

# Curriculum Vitae

## Heidi J. C. Ellis

Computer Science Department  
Trinity College  
300 Summit St.  
Hartford, CT 06106  
(860) 297-4175, fax: (860) 297-3531  
[heidi.ellis@trincoll.edu](mailto:heidi.ellis@trincoll.edu)  
<http://www.cs.trincoll.edu/~hellis2>

### Education

Ph.D., Computer Science and Engineering, University of Connecticut, 1994  
Dissertation: *An Information Engineering Approach to Unified Object-Oriented Design and Analyses*  
M.S., Computer Science and Engineering, University of Connecticut, 1990  
B.S., Animal Science, University of Connecticut, 1984

### Experience

#### *Professional Experience*

2005-present, Visiting Assistant Professor, Dept. of Computer Science, Trinity College  
2000-2005, Associate Professor, Dept. of Engineering and Science, RPI-Hartford  
1997-2000, Assistant Professor, Computer and Information Sciences, RPI-Hartford  
1996-1997, Assistant Professor, Computer Science, Hartford Graduate Center  
1994-1996, Visiting Assistant Professor, Computer Science, Hartford Graduate Center  
1990, 1992, 1993, Lecturer, Computer Science and Engineering, University of Connecticut  
1990-1991, Adjunct Assistant Professor, Dept. of Math and Computer Science, Eastern Connecticut State University  
1987-1994, Research Assistant, Computer Science and Engineering, University of Connecticut

#### *Industrial Experience*

- **MassMutual Financial Group**, Springfield, MA. Responsible for identifying and carrying out training and mentoring needs required for converting an eight-person department from a procedure-based to an object oriented development approach. Tasks included software process audit, software process needs assessment, development mentoring and object oriented training. Jan. 2000 to Jun. 2000.
- **Pratt & Whitney**, East Hartford, CT. Observed the Embedded Systems group, specifically the software process used to develop the embedded software that operates jet engines. Observed FAA's DO-178A and DO-178B certification process and its impact on software development. May 1998 to Aug. 1998.
- Developed and delivered multiple professional development courses including **Introduction to Java**, **C++ Programming**, **Overview of Oracle**, **The Object-Oriented Paradigm**, **Introduction to Rapid Application Development**, and **Java Server Pages**. Clients include:

Heidi J. C. Ellis

- Anthem Blue Cross Blue Shield, North Haven, CT
- Key Bank, Cleveland, OH
- Aetna U. S. Healthcare, Middletown, CT
- Condor Systems, Bloomfield, CT
- MassMutual Financial Group, Springfield, MA
- Advanced Computing Technologies, Glastonbury, CT
- Pratt & Whitney, East Hartford, CT
- Fidelity Investments, Boston, MA
- State of CT Department of Information Technology, Hartford, CT
- Allmerica Inc., Worcester, MA
- Rensselaer Learning Institute, Hartford, CT

## Research

### *Current Interests*

Computing education based on humanitarian open source software, Integrated framework for NMR data analysis, Software engineering pedagogy.

### *Journal Articles and Book Chapters*

1. Ellis, H.J.C., and Hislop, G.W., "An Ontology for Software Engineering Teaching Modules," *International Journal on Metadata, Semantics and Ontologies*, vol. 2, no. 1, 2007, pp. 11-22.
2. Ellis, H.J.C., "An Assessment of Self-Directed Learning in a Software Engineering Course," *IEEE Transactions on Education*, vol. 50, no. 1, Feb. 2007, pp. 55-60.
3. Verdi, K., Ellis, H.J.C., and Gryk, M.R., "Conceptual-level workflow modeling for NMR and other scientific experiments," *BMC Bioinformatics*, vol. 8, no. 31, Jan. 2007.
4. Hislop, G.W. and Ellis, H.J.C., "Issues in Measuring Time to Teach Information Systems Online," *Information Systems Education Journal*, vol. 4, no. 57, Aug. 2006, pp. 1-10,
5. Ellis, H.J.C., Area Editor for chapter on Software Design, IEEE Computer Society Real-World Software Engineering Problems, J. Fernando Naveda and Stephen B. Seidman eds. Wiley-Inderscience, 2006.
6. Fox-Erlich, S., Martyn, T.O., Ellis, H.J.C., and Gryk, M.R., "Delineation and Analysis of the Conceptual Data Model Implied by the IUPAC Recommendations for Biochemical Nomenclature," *Protein Science*, vol. 13, 2004, pp. 2559-2563.
7. Hislop, G.W. and Ellis, H.J.C., "A Study of Faculty Effort in Online Teaching," *The Internet and Higher Education*, Elsevier/Pergamon, vol. 7, no. 1, Spring 2004, pp. 15-31.
8. Liebrand, M., Ellis, H.J.C., Phillips, C., Demurjian, S., Ting, T.C., and Ellis, J., "Role Delegation for a Resource-Based Security Model," in *Data and Applications Security: Developments and Directions II*, E. Gudes and S. Sheno (eds.), Kluwer, 2003.

