

**RESUME**  
**CAROLE D. HAFNER**  
**College of Computer and Information Science**  
**Northeastern University, Boston MA 02115**  
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**Current Position**

Director, Information Science Program and Associate Professor  
College of Computer and Information Science  
Northeastern University, Boston MA

**Education**

B.A. Economics (1969, with honors). Concentration in statistics and econometrics  
The University of Michigan, Ann Arbor MI

Ph.D. Computer Science (1978)  
The University of Michigan, Ann Arbor MI

HERS Management Institute for Women in Higher Education (2003-2004)

**Employment History**

Director of Information Science Education (1999-present) and Associate Professor (1984-present)  
College of Computer and Information Science, Northeastern University, Boston MA 02115

Visiting Scholar (Jan-June 2005) (sabbatical leave from Northeastern University)  
Legal Information Institute, Cornell University Law School

Lecturer on Law (1991-92) (sabbatical leave from Northeastern University)  
Harvard Law School, Cambridge MA USA

Research Scientist (1978-81), Senior Research Scientist (1981-84)  
Computer Science Department, General Motors Research Laboratories, Warren, MI USA

Assistant Professor, Computer Science Department, Indiana University, Bloomington IN (1977-78)

Graduate Research Assistant, University of Michigan, Ann Arbor MI (1971-76)

Programmer/Analyst (Software Engineer) (1968-1971)  
Highway Safety Research Institute, The University of Michigan, Ann Arbor, MI USA

**Professional and Administrative Experience**

**Northeastern University**

Founder and Director, Information Science Program (currently 120 majors) 1999 – present

Co-founder and Director, Graduate Certificate in Information Resources Management (a joint program with the College of Business Administration), 1995-2002. Currently administered by School of Professional and Continuing Education

Presentation at Information Technology Dean's Council (co-author Dean Larry Finkelstein): *Education and Research Agenda for a new IT Discipline*. Arlington, VA, February, 2002. Sponsored by CRA (Computing Research Association).

Represented Northeastern University at national meeting on the future of Information Technology programs, National Academies, Washington D.C., January 2003. Sponsored by ABET (Accreditation Board for Engineering and Technology)

Represented Northeastern University at Information Technology Dean's Council, Portland, OR, July 2003.

Member of University Planning Council, 2002-2004

Member of University Information Technology Planning committee, 2006



Natalya Fridman Noy (1998) , *Knowledge Representation for Intelligent Information Retrieval in Experimental Sciences*.

## **Selected Publications**

### **Journal Special Issues Edited:**

Hafner, C. and Risland, E., (2002). Editors' Introduction to the Special Issue in Memory of Donald H. Berman. *Artificial Intelligence and Law 10*:1-3, 3-6.

Hafner, C., (1995). Editor's Introduction to the Special Issue on Intelligent Legal Text-Based Systems. *Artificial Intelligence and Law 3*:1-2, 1-4.

### **Information Technology Education:**

Trauth, E. and C. Hafner. (2000). Meeting the IT Skills Crisis: An Interdisciplinary Response. In *Proceedings of the Americas Conference on Information Systems (AMCIS-2000)*. Association for Information Systems (www.aisnet.org).

Hafner, C. and Trauth, E. (2000). IS Education Grows Up and Leaves Home: Situating Educational Programs in the Information Society. In *Proceedings of the Information Systems Education Conference (ISECON 2000)*. Foundation for Information Technology Education (www.edfoundation.org).

### **Knowledge-based systems:**

Noy, N. and Hafner, C. (2000). Ontological Foundations for Experimental Science Knowledge Bases. *Applied Artificial Intelligence 14*: 6, 565-618.

Noy, N. and Hafner, C. (1998). Representing Scientific Experiments: Implications for Ontology Design and Knowledge Sharing. In *Proc. 15th National Conference on Artificial Intelligence (AAAI-98)*, 615-622. AAAI Press/MIT Press, Cambridge, MA.

Noy, N. and Hafner, C. (1997). The State of the Art in Ontology Design: A Survey and Comparative Review. *AI Magazine*, Fall 1997, 53-74.

Hafner, C. and Fridman, N. (1996). Ontological Foundations for Biology Knowledge Models. In *Proc. 4th International Conference on Intelligent Systems for Molecular Biology (ISMB-96)*, 78-87. AAAI Press, Menlo Park, CA. (1996).

