

Curriculum Vitae

Catharine M. Wyss (née Rood)

CURRENT POSITION

- **March 2006 – August 2006:** *Visiting Scientist* at IBM Almaden, San Jose, CA.
- **August 2002 – Present:** *Joint Assistant Professor of Informatics and Computer Science*, Indiana University at Bloomington, Bloomington, IN.

EDUCATION

- **January 1998 – August 2002:** Ph.D. in Computer Science, Indiana University at Bloomington, Bloomington, Indiana, USA. Chancellor's Fellow.
- **October 1996 – October 1997:** M.Sc. in Artificial Intelligence, University of Edinburgh, Edinburgh, Scotland. With Distinction.
- **October 1994 – October 1995:** Diploma in Computer Science, Cambridge University, Cambridge, England. With Distinction.
- **October 1993 – October 1994:** M.Phil. in History and Philosophy of Science, Cambridge University, Cambridge, England.
- **September 1989 – June 1993:** B.A. Joint Honors in Mathematics and English Literature, McGill University, Montreal, Canada. Dean's Honor List.

REFEREED PUBLICATIONS

- **March 2006:** *Data Mapping as Search*. International Conference on Extending Database Technology (EDBT). Munich, Germany. With George Fletcher.
- **November 2005:** *A Formal Characterization of PIVOT/UNPIVOT*. ACM Conference on Information and Knowledge Management (CIKM). Bremen, Germany. With Edward Robertson.
- **June 2005:** *Relational Languages for Metadata Integration*. ACM Transactions on Database Systems (TODS). Volume 30, Issue Number 2. With Edward Robertson.
- **June 2005:** *Relational Data Mapping in MIQIS*. Demonstration at ACM SIGMOD International Conference on Management of Data (SIGMOD) 2005. Baltimore, Maryland. With George Fletcher.
- **April 2005:** *A Calculus for Data Mapping*. International Workshop on Database Interoperability (InterDB) 2005. Held in conjunction with COORDINATION, April 2005. Namur, Belgium. With George Fletcher, Edward Robertson, and Dirk Van Gucht.
- **April 2005:** *Mapping Between Data Sources on the Web*. International Workshop on Challenges in Web Information Retrieval and Integration (WIRI) 2005. Held in conjunction with IEEE International Conference on Data Engineering (ICDE), April 2005. Tokyo, Japan. With George Fletcher.

- **March 2005:** *Metadata Management and Relational Databases*. 43rd annual ACM southeast conference (ACMSE) 2005. Kennesaw, Georgia. With Shun Yan Cheung and James J. Lu.
- **August 2004:** *MIQIS: Modular Integration of Queryable Information Sources*. Workshop on Information Integration on the Web (IIWeb) 2004. Held in conjunction with the International Conference on Very Large DataBases (VLDB), August 2004. Toronto, Canada. With George Fletcher, Fulya Erdinc, and Jeremy Engle.
- **July 2003:** *Intrinsic Support for Metadata Integration in Relational Federations*. Engineering Federated Information Systems (EFIS) 2003, Coventry, UK. Held in conjunction with British National Conference on Databases (BNCOD), July 2003. With James J. Lu, Shun Yan Cheung, and Mehdi M. Akhavein.
- **August 2003:** *Managing XML Schemas through XRDB*. Information and Knowledge Engineering (IKE) 2003, Las Vegas, Nevada. With James J. Lu, Shun Yan Cheung, and Mehdi M. Akhavein.
- **November 2001:** *A Relational Algebra for Data/Metadata Integration in a Federated Database System*. ACM Conference on Information and Knowledge Management (CIKM) 2001, Atlanta, Georgia. With Dirk Van Gucht.
- **October 2001:** *Augmenting SQL with Dynamic Typing to Support Interoperability in a Relational Federation*. Engineering Federated Information Systems (EFIS) 2001, Berlin, Germany. With Felix Wyss and Dirk Van Gucht.
- **September 2001:** *FastFDs: A Heuristic-Driven, Depth-First Algorithm for Mining Functional Dependencies from Relation Instances*. Data Warehousing and Knowledge Discovery (DaWaK) 2001, Munich Germany. Long version also IUCS Technical Report TR551. With Chris Giannella and Edward Robertson.
- **September 1996:** *Sethood and Situations*. Journal of Computational Linguistics, pp. 405-408. With T.E. Forster.
- **August 1996:** *Efficient Finite-State Disambiguation of Natural Language*. European Conference on Artificial Intelligence (ECAI) 1996 Workshop on Extended Finite-State Models of Language, Budapest, Hungary.

OTHER PUBLICATIONS

- **July 2004:** *Optimal Tuple Merge is NP-Complete*. IUCS Technical Report TR599. With Edward Robertson.
- **July 2004:** *eXtensible Relational Databases: A Relational Approach to Interoperability*. IUCS Technical Report TR598. With James Lu and Shun Yan Cheung.
- **March 2004:** *Report on the Engineering Federated Information Systems 2003 Workshop (EFIS 2003)*. ACM SIGSOFT Software Engineering Notes, Volume 29, Issue 2 (March 2004). With Anne James, Willi Hasselbring, Stefan Conrad, and Hagen Höpfner.

- **December 2003:** *I308: Information Representation*. Course text, with tutorials, exercises, and lab manual. 2nd edition. 200 pages.
- **August 2002:** *Relational Interoperability*. Ph.D. Thesis, Indiana University at Bloomington.
- **December 2000:** *CSCI A111: Computers and Computing*. Course syllabus, lab manual and project descriptions. IU Class Pak publishing. 65 pages.
- **July 1999:** *MD-SQL: A Language for Meta-Data Queries over Relational Databases*. IUCS Technical Report TR528. With Dirk Van Gucht and Felix Wyss.
- **July 1997:** *GRELogic: A System for Translating and Solving GRE Logic Problems Written in English*. M.Sc. Dissertation, University of Edinburgh.
- **July 1995:** *Efficient Finite-State Disambiguation of Natural Language*. Diploma Dissertation, Cambridge University.
- **July 1994:** *Situational Logic: Toward a Natural Science of Semantics*. M.Phil. Dissertation, Cambridge University.

GRANTS & FELLOWSHIPS

- **August 2003:** Instructional Support Stipend, Microsoft Corporation. Value: \$3,000.
- **January 1998 – August 2002:** Chancellor's Fellowship, Indiana University. Approximate value: \$125,000.
- **May 1993 – August 1993:** NSERC of Canada grant for research into Undecidability and Gödel Incompleteness under Michael M. Makkai (McGill University). Approximate value: \$5,500 (CDN).

TEACHING EXPERIENCE

- **Fall 2003, Fall 2004, Fall 2005:** *Instructor*, CSCI B561 (Advanced Database Concepts)
- **Fall 2002 – Fall 2004, Fall 2005:** *Instructor*, Informatics I308 (Information Representation).
- **Fall 2002:** *Instructor*, CSCI B461 (Database Concepts)
- **Spring 2000, Spring 2001, Spring 2002:** *Instructor*, CSCI A111-A112 (Introduction to Computers and Programming for Non-Majors).
- **Fall 1999, Fall 2000, Fall 2001:** *Associate Instructor* CSCI B461 (Database Concepts) and CSCI B561 (Advanced Database Concepts). Taught by Dirk Van Gucht.
- **Spring 1998:** *Associate Instructor* CSCI A110 (Introduction to Computers and Computing). Taught by Rich Fulcher.