collaboration, hosted by: Mike Worboys.

Dr. Matt Duckham, Lecturer, University of Melbourne, Australia, 1 week, June 2005, Research Collaboration, hosted by: Mike Worboys.

**Referred Publications – Peer Reviewed (52)**

**Articles in Refereed Journals (16)**

Agouris


**Egenhofer**


**Stefanidis**


**Onsrud**


**Worboys**


**Articles in Refereed Conference Proceedings (36)**

**Agouris**


**Beard**


**Egenhofer**


Holden


Hornsby


Nittel

Onsrud


Stefanidis


**Worboys**


**Refereed Publications – Editor Reviewed (13)**

**Books Authored (5)**

**Agouris**


**Nittel**


**Stefanidis**


**Worboys**


**Book Chapters Authored (8)**

**Agouris**


Beard

Stefanidis

Non-Refereed Publications (14)

Articles in Conference Proceedings (10)

Agouris

Egenhofer

Hornsby

Onsrud

Stefanidis


Worboys

Professional and Technical Reports (2)

Stefanidis
Worboys

Book Reviews (1)

Hornsby

Miscellaneous Publications (1)

Leick
I have given publications the lowest propriety since I do not need them to further enhance my professional reputation, in particular in view of the very successful reception of the 3rd revision of my book last year. Other professional activities seem more important at this time.

Professional Presentations without Paper Published (Indicate invited talk or keynote talk) (41 – 7 keynotes)

Agouris
- Spatiotemporal Analysis of Digital Imagery, Department of Computer Science and Engineering, University of California-Riverside, December 2004.
- Accuracy-Aware Change Detection in Spatial Webs, Specialist Meeting on Spatial Webs, NCGIA, University of California, Santa Barbara, December 2004.

Beard
- From Objects to Events: an Event View, UK GIS Research Symposium, Glasgow Scotland, Invited Keynote.
Egenhofer

- Ubiquitous Spatial Computing, GeoInformatics ’05, Toronto, Canada (keynote)
- Algorithmic Challenges in Spatial Computing, WADS 2005 – Workshop on Algorithms and Data Structures, Waterloo, Canada (keynote)
- Geo-Ontometry: Beyond Geo-Ontologies, First International Workshop on Conceptual Modeling for GIS, Shanghai, China (keynote)
- Mobile Space, Spatial Cognition 2004, Frauenchiemsee, Germany (keynote)
- Going Mobile with GIS: Mobile Space, GI-days, Münster, Germany (keynote)
- A Grand Challenge for GIScience, Geoinformatics Forum, Westfälische Wilhelms-Universität Münster, July 2004 (Invited Presentation)
- GeoOntometry, Research Seminar of Oracle Spatial, Nashua, NH, October 2004 (Invited Presentation)
- Mobile Space, Research Seminar of Oracle Spatial, Nashua, NH, October 2004 (Invited Presentation)
- Towards the Geospatial Semantic Web, 2004 NGA Academic Research Program Symposium, Washington, DC, September 2004

Hornsby


Nittel

- Invited talk, ISPRS, Istanbul, Turkey, July 2004
- Invited talk, 1st South African Workshop on Sensor Web Enablement, Pretoria, March 2005
- Keynote talk, Workshop on Sensor Networks and Databases, Tokyo, Japan, May 2005

Onsrud

- Global Spatial Data Infrastructure Overview, Global Spatial Data and Information User Workshop: Development, Dissemination, and Use, CIESIN, FAO, UNEP, WHO, and CGIAR, Lamont-Doherty Earth Observatory, Columbia University, Palisades, New York, September 21-23, 2004
- Global Spatial Data Infrastructure: Where We Go From Here, 8th International Earth Sciences Congress, Santiago, Chile, October 2004
- The Global Public Commons and Marketplace in Geographic Data: A Conceptual Model for Meeting the Needs of Government, Commercial, Scientific and Nonprofit Sectors, 8th International Earth Sciences Congress, Santiago, Chile, October 2004
- Licensing Geographic Data and Services: Vision for a National Commons, Annual Meeting of the American Association for the Advancement of Science, February 20, 2005, Washington, D.C.
• Balancing Security, Access to Government Information and Privacy, Bentley Geospatial Research Seminar, Baltimore, Maryland, May 8, 2005
• Licensing Geographic Data and Services: Vision for a Global Commons and Marketplace, University of Melbourne, June 8, 2005

Stefanidis
• Mobility in Sensor Networks, International Conference on Mobile Data Management, Ayia Napa, May 2005
• Motion Tracking in Networks of Video Sensors, Army Topographic Engineering Center, Arlington, VA, February 2005
• GeoSensor Networks and Spatial Web, UCSB Specialist Meeting on Spatial Webs, Santa Barbara, December 2004

Worboys
• Representing and Reasoning About Real-World Events, Invited talk at the University of Melbourne, Australia, February 2005.
• Representing and Reasoning About Real-World Events, Invited talk at the Laval University, Quebec, Canada, March 2005.

