1. Programmatic Initiatives
All of the course proposals for the new undergraduate program in Information Systems Engineering were completed and approved by the Undergraduate Program Curriculum Committee. This new undergraduate program was also approved as a New England Regional Program. An Undergraduate Degree Reform Implementation grant was submitted to the National Science Foundation.

2. Research and Scholarship Summary
This year the department saw continued success in research activities. Faculty members were very active in submitted grants, submitting 20 proposals for a total of $10.7 million. Faculty in the department were the recipients of research awards and contracts in the amount of $1,420,815. The amount of indirect dollars generated totaled $161,529. Awards were received from the National Science Foundation, the US Department of Defense, NASA, and the US Department of Interior.

Faculty generated refereed and non-refereed publications as indicated in the following table. Faculty made presentations at numerous national and international conferences including 3 keynote addresses and 8 invited talks.

| Peer reviewed journal articles published | 12 |
| Peer reviewed conference proceedings published | 26 |
| Peer reviewed book chapters published | 11 |
| Peer reviewed books published | 5 |
| Other papers published | 14 |
| Presentations or other papers not published | 33 |

Several graduate students were recipients of competitive awards and fellowships: Kristin Eickhorst, PhD candidate working with Dr. Peggy Agouris, received the Robert E. Altenhofen Memorial Scholarship Award from the American Society for Photogrammetry and Remote Sensing (ASPRS). Michael Hendricks, PhD candidate working with Max Egenhofer, received 2nd place ($150) in the College of Engineering Poster Category at the University of Maine Graduate Exposition. Inga Mau, Master candidate working with Max Egenhofer, received 2nd
place in the College of Engineering Poster Category at the University of Maine Graduate Exposition. James Campbell, a PhD student in the department working with Harlan Onsrud was the recipient of the best presentation award at the University of Maine Graduate Exposition.

The department graduated the last group of SIE undergraduates (7) from the program this year. The majority of these students had employment offers or had been accepted to graduate school at the time of their graduation. The department graduated eight Master students and two Ph.D students and four students completed the Graduate Certificate in Geographic Information Systems

3. **Alumni Initiatives and Support**

Alumni lists for the department were reorganized to reflect the name change and split of the Land Surveying component of the program to the SET Surveying Engineering Technology Program.

4. **Special Recruitment Initiatives**

We made a special effort to target undeclared engineering students. Additionally letters and our Information Systems Engineering brochures were mailed to prospective high school students using mailing lists from multiple sources.

5. **Progress on Diversity Issues**

None to report

6. **Summary of Anticipated Challenges**

Recruitment to the new undergraduate program continues as a significant challenge. The department faces the challenge of marketing a new program that is unique in the country. The graduate program has also faced declining applications particularly from foreign students facing more stringent visa restrictions. New marketing and recruitment initiatives are planned particularly targeting PhD students. A collaborative IGERT pre-proposal has been submitted to support attraction of US PhD students in the area of Sensor Science, Engineering and Informatics.

**Individual Summary of Accomplishments (July 1, 2003 – June 30, 2004)**

This year Dr. Peggy Agouris and the Digital Image Processing and Analysis group continued their innovative work on image-based automated information extraction and change detection, as well as spatiotemporal modeling and uncertainty issues in large collections of geospatial datasets. Dr. Agouris’ research projects are supported by grants from the National Science Foundation (NSF) and the National Geospatial-Intelligence Agency (NGA). As a result of her activities in one of her NSF projects, Dr. Agouris was invited to serve as Chair of the 2004 National Science Foundation Information and Data Management Principle Investigator Workshop. Among other multifaceted activities this year, Peggy also organized a successful NSF-sponsored workshop on Next Generation Geospatial Information. In addition, a new post-doctoral researcher, Dr. Arie Croitoru, jointed Dr. Agouris’ group from York University, Canada.
Over the past year Dr. Kate Beard continued as department chair. Installation of the new undergraduate program in Information Systems Engineering was a priority for the year. A range of new courses were developed and approved for this program and it was approved as a New England Regional Program. Dr. Beard also oversaw reorganization of the graduate programs. Several new courses were added at the graduate level and courses were reorganized to align with the new undergraduate program. Regular progress reports were instituted for the graduate program along with a series of regular information meetings for graduate students. In her research activities she was involved with the development of several research proposals. She continued work on gazetteer development under the Intelligent Spatial Technologies grant from the National Geospatial Intelligence Agency. Other research and education activities this year involved a number of collaborative initiatives. Dr. Beard was Co-PI with Dr. Mary Jane Perry from Marine Science on a NSF funded 5-week graduate summer workshop. She collaborated with biological sciences, the Jackson Laboratory and MMCRI on the Functional Genomics IGERT grant from NSF. She was PI on a successful IGERT preproposal in collaboration with four other departments to develop an interdisciplinary PhD in Sensor Science, Engineering, and Informatics. 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 advisor for an external PhD dissertation. She was an invited speaker for the Long Term Ecological Research (LTER) All Scientists meeting in Seattle Washington in September and was the featured speaker for the National Academy CODATA committee meeting in Washington DC in June. She served on international, national, and statewide review committees and served on several campus wide committees. She taught Spatial Analysis in the fall semester and GIS Applications in the spring.