9. Liebrand, M., Ellis, H.J.C., Phillips, C., Demurjian, S., and Ting, T.C., "Role Delegation for a Distributed, Unified RBAC/MAC," *16th Annual IFIP WG 11.3 Working Conference on Data and Application Security*, Kings College, UK, Jul. 2002.
10. Ellis, H.J.C., Mead, N.R., Moreno, A.M., Tanner, C.D., and Ramsey, D., "Characteristics of Successful Collaborations to Produce Educated Software Engineering Professionals," *Computer Science Education*, Swets & Zeitlinger Publishers, Vol.12, No.1-2, Spring 2002, pp. 119-140.
11. Demurjian, S., Peters, T., Beshers, G., Ellis, H.J.C., and Nichols, G., "The (Non) Importance of a Programming Language in a Software Engineering Course," *Computer Science Education Journal*, Ablex Publishing, Inc., Vol. 3, No. 1, 1992, pp. 35-52.

### ***Refereed Publications***

1. Ellis, H.J.C., Morelli, R.A., and Hislop G. W., "WIP: Challenges to Educating Students within the Community of Open Source Software for Humanity," *The 2008 Frontiers in Education Conference*, Saratoga Springs, NY, Oct. 2008.
2. Budd, A. J., and Ellis, H.J.C., "Spanning the Gap Between Software Engineering Instructor and Student," *The 2008 Frontiers in Education Conference*, Saratoga Springs, NY, Oct. 2008.
3. Ellis, H.J.C., and Hislop, G.W., "Fostering the Community of Software Engineering Educators," *21st Annual Conference on Software Engineering Education and Training*, Charleston, SC, Apr. 2008.
4. Ellis, H.J.C., Morelli, R.A., and Hislop, G.W., "Support for Educating Software Engineers Through Humanitarian Open Source Projects," *21st Annual Conference on Software Engineering Education and Training*, Charleston, SC, Apr. 2008.
5. DeNoia, L., Ellis, H.J.C., and McKim, J., "WIP – Issues Involved in Analyzing Student Activity in the Introductory Sequence of Computing Courses," *The 2007 Frontiers in Education Conference*, Milwaukee, WI, Oct. 2007.
6. Ellis, H.J.C., Morelli, R.A., and de Lanerolle, T., "Holistic Software Engineering Education Based on an Open Source Project," *20th Annual Conference on Software Engineering Education and Training*, Dublin, Ireland, Jul., 2007.
7. Morelli, R.A., Ellis, H.J.C., de Lanerolle, T., Damon, J., and Walti, C., "Can Student-Written Software Help Sustain Humanitarian FOSS?" *The 4th International Conference on Information Systems for Crisis Response and Management*, Delft, the Netherlands, May 2007, pp. 41-44.
8. Ellis, H.J.C., Morelli, R.A., de Lanerolle, T.R., Damon, J., and Raye, J., "Can Humanitarian Open-Source Software Development Draw New Students to CS?" *SIGCSE 2007, Technical Symposium on Computer Science Education*, Covington, KY, Mar. 2007.
9. Ellis, H.J.C., Sinnott, B.D., Fox-Erlich, S., and Gryk, M.R., "Undergraduate Research in Bioinformatics - The CONNJUR project," *The 2006 Frontiers in Education Conference*, San Diego, CA, Oct. 2006.