Professional Functions Arranged (12)

Agouris
• Organized and chaired the Annual PI Workshop of the Information and Data Management Program of the National Science Foundation.

Egenhofer
• Program Co-Chair, GeoS 2005, Mexico City, 2005
• Program Co-Chair, SSTD 2005—Ninth International Symposium on Spatial and Temporal Databases, Angra dos Reis, Brazil, 2005
• Program Co-Chair, GIScience 2004, Adelphi, MD 2004
Hornsby


Nittel

- Workshop Co-Organizer, “Location Privacy”, Schoodic Peninsula, Maine, August 2004

Onsrud

- Location Privacy Workshop: Individual Autonomy as a Driver of Design, August 2004, Schoodic Peninsula
- Copyright, Scholarship, and the Case for Open Access: Conference on the Intellectual Commons, November 2004, Orono, ME
- Emerging Approaches for Expanding Access to Scientific Data, Arranged Session Track for the 2005 Meeting of the American Association for the Advancement of Science (AAAS), February 20, 2005, (http://www.aaas.org/meetings/)
- GSDI Association meetings of the Executive Committee, Board and Council, Cairo, Egypt, April 15-21, 2005

Worboys

- Department Seminar, Anthony Galton, Exeter University, UK
- Department Seminar, Matt Duckham, University of Melbourne, Australia

Sessions at National Meetings in which Faculty Participated (Other than paper presentations) (10)

Agouris


Beard

- 3rd International GIScience Conference, Adelphi, MD, October 22-24, 2004
- 19th International CoData Conference, Berlin Germany, November 7-10, 2004

Egenhofer

- Workshop on Information Systems for Earth Management, Münster, Germany, June 2005
- Workshop on Spatial Theories and their Relations, Frauenchiemsee Island, Germany, October 2004

Holden

- National Science Foundation, Engineering and Computing Education Grantee Meeting, February 16-18, 2005, Washington, D.C.

Hornsby

- Chaired session at GIScience 2004 Conference, October 20-23, Adelphi, MD.

**Nittel**

• VLDB-Workshop, “Data Management for Sensor Networks”, August 30, 2004, Toronto (PC Member)
• Workshop, “Location Privacy: User Autonomy as Driver of Design”, Schoodic Peninsula, August 2004, (Co-organizer, Speaker, Session Chair)

**National and International Professional Committees Participation (41)**

**Beard**

• US National Committee on Data for Science and Technology (CODATA) 2003-2006
• Digital Library for Earth Systems Education (DLESE), Data Access Working Group 2003-2005
• University Consortium for Geographic Information Science (UCGIS) Model Curricula Project Advisory Board

**Egenhofer**

• Chair of the Steering Committee of the Symposia on Spatial and Temporal Databases, 2005-ongoing
• Chair of the Scientific Advisory Committee, Instituto de Engenharia de Estructuras, Território e Construção, Lisbon, Portugal, 2004-2005
• Member of the Advisory Board, Geotechnologies: Information Systems for Earth Management, German Department of Education and Research (BMDF) 2001-2005
• Member of the Strategic Orientation Committee, Centre for Research in Geomatics, Université Laval, Canada, 2003-ongoing
• Program Committee Member, 17th International Conference on Scientific and Statistical Database Management—SSDBM 2005, Santa Barbara, CA, June 2005
• Program Committee Member, International Conference on Web Information Systems and Technologies—WEBIST, Miami, FL, May 2005
• Program Committee Member, GIS Plant 2005, Lisbon, Portugal, May 2005
• Program Committee Member, International Workshop on Conceptual Modeling for GIS—CoMoGIS 2004, Shanghai, China, November 2004
• Program Committee Member, 4th International Workshop on Web and Wireless Geographical Information Systems, W2GIS 2004, Goyang, Korea, November 2004
• Program Committee Member, 6th Brazilian Symposium on Geoinformatics—GeoInfo 2004, Campos do Jordão, Brazil, November 2004
• Program Committee Member, WWW/Internet 2004, Madrid, Spain, October 2004
• Program Committee Member, Spatial Cognition 2004, Frauenchiemsee Island, Germany, October 2004
• Program Committee Member, WebS 2004: Third International Workshop on Web Semantics, Zaragoza, Spain, September 2004
• Program Committee Member, Second Workshop on Spatio-Temporal Database Management—STDBM ’04, Toronto, Canada, August 2004