During FY04, Dr. Max Egenhofer oversaw a research enterprise with six active research grants as PI or Co-PI, with funding from the National Science Foundation (2), the National Geospatial-Intelligence Agency (3), and the national Institute of Environmental Health (1), totaling over $10 million. He graduated one PhD student (Michael Hendricks) who will take on an academic position at West Point. He also mentored a post-doc (Lars Kulik) who moved on to a faculty position. Dr. Egenhofer organized two professional meetings as Program Chair, including GIScience 2004, the third meeting in a conference series that he initiated in 2000 and which has become the premier scientific conference on geographic information science. He published two refereed journal articles and six papers in fully refereed conference proceedings. He was the keynote speaker at six national and international conferences, and gave another three invited presentations. In the Spring semester he was on sabbatical leave, including an appointment as visiting faculty at the Westfälische-Wilhelms Universität in Münster, Germany. He also serves as the Chief Technology Officer of Intelligent Spatial Technologies, LLC, for which he authored the technical part of a successful NSF-SBIR proposal for the iPointer.

Dr. Constance Holden continued working on the GenoSIS (Genome Information System) project and began working on a virtual reality model and GIS for virtual preservation of a decaying sugar plantation in the Virgin Islands National Park for which she received travel funds from the University of Maine, Faculty Research Funds Committee. She accompanied and supervised eight undergraduates in the data collection process at the Virgin Islands National Park. Dr. Holden is a Co-PI with Dr. John Vetelino on two projects funded by the National Science Foundation, the GK-12 project and the related Research Experience for Teachers (RET).
As part of the GK-12 project she advised a group of Bangor High School students in the creation of a GIS for homeland security. She was involved in several departmental recruiting efforts. This year she organized a GIS activity for the Expand Your Horizons Conference and assisted with CAD Camp. She taught ISE 102 and SIE 509 for the fall semester and ISE 112 and SIE 460 for the spring semester.

During the past year, Dr. Kathleen Stewart Hornsby continued to conduct research in the areas of spatio-temporal reasoning and data modeling including topics relating to modeling spatial objects over multiple granularities and event-based modeling. She continued as PI of a research grant on spatio-temporal panning and zooming funded by the National Geospatial-Intelligence Agency. She has been collaborating on a grant from NIH on spatio-temporal GIS for environmental health science that finished in Spring 2004. During this year, Kathleen has served or has been asked to serve on the program committee for seven international conferences and workshops. She was co-editor of a special journal issue of Spatial Cognition and Computation on event-based approaches for geographic information science based on papers submitted to a previously held international workshop. She is currently the primary co-advisor for 2 M.S. students in the Department of Spatial Information Science and Engineering. Kathleen currently serves on the graduate committees of 3 M.S. (thesis) students and 3 Ph.D. students as well as one Ph.D. student in Biological Sciences. She served on the committee on one M.S. student who completed his degree in Fall 2003 and 2 Ph.D. students who defended their dissertations in Spring 2004. Kathleen taught SIE 550 in Fall 2003, which was web-streamed and offered as a distance course for graduate students. This course is also a required course for the MSIS program, an interdisciplinary program between SIE and the College of Business. In Spring 2004, she taught SIE 560 and gave an independent study course on event-based modeling for a graduate student during Summer 2004.