10. Ellis, H.J.C., “An Evaluation of Learning in an Online Project-Based Web Application Design and Development Course,” 2006 Consortium for Computing Sciences in Colleges, Northeast, Apr. 2006. **3<sup>rd</sup> prize for best paper**, *Journal of Computing Sciences in Colleges*, vol. 21, no. 6, Jun. 2006, pp. 217 – 227.
11. Ellis, H.J.C., Fox-Erlich, S., Martyn, T.O., and Gryk, M.R., “Development of an Integrated Framework for Protein Structure Determinations: A Logical Data Model for NMR Data Analysis,” *Third International Conference on Information Technology : New Generations, ITNG 2006*, Apr. 2006.
12. Ellis, H.J.C., “A Collaborative Approach to a Course on the Semantic Web,” *The 2005 Frontiers in Education Conference*, Indianapolis, IN, Oct. 2005.
13. Ellis, H.J.C., “Autonomous Learning in Online and Traditional Versions of a Software Engineering Course,” *18th Annual Conference on Software Engineering Education and Training*, Ottawa, CAN, Apr. 2005.
14. Hislop, G.W. and H.J.C. Ellis, “Issues in Measuring Time to Teach Information Systems Online,” *ISECON 2004*, Newport, RI, Nov. 2004.
15. Ellis, H.J.C., “Student-Directed Learning in a Graduate Software Engineering Course,” *The 2004 Frontiers in Education Conference*, Savannah, GA, Oct. 2004.
16. Ellis, H.J.C. and Hislop, G.W., “Techniques for Providing Software Engineering Education to Working Professionals,” *The 2004 Frontiers in Education Conference*, Savannah, GA, Oct. 2004.
17. Kowalczyk, T., Ellis, H.J.C., and Hislop, G.W., “A Framework of Trust for the Semantic Web,” *2004 Americas Conference on Information Systems (AMCIS)*, NYC, Aug. 2004.
18. Stevens, M.E. and Ellis, H.J.C., “Using a Lease to Manage Service Contracts in Service Oriented Architectures,” *2004 Americas Conference on Information Systems (AMCIS)*, NYC, Aug. 2004.
19. Ellis, H.J.C., G.W. Hislop, and T. Kowalczyk, “Towards an Information Assessment Framework for Use with the Semantic Web,” *6th International Conference on Enterprise Information Systems*, Porto, Portugal, Apr. 2004.
20. Hislop, G.W. and Ellis, H.J.C., “An Analysis of Variation in Teaching Effort Across Tasks in Online and Traditional Courses,” *6th International Conference on Enterprise Information Systems*, Porto, Portugal, Apr. 2004.
21. Ellis, H.J.C. and Mitchell, R., “Self-Grading in a Project-Based Software Engineering Course,” *17th Annual Conference on Software Engineering Education and Training*, Norfolk, VA, Mar. 2004.
22. McKim, J.C. and Ellis, H.J.C., “Using a Multiple Term Project to Teach Object Oriented Programming and Design,” *17th Annual Conference on Software Engineering Education and Training*, Norfolk, VA, Mar. 2004.