**Hornsby**
- University Consortium for Geographic Information Science (UCGIS) Model Curricula Project Advisory Board

**Nittel**
- PC Member, VLDB-Workshop, “Data Management for Sensor Networks”, August 2004
- PC Member, International Workshop on “Networked Sensing Systems”, California, 2005
- PC Member, International Conference, “Scientific and Statistical Database Systems”, Santa Barbara, CA, 2005
- PC, 4th International ACM Workshop on “Data Engineering for Wireless and Mobile Access (MobiDE’05)”, in conjunction with SIGMOD, Baltimore, MN, June 12, 2005
- PC, “Geosensor Networks – From Research to Applications”, June 23-24, 2005, Münster GI-Days, Germany

**Onsrud**
- Served as external PhD dissertation reviewer for Mathew Warnest, University of Melbourne
- External reviewer for Lea Shanley, PhD candidate, University of Wisconsin

**Worboys**
- National Science Foundation Panelist
- UK Engineering and Physical Sciences Council, Research Proposal Reviewer
- Program Chair (joint) of the International Schloss Dagstuhl on Computational Cartography, Germany, 2003, 2005
- Program Chair (joint with M. Goodchild and A. Camara), GIS Planet, Lisbon, Portugal, 2005
- UCGIS Model Curricula project Advisory Board 2005-2007
- Program Committee, Conference on Spatial Information Theory 2005
- Program Committee, International Symposium on Large Spatial Databases
- Program Committee, ACM International Workshop on Advances in Geographic Information Systems, 2005
- Program Committee, International Symposium on Spatial Data Handling, 2004
- Program Committee, International Symposium on Spatial Data Quality, 2005
- Program Committee, International Conference, GIScience 2004
- Program Committee, Special Track on Spatiotemporal Reasoning, FLAIRS 2001, 2004
- Program Committee, International Schloss Dagstuhl on Computational Cartography 2005
- Program Committee, International Symposium on Spatial-temporal Modeling, Spatial Program Committee, Reasoning, Spatial Analysis, Data Mining and Data Fusion, Beijing, China, 2005
- Program Committee, 1st International Workshop on Conceptual Modeling for GIS (CoMoGIS 2004), Shanghai, China, 2004
- Program Committee, 2nd Workshop on Spatio-Temporal Database Management – STDBM’04, (co-located with VLDB 2004), Toronto, Canada, 2004
• Program Committee, 1st International Conference of Geospatial Semantics, Mexico City, 2005

**National and International Editorial Boards on which Faculty Served (29)**

**Agouris**
- Member of the Article Review Board, URISA (Urban and Regional Information Systems Association) Journal
- Chair of the Information and Data Management PI Workshop, October 2004, Boston, MA
- Program Committee Member for National Conference on Digital Government Research 2005, May 2005, Atlanta, GA
- Program Committee Member for ISPRS Workshop on “High Resolution Earth Imaging for Geospatial Information”, May 2005, Hannover, Germany
- Program Committee Member for International Workshop on Geographic Hypermedia, April 2005, Denver, CO

**Beard**
- Editorial Board of URISA Journal

**Egenhofer**
- Editorial Board Advisor, GeoInformatica, 2002-ongoing
- Member of the Editorial Board, Diagrams, 2002-ongoing
- Member of the Editorial Board, Annals of the Association of American Geographers, 2000-ongoing
- Member of the Editorial Board, International Journal of Applied Earth Observation and Geoinformation, 1998-ongoing
- Member of the Editorial Board, Journal of Spatial Cognition and Computation, 1997-ongoing
- Member of the Editorial Board, Transactions in GIS, 1996-ongoing
- Member of the Editorial Board, International Journal of Applied Software Technology, 1994-ongoing
- Member of the Article Review Board, URISA Journal, 2000-ongoing
- Member of the Panel of Reviews, The West Indian Journal on Engineering, 2004-ongoing

**Leick**
- Editor-in-Chief of GPS Solutions and managing the editorial board of 30 members, Springer Verlag. Listed by ISI’s Science Citation Index (SCIE) and Current Contents/Physical, Chemical and Earth Sciences.