In FY04, Dr. Silvia Nittel focused her research activities in 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. In 2004, Dr. Nittel successfully published her previous research work on a data streaming approach for compressing massive remote sensing earth science data sets in international journals and refereed conference proceedings. In Fall 2003 she was the General and Program Co-Chair of the First International Workshop on Geosensor Networks and in Spring 2004 she served as a Co-Organizer of the Invited Workshop on Location Privacy which brought together people from the technical, social, legal, and ethics community to discuss issues arising from novel location sensing technology. In FY 2004, Dr. Nittel published two articles in refereed journals, two articles in fully refereed conference proceedings and two books. She is a Co-PI on a NGA, a NASA, and an IGERT award at the University of Maine. She currently supervises three Ph.D. students and one master’s student. Dr. Nittel prepared a new course, SIE 556 Information System Architecture. She continues to teach SIE 555 Spatial Database Systems and the database section of the MAT 500 Computational Genomics course.

Dr. Harlan Onsrud
In the Fall of 2003 and the Spring of 2004 Professor Onsrud continued to teach and develop his courses on Information Ethics and Information Systems Law. His research with graduate students focused on information privacy issues, cadastral information systems, and a commons
for geographic data. In addition to his teaching and research responsibilities, Professor Onsrud was heavily involved in accomplishing studies and hosting workshops for the National Research Council of the National Academies of Science. A landmark report prepared primarily during this period is titled "Licensing Geographic Data and Services" and continues to be a best seller Mapping Science Committee publication. In January 2004 in Bangalore India, Professor Onsrud was elected vice-president of the Global Spatial Data Infrastructure Association (GSDI). During the past reporting period he wrote four research proposals as PI or co-PI and received funding for one.

**Dr. Anthony Stefanidis** and his group of graduate students continued to work on motion imagery analysis, supported by grants from NSF and the National Geospatial-Intelligence Agency (NGA). These projects address virtual modeling, image analysis in spatiotemporal applications, as well as modeling and positioning issues related to the use of unmanned aerial vehicle (UAV) imagery in dynamic environments. In addition to these efforts, Dr. Stefanidis co-organized two NSF-funded workshops, one in Portland, Maine on Geosensor Networks and another in Budapest, Hungary on US-EU Collaborations in the Field of Digital Government. In addition to these efforts, Dr. Stefanidis participated in a newly awarded NSF grant that will allow application of spatiotemporal analysis expertise on oceanographic data in the Gulf of Maine.

**Dr. Michael Worboys** main activities during this period were proposal writing (3 submitted to NSF and 2 to NGA), journal and refereed conference articles, acting as program chair for a major international scientific conference (COSIT), and finalizing the 2nd edition of his textbook. Some of these activities will show results in the next financial period (e.g., the book has now been published, and several journal and conference papers have been accepted). Mike received his first NSF research award, recruited a student, and has begun work. During the year, Mike gave several keynote addresses in the USA and internationally. He taught two courses, SIE 598 Formal Foundations of Geographic Information Science and SIE 565 Reasoning with Uncertainty in Spatial Information Systems.

**Awards Received**

Kristin Eickhorst, PhD candidate working with Dr. Peggy Agouris, received the Robert E. Altenhofen Memorial Scholarship Award from the American Society for Photogrammetry and Remote Sensing (ASPRS).

Dr. Anthony Stefanidis received the Early Career Research Award by the University of Maine, College of Engineering.

Dr. Michael Worboys received the Dean’s Award of Excellence by the University of Maine, College of Engineering.

Lars Kulik, Post-Doc with NCGIA received the UCGIS Young Scholars Award.

Michael Hendricks, PhD candidate working with Max Egenhofer, received 2nd place ($150) in the College of Engineering Poster Category at the University of Maine Graduate Exposition.
Inga Mau, Master candidate working with Max Egenhofer, received 2nd place in the College of Engineering Poster Category at the University of Maine Graduate Exposition.

Visitors Hosted by Faculty
Paul Fonteyne, Provost, University of Massachusetts-Boston, November 2003, host: Max Egenhofer. Discuss success academic GIS programs.

Yong Tian, Jack Looney, Department of Earth and Geographic Sciences, University of Massachusetts-Boston, November 2003, host: Max Egenhofer. Discuss success academic GIS programs.

Chris Parker, Glen Hart, Mark Pendlington, and Joe Greenwood, Research and Innovation Department, Ordnance Survey of Great Britain, host: Mike Worboys, 3 day visit in January. Discussion with the Department for future research collaborations.