23. Ellis, H.J.C., "Transfer of Knowledge in a Web Design and Development Course," *The 2003 Frontiers in Education Conference*, Boulder, CO, Nov. 2003.
24. Ellis, H.J.C., Mead, N.R., Moreno, A.M., and Seidman, S.B., "Industry/University Software Engineering Collaborations for the Successful Reeducation of Non-Software Professionals," *16th Annual Conference on Software Engineering Education and Training*, Madrid, Spain, Mar. 2003.
25. Ellis, H.J.C. and McKim, J.C., "Focusing on Software Engineering Education: A Graduate Certificate in Software Engineering," *The 2002 Frontiers in Education Conference*, Boston, MA, Nov. 2002.
26. Mendoza, R.A. and Ellis, H.J.C., "Knowledge Transfer in IS Education: A Project-Based Pedagogical Approach to Bridging the Applicability Gap," *16th Annual CCSC Southeastern Conference*, Bloomsburg, PA, Oct. 2002.
27. Sandberg, M. and Ellis, H.J.C., "Major Integration and Scalability Roadblocks to the Large-Scale Deployment of a Semantic Search Engine," *2002 International Conference on Information and Knowledge Engineering*, Reno, NV, Jun. 2002.
28. Ellis, H.J.C., "Andragogy in a Web Technologies Course," *SIGCSE 2002, Technical Symposium on Computer Science Education*, Covington, KY, Feb. 2002.
29. Ellis, H.J.C., "An Experience in Collaborative Learning: Observations of a Software Engineering Course," *The 2000 Frontiers in Education Conference*, Kansas City, MO, Oct. 2000.
30. Savage, N.E. and Ellis, H.J.C., "The Projected Development of the PW6000 Engine Controller Under the FAA's DO178B Certification Framework," *First International Software Assurance Certification Conference*, Washington, D.C., Mar. 1999.
31. Ellis, H.J.C., "Software Engineering at a Distance," *11th Annual Conference on Software Engineering Education and Training*, Atlanta, GA, Feb. 1998.
32. Needham, D., Demurjian, S., El Guemhioui, K., Peters, T., Zamani, P., McMahon, M., and Ellis, H.J.C., "ADAM: A Language-Independent, Object-Oriented, Design Environment for Modeling Inheritance and Relationship Variants in Ada 95, C++, and Eiffel," *Proc. Of 1996 TriAda Conference*, Dec. 1996.
33. El Guemhioui, K., Demurjian, S., Peters, T., and Ellis, H.J.C., "Profiling in an Object-Oriented Design Environment that Supports Ada 9X and Ada 83 Code Generation," *Proc. of 1994 TriAda Conference*, Nov. 1994.
34. Ellis, H.J.C., and Demurjian, S., "Object-Oriented Design and Analyses for Advanced Application Development – Progress Towards a New Frontier," *Proc. Of 1993 ACM Computer Science Conference*, Feb. 1993.
35. Ellis, H.J.C., Ammar, R., and Demurjian, S., "The Role of Propagation in Database Support for Performance Modeling Environments," *Proc. of 1992 Phoenix Conference on Computers and Communications*, Apr. 1992.

36. Ellis H.J.C., and Demurjian, S., "ADAM: A Graphical Object-Oriented Database Design Tool and Code Generator," *Proc. of 1991 ACM Computer Science Conference*, Mar. 1991.
37. Demurjian, S., Ellis, H.J.C., and Hu, M.Y., "Software Reuse and Evolution in ADAM – A Joint Object-Oriented Programming Language and Database Design Tool," *Proc. of 1990 ACM Symposium on Object-Oriented Programming Emphasizing Practical Applications*, Sep. 1990.
38. Ellis, H.J.C., Demurjian, S., Beshers, G., Maryanski, F., and Peckham, J., "Extending the Behavioral Capabilities of the Object-Oriented Paradigm with an Active Model of Propagation," *Proc. of 1990 ACM Computer Science Conference*, Feb. 1990.
39. Peckham, J., Maryanski, F., Beshers, G., Chapman (Ellis), H.J., and Demurjian, S., "Constraint-Based Analysis," *Proc. of International Conference on Information Systems*, Dec. 1, 1989.

#### ***Publications Under Review***

1. Vyas, J., Ellis, H.J.C., Martyn, T.O., Fox-Erlich, S., and Gryk, M.R., "Lessons Learned in Developing an NMR Application" submitted to the *Journal of Computing in Science & Engineering*.
2. The Software Engineering: Effective Teaching and Learning Approaches and Practices, Heidi J. C. Ellis, Steven A. Demurjian, and J. Fernando Naveda eds. IGI Global, Oct. 2008.