Hafner, C., Baclawski, K., Futrelle, R., Fridman, N., Sampath, S. (1994). Creating a Knowledge Base of Biological Research Papers. In *Proc. 2nd International Conference on Intelligent Systems for Molecular Biology (ISMB-94)*, 147-155. AAAI Press, Menlo Park, CA.

### **Artificial intelligence and law:**

Hafner, C. D. and Lauritsen, M. (2007). Extending the Power of Automated Legal Drafting Technology. In Lodder, A.R. and L. Mommers, eds., *Legal Knowledge and Information Systems: Jurix 2007*, pp. 59-68. IOS Press.

Hafner, C. D. and Berman, D.H. (2002). The Role of Context in Case-Based Legal Reasoning: Teleological, Temporal and Procedural. *Artificial Intelligence and Law 10*, 19-64.

Hafner, C. (2001). Legal Reasoning Models. *International Encyclopedia of the Social and Behavioral Sciences*. Elsevier Science Publishers.

Berman, D. H. and Hafner, C. D. (1995). Understanding Precedents in a Temporal Context of Evolving Legal Doctrine. In *Proceedings of the 5th International Conference on Artificial Intelligence and Law*, 42-51. ACM Press: New York.

Hafner, C. and Wise, V. (1993). Smartlaw: Adapting "Classic" Expert System Techniques to the Legal Research Domain. In *Proc. 4th International Conference on Artificial Intelligence and Law*, pp. 133-141. ACM Press, New York.

- Berman, D. H. and Hafner, C. D. (1993). Representing Teleological Structure in Case-Based Legal Reasoning: The Missing Link. In *Proceedings of the 4th International Conference on Artificial Intelligence and Law*, 50-60. ACM Press: New York.
- Berman, D. H. and Hafner, C. D. (1991). Incorporating Procedural Context into a Model of Case-Based Legal Reasoning. In *Proceedings of the 3rd International Conference on Artificial Intelligence and Law*, 12-20. ACM Press: New York.
- Berman, D and Hafner, C. (1989). The Potential of Artificial Intelligence to Help Solve the Crisis in Our Legal System. *Communications of the ACM* 32:8, 928-938.
- Hafner, C. D. (1987). Conceptual Organization of Case Law Knowledge Bases. In *Proceedings of the First International Conference on Artificial Intelligence and Law*, 35-42. ACM Press: New York.
- Hafner, C. D. (1981). *An Information Retrieval System Based on a Computer Model of Legal Knowledge*. Ph.D. Thesis, The University of Michigan. UMI Research Press: Ann Arbor, MI.

### **Natural language processing:**

- Gong, J., P. Tarasewich, C. D. Hafner and S.I. Mackenzie (2007). Improving Dictionary-based Disambiguation for Text Entry Accuracy. In *CHI'07 Extended Abstracts on Human Factors in Computing Systems*. ACM.
- Hafner, C. (1990). A Linguistically Sound Approach to Content Analysis of Natural Language Text. In *Proc. 5th Annual AI Systems in Government Conference*, 142-149. IEEE Computer Society Press.
- Hafner, C. (1990). Challenges for Text-Based Intelligent Systems. In Notes from the AAAI Spring Symposium on Text-Based Intelligent Systems, 34-38. Stanford CA, March 1990.
- Hafner, C. (1985). Semantics of Temporal Queries and Temporal Data. In *Proc. 23rd Ann. Mtg. of the Assoc. for Computational Linguistics*, 1-8. ACL: Morristown, NJ.
- Hafner, C. and Godden, K. (1985). Portability of Syntax and Semantics in DATALOG. *ACM Transactions on Information Systems* 3:2, 141-164
- Hafner, C. (1984). Interaction of Knowledge Sources in a Portable Natural Language Interface.' In *Proceedings of the 10th International Conference on Computational Linguistics (COLING 84)*, 57-60. ACL: Morristown, NJ.

### **Teaching Experience**

#### **New courses developed:**

Principles of Information Science ( <http://www.ccs.neu.edu/course/isu300/> )

Empirical Research Methods for Information Science ( <http://www.ccs.neu.edu/course/isu580/> )

#### **Graduate courses:**

Human-Computer Interaction

Knowledge Representation

Foundations of Artificial Intelligence

Data Structures/C Programming

Natural Language Processing

#### **Undergraduate Courses:**

Principles of Information Science

Object-Oriented Design

Empirical Research Methods for Information Science

Automata Theory and Formal Languages

Artificial Intelligence

Lisp and Functional Programming

Human-Computer Interaction

Assembly Language Programming

### **References**

Provided upon request