Alexandros Labrinidis, University of Pittsburg, Computer Science Department, host: Silvia Nittel, invited talk.

Undergraduate Degrees Awarded
Glenn Griswold - December
Jeffrey McCooey - August
Christopher Nelson - May
Aaron O’Brien - August
John Parkin IV - May
Kenton Williams - May
Erin Young - May

Graduate Degrees Awarded
Certificate in Geographic Information Systems
Xiumei Fang – August
David Gould – December
Brandon Sackmann – May
Erin Simons – May

Master’s (Non-Thesis)
Jacob Griffis
Advisor – Harlan Onsrud
Placement – TVGA Consultants
Ugrad Degree - Surveying
**Inga Mau**  
Advisor – Max Egenhofer  
Placement –  
Ugrad Degree – Nature

**Richard Monteiro**  
Advisor – Kate Beard  
Placement –  
Ugrad Degree – Spatial Information Engineering

**Master’s (Thesis)**

**Anuket Bhaduri**  
Title: User Controlled Privacy Protection in Location-Based Services  
Advisor – Harlan Onsrud  
Placement – GeoSpatial Technologies, Inc.  
Ugrad Degree – Business Administration

**Farhan Faisal**  
Title: Query-By-Pointing: Algorithms and Pointing Error Compensation  
Advisor – Max Egenhofer  
Placement – Geographic Data Technology (GDT)  
Ugrad Degree - Engineering

**Christopher Frank**  
Title: An Egocentric Spatial Data Model For Intelligent Mobile Geographic Information Systems  
Advisor – Max Egenhofer  
Placement – Intelligent Spatial Technologies, LLC  
Ugrad Degree – Spatial Information Engineering

**Chakravarthy Narnindi Sharad**  
Title: Public Commons For Geospatial Data, A Conceptual Model  
Advisor – Harlan Onsrud  
Placement – Attic Technologies, Inc  
Ugrad Degree – Technology

**Markus Wuersch**  
Title: Perceptual Sketch Interpretation  
Advisor – Max Egenhofer  
Placement – Intelligent Spatial Technologies, LLC  
Ugrad Degree – Engineer HTL
Ph.D Dissertation

**Michael Hendricks**
Title: Structuring a Wayfinder’s Dynamic and Uncertain Environment  
Advisor – Max Egenhofer  
Placement – Professor in Geospatial Information Science, United States Military Academy, West Point  
Ugrad Degree – Civil Engineering

**Paul Schroeder**
Title: Spatial Aspects of Metaphors For Information: Implications For Polycentric System Design  
Advisor – Harlan Onsrud  
Placement – Common Coordinates  
Ugrad Degree – Political Science

Refereed Publications – Peer Reviewed
Articles in Refereed Journals – (12)

**Agouris**


S. Dawes, V. Gregg, P. Agouris (Guest Eds.), Special Issue on Digital Government Research, Social Science Computer Review, Vol. 22, No. 1.

**Egenhofer**


**Hornsby**
Nittel


Stefanidis


Worboys


Articles in Refereed Conference Proceedings – (26)

Agouris


**Egenhofer**


L. Kulik and M. Egenhofer, Linearized Terrain: Languages for Sillhouette Representation, *Conference on Spatial Information Theory (COSIT’03)*, Kartause Ittingen, Switzerland, W. Kuhn, M. Worboys


**Hornsby**


**Nittel**

Nittel, S., Leung, K., Parallelizing Clustering of Geoscientific Data Sets Using Data Streams, International Conference on Scientific and Statistical Data Base Management (SSDBM 2004), Santorini, Greece, June 2004.

**Onsurd**

**Stefanidis**


Refereed Publications – Editor Reviewed
Book Authored – (6)

Hornsby

Nittel


Onsrud

Stefanidis

Worboys

Book Chapters Authored – (11)

Agouris


Egenhofer

**Onsrud**


**Stefanidis**


**Worboys**


**Non-Refereed Publications**

*Articles in Conference Proceedings – (6)*

**Agouris**


**Stefanidis**


**Professional and Technical Reports – (2)**

**Agouris**


**Nittel**


**Miscellaneous Publications – (6)**

**Agouris**


**Egenhofer**


**Hornsby**

**Nittel**

**Stefanidis**

**Professional Presentations without Paper Published**
(Indicate invited talk or keynote talk) – (33)

**Agouris**

**Beard**

*Information Integration Through Events*, LTER All Scientists Meeting, Seattle, WA, September 2003. (Invited talk)


**Egenhofer**
*Going Mobile with GIS: Mobile Space*, GI-days, Münster, Germany, July 2004, (Keynote).


Multi-Representation Spatial Databases, Technology for a National GeoDatabase Infrastructure, Siena, Italy, September 2003, (Keynote).