#### ***Panels, Posters and Other Publications***

1. Morelli, R.A., Danner, N., Iyengar, J., de Lanerolle, T. R., and Ellis, H.J.C., "Teaching and Building Humanitarian Open Source Software," *SIGCSE 2008, Technical Symposium on Computer Science Education*, Portland OR, Mar. 2008. (Workshop)
2. Koffman, E., Ellis, H.J.C., Keleman, C., White, C., and Wolfman, S., "New Paradigms for Introductory Courses," *SIGCSE 2007, Technical Symposium on Computer Science Education*, Covington, KY, Mar. 2007. (Panel)
3. Hislop, G. W., and Ellis H.J.C., "Retention of Distance and On-Campus Students in a Graduate Computer Science Degree Program," *The Eleventh Annual Conference on Innovation and Technology in Computer Science Education (ITiCSE)*, Bologna, Jun. 2006. (Poster)
4. Ellis H.J.C., "Undergraduate Involvement in Bioinformatics Research: Lessons from the CONNJUR Project," *The Eleventh Annual Conference on Innovation and Technology in Computer Science Education (ITiCSE)*, Bologna, Jun. 2006. (Poster)
5. Ellis H.J.C., "Self-Grading: An Approach to Supporting Self-Directed Learning," *The Eleventh Annual Conference on Innovation and Technology in Computer Science Education (ITiCSE)*, Bologna, Jun. 2006. (Teaching Tip)

6. Gryk, M.R., Vyas J., Fox-Erlich S., Martyn T.O., Ellis H.J.C., "CONNJUR: An Open Source Integration Environment for Biomolecular NMR Data Analysis," *47th Experimental Nuclear Magnetic Resonance Conference*, Asilomar, CA, Apr. 2006. (Poster)
7. Hislop, G.W., and Ellis, H.J.C., "Retention Patterns and Indicators for Online Students in a Professional Master's Degree," *Eleventh International Conference on Online Learning*, Orlando, FL. November, 2005. (Presentation)
8. Fox-Erlich S., Ellis H.J.C., Martyn T.O., and Gryk M.R., "StrucCheck: a JAVA Application to Derive Geometric Attributes from Arbitrary Subsets of Spatial Coordinates Obtained from the PDB," *46th Experimental Nuclear Magnetic Resonance Conference*, Providence, RI, Apr. 2005. (Poster)
9. Fox-Erlich S., Ellis H.J.C., Martyn T. O., Skowronek, S., and Gryk M. R., "Development of a Logical Data Model for NMR Molecular Structure Determinations," *1st New England Structure Symposium*, Storrs, CT, Oct. 2004. ( Poster)
10. McKim, J.C. and Ellis, H.J.C., "Course Module: Design By Contract," SWENET course module at: *18th Annual Conference on Software Engineering Education and Training*, Ottawa, CAN, Apr. 2005. (Presentation)
11. Hislop, G.W., Ellis, H.J.C., Land, K.S., and Moreno, A., "Graduate Software Engineering Education: Adapting for the BSSE?" *17th Annual Conference on Software Engineering Education and Training*, Norfolk, VA, Mar. 2004. (Panel)
12. Hislop, G.W., Ellis, H.J.C., MacNeil, P.E., and Tanner, C.D., "Challenges in Teaching Software Engineering Professionals Online," *The 2003 Frontiers in Education Conference*, Boulder, CO, Nov. 2003. (Panel)
13. Hickey, T., Kumar, A., Wilkens, L., Beiderman, A., Mahadev, A., and Ellis, H.J.C., "Internet-Centric Computing in the Computer Science Curriculum," *SIGCSE 2002, Technical Symposium on Computer Science Education*, Covington, KY, Feb. 2002. (Panel)
14. Mendoza, R. and Ellis, H.J.C., "eXtensible Markup Language (XML): A Tutorial," *Hawaii International Conference on System Sciences*, Hawaii, Jan. 2002. (Tutorial)
15. Bagert, D.J., Ellis, H.J.C., Frailey, D.J., Moreno, A.M., and Mead, N.R., Thomas Hilburn moderator, "FASE 10TH Anniversary Round-Table Discussion, Academic Software Engineering: Before and After," *Forum for the Advancement of Software Engineering (FASE)*, Dec. 2001.
16. Ellis, H.J.C., Mead, N.R., Moreno, A.M., and MacNeil, P.E., "Can Industry and Academia Collaborate to Meet the Need for Software Engineers?" *Cutter IT Journal*, Jun. 2001. (Magazine Article)
17. Naveda, J.F., Diaz-Herrera, J., Ellis, H.J.C., Hilburn, T., and Lutz, M., "Software Engineering: Is it Process? Is it Design?," *14th Annual Conference on Software Engineering Education and Training*, Charlotte, NC, Feb. 2001. (Panel)
18. Ellis, H.J.C., "Summary of Initial Results from the University/Industry Collaboration Survey," *Forum for the Advancement of Software Engineering (FASE)*, Jan. 2001.