**Stefanidis**
- Program Committee Member for GI-Days: Sensors and Geographic Networks, Muenster, Germany, June 2005
- Program Committee Member for National Conference on Digital Government Research 2005, May 2005, Atlanta, GA
- Program Committee Member for NSF Information and Data Management PI Workshop, October 2004, Boston, MA
- Program Committee Member for Data Management for Sensor Networks (DMSN 2004), in conjunction with VLDB’04, August 2004, Toronto
- Program Committee Member for ACM GIS 2004, November 2004, Washington DC

**Worboys**
- Oxford University Press Spatial Information Science Series
- International Journal of Geographical Information Systems, Taylor and Francis
- Transactions on GIS, Longmans
- GeoInformatica, Kluwer
- Computers in Environmental and Urban Systems, Pergamon Press
- Cartography and Geographic Information Science
- URISA Article Review Board

**Campus-wide Committees on which Faculty Served (20)**

**Agouris**
- Search Committee for Chair, Department of Spatial Information Science & Engineering
- Search Committee for Faculty, Department of Mechanical Engineering
- Faculty Senate
- College of Engineering Research Council
- Graduate Board

**Beard**
- College of Engineering Executive Committee
- Functional Genomics Executive Committee
- Electrical Engineering Faculty Search Committee
- Ad Hoc Committee for Review of Promotion and Tenure Process
- University Research Council
- University Strategic Planning Committee

**Egenhofer**
- Marketing Plan’s Goal Team for Graduate Education, 2004-ongoing

**Holden**
- Surveying Engineering Technology Search Committee

**Leick**
- System-wide Committee: Strategic Direction 8 – Higher Education Park.
- Campus-wide Committee: Strategic Direction 3 – Distance Education/Outreach Strategic Planning Subcommittee.
Nittel
- Recruitment/Admissions Committee for the Interdisciplinary PhD in Functional Genomics Program, Spring 2005

Onsrud
- Faculty Senate
- Graduate Education Strategic Planning Committee

Stefanidis
- College of Engineering Academic Council

Worboys
- University Research Council

Workshops Presented (5)

Beard
- Engineering EXPO, February 26, 2005
- Toward Improved Visualization of Uncertain Information, March 3-5, 2005, Washington, DC

Egenhofer
- Principles of GIS and Spatio-Temporal Databases for Environmental Information, Excellence Course on Engineering Geology, Geotechnical and Planning, Bari, Italy, 2005

Hornsby

Worboys
- Workshop on Dynamic GIS (with Kathleen Hornsby) for GIS Planet 2005, Lisbon, Portugal, June 2005

Review of Papers (625)

Agouris
- IEEE Transaction on Knowledge and Data Engineering – IEEE TKDE (2)
- Photogrammetric Engineering and Remote Sensing – PE&RS (3)
- International Journal of Geographical Information Science – IJGIS (1)
- Transactions in GIS (2)
- Data and Knowledge Engineering Journal – DKE (1)
- Geomatica (2)
- Journal of Computing in Civil Engineering (1)
- Journal of ISPRS (1)
- Photogrammetric Record (1)
• Journal of e-Government (1 full journal issue)
• Journal of Electronic Imaging (1)
• Journal of Systems and Software (1)
• Computational Intelligence (1)
• ACM GIS 2005 Conference (8)
• ACM Transaction on Database Systems – TODS, 2005 (1)
• SPIE Conference
• ISPRS CMRT’05 Conference (5)

**Beard**
• Geographic Analysis (1)
• Geomatica (1)
• GIS Transactions (1)
• IJGIS (2)
• URISA Journal (1)

**Egenhofer**
• GeoInfo (4)
• Spatial Cognition (2)
• JAG (1)
• TG (2)
• IJPRS (1)
• WEBIST (3)
• WebS (1)
• SSDBM (4)
• GISPlanet (9)
• SSTD (72)
• COSIT (5)
• WWW-Internet (5)
• W2GIS (4)
• GiScience (70)
• GiScience (188)

**Hornsby**
• Reviewed 37 papers and 11 abstracts

**Leick**
• External Examiner: 3 doctoral dissertations (Australia, Canada, Hong Kong)
• External Evaluator: 3 faculty promotions (US, Australia, England)

**Nittel**
• Computer Journal, July/August 2004 (1)
• Data & Knowledge Engineering (DKE) Journal, September 2004 (1)
- International Workshop on Location and Context Awareness (LoCA 2005), Oberpfaffenhofen, Germany (4)
- PC, “Geosensor Networks – From Research to Applications”, June 23-34, 2005, Münster GI-Days, Germany, (3)
- PC, 4th International ACM Workshop on Data Engineering for Wireless and Mobile Access (MobiDE’05), in conjunction with SIGMOD, Baltimore, MD, June 12, 2005, (14)
- PC, ACM-GIS 2005, Berlin, Germany, (9)