Topological Reasoning in Geographic Space, International Spatial Cognition Summer Institute, Bad Zwischenahn, Germany, August, 2003, (Tutorials).


Holden

Hornsby

Nittel
Efficient Analysis of Geospatial Data Using Distributed Motion Imagery, NIMA site visit, University of Maine, August 6, 2003.


Sensor Networks Meet Spatial Data Handling, Dagstuhl Seminar on Computational Cartography, Wadern, Germany, September 30, 2003 (Invited Talk).


Stefanidis
Spatiotemporal Information Extraction Using Motion Imagery, ER’2003 Conference, Chicago, IL, October 2003, (Invited Talk).


Worboys
Modelling Spatiotemporal Events, Schloss Dagstuhl Specialist Meeting on Computational Cartography and Spatial Modelling, Germany, October 2003, (Invited Talk).


Professional Functions Arranged – (12)

Agouris
Organized a workshop sponsored in part by the National Science Foundation on Next Generation Geospatial Information, Boston, MA, October 2003.

Egenhofer

**Nittel**
Program and General Co-Chair, *Conference on Scientific and Statistical Data Base Management (SSDBM)*, Cambridge, MA, July 2003.


Steering Committee Member for SIAM Workshop on *Data Mining in Computationally Constrained Environments*, Orlando, April 2004.

Steering Committee Member, 16th International Conference *Scientific and Statistical Data Base Management*, Santorini, June 2004.

Sensor-Based Information Systems Brown Bag at SIE, University of Maine.

**Stefanidis**


**Worboys**
SIE Department Seminars: Alex Klippel (Hamburg), Sharon Oviatt (Oregon and MIT).

**Sessions at National Meetings in which Faculty Participated**
(Other than Paper Presentations) – (21)

**Agouris**
Session Chair (Multiple Sessions), *Symposium of the International Society of Photogrammetry and Remote Sensing (ISPRS)*, Istanbul, Turkey, July 2004.


**Beard**
15th International Scientific and Statistical Database Management (SSDBM), Cambridge, MA, July 2003.
LTER All Scientists Meeting, Seattle, WA, September 2003.

Egenhofer

Hornsby
Chair, Final Panel, International Conference on Spatial Information Theory, COSIT’03, Kartause Ittingen, Switzerland, September 2003.

Nittel
General and Program Chair, Conference on Scientific and Statistical Database Systems, July 2003.

General and Program Co-Chair, Workshop on Geo Sensor Networks, Portland, ME, October 2003.

Symposium Spatial and Temporal Databases (SSTD), Santorini, Greece, July 2003.

Very Large Data Bases (VLDB), Berlin, Germany, September 2003.

Talks by David Maier, Mike Stonebraker, Alon Halevy, New England Database Society (NEDS), Brandeis University.


ACM SIG Management of Data (SIGMOD), June 2004.

Stefanidis


Participant, Symposium on Spatial and Temporal Databases, Santorini, July 2003.

Worboys
University Consortium on GIS (UCGIS) Specialist Meeting on Spatial Information Visualization, Washington, DC, November 2003.
National and International Professional Committees Participation – (46)

Agouris
- Workshop Chair, Next Generation Geospatial Information, Boston, MA, October 2003.
- Chair, Working Group on Image-Based Geospatial Databases for the International Society for Photogrammetry and Remote Sensing (ISPRS).

Beard
- US National Committee on Data for Science and Technology (CODATA), 2003-2006.