19. Ellis, H.J.C., McKim, J.C., and Younessi, H. "Issues Affecting Graduate and Postgraduate Software Engineering Curricula," *13th Annual Conference on Software Engineering Education and Training*, Mar. 2000.
20. Ellis, H.J.C., Higginbotham, C.W., and McKim, J.C., "An Evolving Object-Oriented Software Curriculum," *Proc. Of 1995 TOOLS Conference*, Aug. 1995.

***Invited Presentations***

1. Free and Open Source Software (FOSS) Symposium 2009, "Integrating FOSS into the Undergraduate Computing Curriculum", a full-day pre-SIGCSE activity. With R.A. Morelli, et al.
2. "Teaching and Building Humanitarian Open Source Software," with R.A. Morelli, T.R. de Lanerolle, N. Danner, J. Iyengar, *2008 SIGCSE Workshop*, Mar. 2008.
3. "Teaching Communication Skills in the Software Engineering Curriculum," with G. W. Hislop, *NSF Chautauqua: Teaching Communication Skills in the Software Engineering Curriculum: A Forum for Professionals and Educators*, June 2008.
4. "Building Software to Serve Humanity," *Trinity College's Celebration and Dedication of the Center for Urban and Global Studies*, Hartford, CT, Oct. 2007.
5. "An Overview of the CONNJUR Project" *The Rensselaer at Hartford Computer Science Seminar*, Hartford, CT, Dec. 2005.
6. "The Semantic Web: Advantages and Roadblocks to Adoption," *Rensselaer IT's Only Breakfast series*, Hartford, CT, Jun. 2004.
7. "Using the Internet for Research," *Principles of Clinical Research, University of Connecticut Health Center*, Farmington, CT, Jan. 2002.
8. "Searching for Biological Information on the Web," *University of Connecticut Health Center*, Farmington, CT, Nov. 2001.
9. "Hands-On Overview of XML," *The Rensselaer Chapter of the Internet Society*, Hartford, CT, Apr. 2001.
10. "What is the Scoop on the OOP?" *University of Hartford Student Chapter of ACM*, Hartford, CT, Dec. 1996.
11. "The Use of C++ in an Object-Oriented Design and Analyses Environment," *Connecticut Object-Oriented Users' Group*, Hartford, CT, Jul. 1996.
12. "An Information Engineering Approach to Object-Oriented Design and Analyses," *The Hartford Graduate Center Computer Science Seminar*, Hartford, CT, Sept. 1994.
13. "Extensions to the Object-Oriented Model," *Greater Hartford Chapter of the ACM*, Hartford, CT, Nov. 1991.