**Onsrud**
- Transactions in GIS (1)
- AAG Annals (1)
- URISA Journal (1)
- Geomatica (1)
- IJGIS (1)
- CAGIS (1)

**Stefanidis**
- Photogrammetric Engineering and Remote Sensing – PE&RS (2)
- Transactions in GIS (1)
- Geomatica (1)
- GI-Days: Sensors and Geographic Networks, Muenster, Germany, (3)
- National Conference on Digital Government Research 2005, (3)
- ACM GIS 2004 (4)

**Worboys**
- Reviewed over 100 papers

**Review of Books (7)**

**Agouris**
- Book proposals for Taylor & Francis (1)

**Egenhofer**
- Morgan Kauffmann (1)
- CRC (1)
- Springer (1)

**Hornsby**
- Reviewed 1 book

**Stefanidis**
- Book proposals for CRC Press and Taylor & Francis (2)
Review of Proposals (149)

Agouris
- National Science Foundation (1)
- State of Indiana 21st Century Research and Technology Fund Program (4)
- Batelle (1)
- US Civilian Research and Development Foundation (3)

Beard
- NSF Panel – January 2005 (18)
- NSF Panel – March 2005 (18)
- NSF Proposals (1)
- External Thesis Review: University of Melbourne (1)
- External Thesis Review: ETH Zurich (1)
- External Thesis Review: University of West Indies (3)

Egenhofer
- Canada Research Chairs (1)
- NSF (1)
- NSERC (1)
- GEOID (25)

Hornsby
- Reviewed 1 proposal

Nittel
- NSF Panel – March 2005 (9)

Stefanidis
- National Science Foundation (12)
- German Research Foundation (8)

Worboys
- Reviewed 30 proposals

Paid Consulting Assignments (7)

Agouris
- Milcrod, LLC

Egenhofer
- GEOID Network, Laval University, Quebec, Canada
- Instituto de Engenharia de Estruturas, Território e Construção, Lisbon, Portugal
Hornsby
- Ordnance Survey of Great Britain

Stefanidis
- Milcord, LLC

Worboys
- External Assessor for MS in Computer Science, Brock University, Canada

School Visits (3)

Beard
- Hampden Academy Tour – February 4, 2005

Holden
- Bangor High School
- Oxford Hills High School

Undergraduate Degrees Awarded

Amber (Howell) Poulin
Placement – Not Currently Looking

Graduate Degrees Awarded

Masters – Project Option

Elizabeth Crews
Advisor – Kate Beard
Project - 3D Scene Visualization of Jordan Pond
Placement – National Imagery and Mapping Agency
Ugrad Degree - Geography

Rachel Keats
Advisor – Kate Beard
Project – Developing a Gazetteer as a Geographic Knowledgebase: Narraguagus River Implementation
Project – Placement – Woodward & Curran
Ugrad Degree – Entomology
Masters – Thesis

**Suzannah Hall**  
Advisor – Kathleen Hornsby  
Thesis – Generating Linear Orders of Events for Geospatial Domains  
Placement – Maine Department of Transportation  
Ugrad Degree – Spatial Information Engineering

**Caixia Wang**  
Advisor – Tony Stefanidis  
Thesis – Using Linear Features For Aerial Image Sequence Mosaicking  
Placement – SIE Graduate School (Ph.D)  
Ugrad Degree – Surveying Engineering

**Rui Zhang**  
Advisor – Mike Worboys  
Thesis – Hierarchies for Event-Based Modeling of Geographic Phenomena  
Placement –  
Ugrad Degree – Computational Mathematics

Ph.D Degrees

**Jorge Campos**  
Advisor – Max Egenhofer  
Thesis – A Data Model for Exploration of Temporal Virtual Reality Geographic Information Systems  
Placement – Assistant Profess, Universidade Salvador UNIFACS, Brazil  
Ugrad Degree – Civil Engineering

**Georgios Mountrakis**  
Advisor – Peggy Agouris  
Thesis – Context-Specific Preference Learning of One-Dimensional Quantitative Geo-Spatial Attributes Using a Neuro-Fuzzy Approach  
Placement – United States Geological Survey  
Ugrad Degree - Engineering

**Sotirios Gyftakis**  
Advisor – Peggy Agouris  
Thesis – Image-Based Change Detection of Geospatial Objects Using Positional Uncertainty  
Placement – Bantrel Co.  
Ugrad Degree – Electrical and Computer Engineering