Egenhofer
- Member of the UCGIS Research Awards Committee, 2004.
- Member of the Scientific Advisory Committee, Instituto de Engenharia de Estructuras, Território eConstrução, Lisbon, Portugal, 2004-2005.
- Member of the Strategic Orientation Committee, Centre for Research in Geomatics, Université Laval, Canada, 2003-ongoing.
- Member of the External Review Team of the OTB Research Institute for Housing, Urban and Mobility Studies, Delft University of Technology, The Netherlands, 2003.
- Member of the National Research Council’s Committee on Beyond Mapping: The Challenges of New Technologies in the Geographic Information Sciences, 2002-2004.
- Member of the Advisory Board, Information Systems for Earth Management, GeoTechnologies Program of the German National Science Foundation (DFG) and the German Department of Education and Research (BMDF), 2002-ongoing.
- Member of the College of Reviewers for the Canada Research Chairs Program, 2000-ongoing.
- Program Committee Member, Sixth Brazilian Symposium on Geoinformatics—GeoInfo 2004, Campos de Jardão, Brazil, November 2004.
- Program Committee Member, 1st International Workshop on Conceptual Modeling for GIS—CoMoGIS 2004, Shanghai, China, November 2004.
- Program Committee Member, Spatial Cognition 2004, Frauenchiemsee Island, Germany, October 2004.
- Program Committee Member, WWW/Internet 2004, Madrid, Spain, October 2004.
- Program Committee Member, Third International Workshop on Web Semantics, Zaragoza, Spain, September 2004.
- Program Committee Member, 2nd Workshop on Spatio-Temporal Database Management—STDBM’04, Toronto, Canada, August 2004.
- Program Committee Member, UbiGIS 2004—First International Workshop on Ubiquitous GIS, Gävle, Sweden, June 2004.
- Program Committee Member, First Workshop on Databases In virtual Organizations (DIVO 2004), Paris, France, June 2004.
- Program Committee Member, ISSDQ 2004—Third International Symposium on Spatial Data Quality, Bruck an der Leitha, Austria, April 2004.
- Program Committee Member, ACM GIS 2003, New Orleans, LA, November 2003.
- Program Committee Member, GEOPRO 2003: International Workshop on Semantic Processing of Spatial Data, Mexico City, Mexico, November 2003.
- Program Committee Member, Fifth Brazilian Symposium on Geoinformatics—GeoInfo 2003, Caxambu, Brazil, October 2003.
- Program Committee Member, COSIT 2003: Conference on Spatial Information Theory, Ittingen, Switzerland, September 2003.
- Program Committee Member, Semantic Web and Databases, Berlin, Germany, September 2003.

**Hornsby**

**Nittel**
- PC Member for SIAM Workshop on Data Mining in Computationally Constrained Environments, Orlando, April 2004.
- PC Member, ACM GIS 2004.
- PC Member of VLDB Workshop on Data Management for Sensor Networks, Toronto, September 2004.

**Stefanidis**
- Program Committee, Workshop on Data Management for Sensor Networks in conjunction with VLDB, Toronto, August 2004.
- Workshop Co-Chair, GeoSensor Networks, Portland, ME, October 2003.
• Chair, Working Group on Quick Response and Distributed Computing for Close-Range Applications for the International Society for Photogrammetry and Remote Sensing (ISPRS).

Worboys
• Program Co-Chair, International Conference on Spatial Information Theory, Zurich, 2003.
• Program Chair, International Schloss Dagstuhl on Computational Cartography, Germany, 2003.
• National Science Foundation Panelist.

National and International Editorial Boards on Which Faculty Served – (19)

Agouris
• URISA Journal, Review Board

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 of Engineering, 2004-ongoing

Stefanidis
• URISA Journal, Review Board

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 – (21)

**Agouris**
- Faculty Senate
- Faculty Senate Executive Committee
- Chair, Research Committee of Faculty Senate
- Graduate Board
- Research Council, College of Engineering
- Reappointment Committee for the Dean of College of Engineering
- Search Committee for Director of the Office of Research and Sponsored Programs
- Chair, Reappointment Committee for Bath Iron Works Professorship of Structural Engineering
- Admissions Committee, Functional Genomics PhD Program

**Beard**
- College of Engineering Executive Committee
- Functional Genomics Executive Committee
- Electrical Engineering Chair Search Committee
- Geology and Climate Change Institute Faculty Search Committee
- Participated in Peterson Review of PhD Programs

**Egenhofer**
- University Research Council, 2002-ongoing
- Marketing Plan’s Goal Team for Graduate Education, 2004-ongoing
- Committee on Research Faculty, 2003
- Commission on Information Technologies, 2001-2003

**Stefanidis**
- Academic Council

**Worboys**
- University Research Council, Spring 2004 semester
- University Research Unit Directors Meeting, Spring 2004 semester