## Grants and Contracts

### *Funded Grants*

- “CONNJUR: A Software Integration Platform for Biomolecular NMR Spectroscopy” Michael Gryk, University of Connecticut Health Center PI, Heidi J. C. Ellis Co-PI, NIH-BDMA, (R21) \$1.85M (Trinity: \$173,894), September 2008 – August 2012. (awaiting federal budget for grant award: proposal is in top 12%, score:161)
- “SoftHum: Student Participation in the Community of Open Source Software for Humanity,” Heidi J. C. Ellis PI, Gregory W. Hislop Drexel University Co-PI, NSF-CCLI, \$149,000 (Trinity: \$101,000), May 2008 – April 2010.
- “Advancing ChangeTips,” Heidi J. C. Ellis PI, Trinity College Faculty Research Grant, \$1596, June 2008 – October 2009.
- “Database-driven software for biological NMR analysis,” Michael Gryk, University of Connecticut Health Center PI and Heidi Ellis Co-PI, NIH-NIBIB, (R21/R33), \$250,000 (Trinity: \$100,000), February 2005 – August 2008.
- Consultant on: “Can Humanitarian Open-Source Software Development Help Revitalize Undergraduate Computing Education?”, NSF-CPATH, \$428,000, July 2007 - June 2010.
- Consultant on: “EntryPoint: Creating a Better Start for Students in Computing Degrees,” Gregory W. Hislop, Drexel University PI, NSF-CCLI, \$149,795, June 2007 - July 2009.
- Contractor on: Andrew W. Mellon Foundation. “Evaluating an Online Degree Program.” \$307,000. 1999 – 2004.

## Teaching

### *Courses Taught*

#### **Undergraduate**

Introduction to Computing  
Computers, Information and Society  
Introduction to Computer Science  
Object Structures (distance education)  
Principles of Software Engineering  
Software Engineering Laboratory  
Database Fundamentals  
Machine Organization and Assembly Language

#### **Graduate**

Software Engineering I (distance education)  
Software Engineering II  
Web Application Design and Development (distance education)  
Computers and Risk (1 credit)  
Object-Oriented Database Systems (distance education)  
Readings in CSCI  
Studies in Computer Science

Student feedback on teaching evaluations consistently includes comments such as:

- excellent instructor
- teaches with enthusiasm
- knowledgeable of subject matter
- interested in her students
- materials are well organized
- good communication skills

### *Course and Curriculum Development*

#### **Trinity College**

- **Spring 2008:** Revamped the Introduction to Computing course to take a “late objects” approach.
- **Fall 2006:** Created a variant of the CS0 course that focused on the management of data to convey introductory programming concepts. Students download data from public data sources on the web into MySQL and incorporate the data into a semester-long project.

#### **Rensselaer at Hartford**

- **Fall 2003:** Supervised an adjunct in the creation of the content of a new graduate course, **Distributed Web Architectures**, that addresses bridging the gap between object oriented and procedural Web applications and covers J2EE, .NET, Web Services, agents, and peer-to-peer computing.
- **Spring 2002:** Transformed the format of the graduate course **Web Application Design and Development** to a distance learning format.
- **Fall 2000:** Developed a new graduate course, **Web Application Design and Development** that covers the Web-based technologies used to support a medium-size Web site from presentation via a Web browser through to storage and retrieval of data in a database.
- **Fall 2000:** Developed proposal to provide a **graduate certificate in Software Engineering** for United Technologies Corporation (UTC), in conjunction with Dr. Houman Younessi. Identified existing courses and infrastructure necessary to provide software engineering education for UTC employees worldwide.
- **Fall 2000:** Initiated development of a **Web and Internet Technologies application area** for the MSIT.
- **Fall 1999:** Team taught the graduate course **Object Oriented Database Systems**.
- **Spring 1999:** Modified the format of the graduate course **Software Engineering I** to include a continuing, team project that requires the collaborative effort of the entire class.
- **Spring 1998:** Developed the content and materials for the graduate course **Software Engineering II**. Created extensive distributed object technology modules for topics including remote method invocation, remote database access, components, the CORBA standard, and other communication methods for distributed object-oriented systems.

Heidi J. C. Ellis

- **Spring 1996:** Transformed the format of the graduate course **Software Engineering I** to a distance learning format. Updated the contents to include topics of current interest to the software engineering community including reuse, reengineering, and CASE.
- **Spring 1996:** Developed a new one-credit graduate course, **Computers and Risk** that investigated the risk associated with general computer use. Topics included the nature of risk, base causes of computer-related accidents, and actions that can be taken to avert computer-related accidents.
- **Fall 1995:** Developed a new graduate course, **Object-Oriented Database Management**. This advanced course provides students with an understanding of the important issues and topics that encompass the storage of applications in an object-oriented database.
- **Fall 1994:** Revised the emphasis of the existing Data Structures course to become **Object Structures** to include an object-oriented emphasis as part of a department-wide effort to incorporate object technology into the software curriculum.

### **The University of Connecticut**

- **Fall 1991/Spring 1992:** Revised the content and focus of the two course junior year software engineering sequence, **Introduction to Software Engineering** and **Software Engineering Laboratory**, from a traditional to an object-oriented emphasis.

## **Service**

### ***Professional Activities***

- Served on NSF panel.
- Problem Development Committee for the IEEE Certified Software Development Professional Certification Exam, Development Leader, Feb. 2002 – June 2006.
- Benjamin J. Dasher Award for Best Paper in Engineering Education Award Committee, 2005.
- Regular reviewer of Software Engineering and Computer Science publications including IEEE Transactions on Education, IEEE Transactions on Knowledge and Data Engineering, IEEE Software, IEEE Systems, International Conference on Software Engineering, Journal of Systems and Software, VLDB, Australian Software Engineering Conference, International Conference on System Integration, World Multi-Conference on Systemics, Cybernetics and Informatics, ACM SIGCSE Technical Symposium on Computer Science Education, and books including Object Oriented Frameworks, The Internet Encyclopedia, and Web Programming.
- Attendee at workshops including the SWENET 2006 Faculty Workshop, Workshop on Alice and Media Computation in 2007, and Teaching Communications Skills in the Software Engineering Chautauqua in 2008.

### ***Conference Organization***

- Co-chair of Industry Experience track for Conference on Software Engineering Education and Training, 2009.

Heidi J. C. Ellis

- Program Committee for Conference on Software Engineering Education and Training, 2003 – present.
- Program Committee Member for The World Wide Web at 10 Conference, Terre Haute, Indiana, 2004.
- Scientific Committee of the IADIS WWW/Internet Conference, 2003.
- Co-Organizer of TOOLS Workshop on Education (WET), 2001.
- Registration Chair for Conference on Computing in Small Colleges in New England, 1998.

***Trinity College Committees and Service***

- Organized the 2006 Women in Computing banquet.

***Rensselaer at Hartford Committees and Service***

- Rensselaer at Hartford Search Committee for Vice President and Dean, May 2001 to Sept. 2002.
- Nominator of Trustee's Founders Awardees 2001; 2003
- Nomination Coordinator for Trustee's Outstanding Teaching Award, Mar. 2001
- Ebusiness Committee for MSIT, Spring 2000 to Fall 2001
- Hartford contact for Faculty Governance issues, Apr. 1999 to Sept. 2001.
- Committee on Academic Standing, Fall 1994; Fall 1995; Spring 2000; Spring 2001
- Promotion Committee, Sept. 1998 to Feb. 1999; Sept. 2001 to Feb. 2002.
- Technology Infrastructure Committee, Apr. 1998 to Sept. 1999
- Proficiency Curriculum Committee, Sept. 1996 to 1997
- Committee for International Students, Sept. 1995 to Sept. 1997

***Professional Societies***

- IEEE Computer Society, Member, 1989 to present
- IEEE Education Society, Member 1994 to present
- IEEE Technical Council on Software Engineering, 1994 to present
- Association of Computing Machinery, 1988 to present
- SEI Working Group on Software Engineering Education and Training (WGSEET), Nov. 1999 to 2004.
- SEI WGSEET Subgroup on University/Industry Collaboration, Leader, Mar. 2000 to Oct. 2003
- Upsilon Pi Epsilon (National Computer Science Honorary Society), Member, 1989 to present
- Phi Kappa Phi, Honor Fraternity, 1991 to present

***Honors and Awards***

- 2002 Woman in Motion Award, sponsored by the Arthritis Foundation, Southern New England Chapter
- Taylor L. Booth Graduate Fellowship, The University of Connecticut, 1992
- Erle Martin Teaching Fellow, The University of Connecticut, 1991 – 1992
- Eastern Connecticut State University Women's Basketball Team Member Favorite Teacher Award, 1991