**Workshops Presented – (10)**

**Agouris**
- Co-organized a workshop on Next Generation Geospatial Information, Boston, MA, October 2003

23
Beard
- NSF CMG Spatio-Temporal Statistical Analysis of Multi-Platform Optical Ocean Observations, University of Maine, Darling Marine Center, June 23-July 25, 2004
- Engineering EXPO, February 28, 2004

Holden
- ArcGIS Workshop for the Houlton Band of Malaseets, 3 days
- GPS/ArcView Workshop for 4-H,
- One Week Curriculum Development Workshop for GK-12 Teachers and Fellows

Stefanidis
- Organized a Workshop on the Collaboration between the National Science Foundation (NSF) and their Hungarian Counterparts, Budapest, Hungary, March 2004
- Co-Organized a Workshop on GeoSensor Networks, Portland, ME, October 2003

Worboys
- Invited Lecture Series, International Spatial Cognition Summer Institute (ISCSI), Uncertainty Handling for Spatial Reasoning, Bad Zwischenahn, Germany, August 31-September 6, 2003

Review of Papers – (324)

Agouris – (15)
- Conference, Digital Government 2004, (6)
- International Journal of Geographical Information Science (IJGIS), (2)
- IEEE Transactions on Knowledge and Data Engineering, (1)
- Journal of Photogrammetric Engineering and Remote Sensing, (1)
- Journal of the International Society of Photogrammetry and Remote Sensing, (1)
- Journal of Electronic Imaging, (1)
- Journal of Systems and Software, (1)
- Journal of Computational Intelligence, (1)
- Journal of ACM Transactions on Database Systems, (1)

Beard – (4)
- IEEE Multimedia, (1)
- IJGIS, (3)

Egenhofer – (123)
- ACMGIS, (6)
- EDBT, (16)
- Diagrams, (3)
- DiVO, (1)
- GIScience 2004, (70)
- ISSDQ, (3)
- Scientific Semantic Web, (4)
- Spatial Cognition 2004, (3)
- UbiGIS, (2)
- W2GIS, (2)
- Web Semantics, (1)
- WWW-Internet 2004, (3)
- Annals of the American Geographers, (1)
- Computers, Environment and Urban Systems, (1)
- Computers and Geosciences, (1)
- Information Processing and Management, (1)
- Software Practice and Experience, (1)
- Spatial Cognition and Computation, (2)
- Transactions in GIS, (1)
- West Indian Journal of Engineering, (1)

**Hornsby** – (30)
- Reviewed approximately 30

**Nittel** – (17)
- Reviewed 17

**Stefanidis** – (35)
- ACM GIS 2004, (8)
- Workshop on GeoSensor Network, (12)
- Workshop on Data Management for Sensor Networks, (6)
- Digital Government 2004, (6)
- Journal of Photogrammetric Engineering and Remote Sensing, (2)
- Journal of Machine Vision and Application, (1)

**Worboys** – (100)
- Reviewed at least 100

**Review of Books** – (7)

**Agouris**
- Taylor & Francis (2)
- CRC Press (1)
- Haworth Press, Inc. (1)

**Nittel**
- Review of Book (1)
Worboys
- Review of Books (2)

Review of Proposals

Agouris
- National Science Foundation
- Cooperative Institute for Coastal and Estuarine Environmental Technology
- US Civilian Research and Development Foundation
- Indiana 21st Century Research and Technology Fund, 2003-2004
- NASA
- Battelle (1)

Beard
- EPSCOR Review – February 2004
- Maine DMR – February 2004
- NSF Panel – March 2004
- NSF (3)
- External Thesis Review, Anders Friis Christensen, Copenhagen Denmark, October 2003

Egenhofer
- Ireland Science Foundation (1)
- City University New York (1)

Hornsby
- Review of Proposals (25)

Nittel
- Review of Proposals (33)

Stefanidis
- National Science Foundation
- Battelle

Worboys
- Review of Proposals (15)

Paid Consulting Assignments

Agouris
- Milcord LLC of Massachusetts
Egenhofer
- Intelligent Spatial Technologies, LLC (Consultant on NSF-SBIR Award)

Stefanidis
- Milcord LLC of Massachusetts

Worboys
- Ordnance Survey of Great Britain. Research Topic: Appropriate Research Directions for Ordnance Survey in the Area of Spatiotemporal Information Systems

School Visits

Beard
- Hampden Academy Tour, December 5, 2003

Holden
- Bangor High School
- John Bapst High School