

Mathias Niepert

Department of Computer Science
Lindley Hall 401A
150 S. Woodlawn Ave.
Indiana University
Bloomington, IN 47405-7104

Phone: (812) 855-4318
Fax: (812) 855-4829
mniepert@indiana.edu
<http://www.matlog.net>

Education

Ph.D. Computer Science, Indiana University Bloomington, 2009 (expected)
Minors: Mathematics and Artificial Intelligence
Supervisor: Professor Dirk Van Gucht

Graduate Studies in Computer and Cognitive Science, University of Freiburg, 2002–2004

Vordiplom (B.S.) Computer Science, Clausthal University of Technology, 2002
(*“Sehr Gut”, best possible grade*)

Research and Professional Experience

Visiting Scholar
Dr. Edward N. Zalta
July 2008
CSLI, Stanford University

Research Assistant
Professor Colin Allen
2006–2008
Cognitive Science Program
Indiana University Bloomington

Software Developer
Professor Katy Börner
2007
Cyberinfrastructure for Network Science Center
Indiana University Bloomington

Student Research Assistant
Fraunhofer Institute for Solid-State Physics
2003–2004
Freiburg, Germany

Software Developer
Friedrichstift Leimen
2000–present
Heidelberg, Germany

Emergency Medical Technician
Red Cross Heidelberg
1999–2000
Heidelberg, Germany

Teaching Experience

Associate Instructor, Theory of Computation, Indiana University, Fall 2005

Associate Instructor, Algorithm Design and Analysis, Indiana University, Spring 2006

Associate Instructor, Advanced Database Concepts, Indiana University, Fall 2007

Associate Instructor, Discrete Structures for Computer Science, Indiana University, Spring 2008

Research Interests

Database theory, finite model theory, data mining, reasoning under uncertainty, answer set programming, ontology learning and population

Research Projects

InPhO, The Indiana Philosophy Ontology Project: Developing a Dynamic Ontology for the Stanford Encyclopedia of Philosophy, with Professor Colin Allen and Cameron Buckner. Project homepage: <http://inpho.cogs.indiana.edu>

The Implication Problem for Disjunctive Statements (working title), with Professor Dirk Van Gucht and Professor Marc Gyssens

Publications

Mathias Niepert and Dirk Van Gucht. **Logical Properties of Stable Conditional Independence**. In *Proceedings of the 4th European Workshop on Probabilistic Graphical Models*, Hirtshals, Denmark, pages 225–232, 2008. (selected for plenary presentation)

Mathias Niepert, Dirk Van Gucht, and Marc Gyssens. **On the Conditional Independence Implication Problem: A Lattice-Theoretic Approach**. In *Proceedings of the 24th Conference on Uncertainty in Artificial Intelligence*, Helsinki, Finland, pages 435–443, AUA Press, 2008. (best student paper runner-up award)

Mathias Niepert, Cameron Buckner, Jaimie Murdock, and Colin Allen. **InPhO: A System for Collaboratively Populating and Extending a Dynamic Ontology**. (*demo abstract*). In *Proceedings of the 8th IEEE/ACM Joint Conference on Digital Libraries*, 2008, Pittsburgh, Pennsylvania, 429, ACM Press, 2008.

Cameron Buckner, Mathias Niepert, and Colin Allen. **Taxonomizing Ideas: Designing an Ontology for the Discipline of Philosophy**. In a special issue of *Synthese*, Springer-Verlag Berlin Heidelberg (forthcoming)

Colin Allen, Cameron Buckner, and Mathias Niepert. **The World is Not Flat: Expertise and InPhO**. Selected papers from the Ninth Annual WebWise Conference. *First Monday*, Volume 13, Number 8, 2008.

Mathias Niepert, Cameron Buckner, and Colin Allen. **Answer Set Programming on Expert Feedback to Populate and Extend Dynamic Ontologies**. In *Proceedings of the 21st International FLAIRS Conference*, Coconut Grove, Florida, pages 500–505, AAAI Press, 2008.

Mathias Niepert, Cameron Buckner, and Colin Allen. **A Dynamic Ontology for a Dynamic Reference Work**. In *Proceedings of the 7th IEEE/ACM Joint Conference on Digital Libraries*, Vancouver, British Columbia, pages 288–297, ACM Press, 2007.

Cameron Buckner, Mathias Niepert, and Colin Allen. **InPhO: The Indiana Philosophy Ontology**. *APA Newsletter on Philosophy and Computers*, Volume 7, Number 1, 26–28.

Presentations

On the Conditional Independence Implication Problem: A Lattice-Theoretic Approach. Conference on Uncertainty in Artificial Intelligence, Helsinki, Finland, July 12th, 2008.

Answer Set Programming on Expert Feedback to Populate and Extend Dynamic Ontologies. International FLAIRS Conference, Coconut Grove, Florida, May 17th, 2008.

The Implication Problem for Disjunctive Statements. Research Seminar in Databases and Data Mining, Indiana University, September 24, 2007.

A Dynamic Ontology for a Dynamic Reference Work. *North American Computers and Philosophy (NA-CAP) Conference*, Loyola University, Chicago, July 28, 2007.

A Dynamic Ontology for a Dynamic Reference Work. *IEEE/ACM Joint Conference on Digital Libraries*, Vancouver, Canada, June 22, 2007.

Combining Statistical Language Processing and Defeasible Reasoning for Collaborative Ontology Learning. *Research Seminar in Databases and Datamining*, Indiana University, March 5, 2007.

Ontology Learning and Population from Text. *Research Seminar in Databases and Datamining*, Indiana University, February 13, 2006.

Awards and Honors

Best student paper runner-up award, Conference on Uncertainty in AI, 2008

Indiana University Office of International Services Scholarship, Summer 2008

Travel Grant from the Association for Uncertainty in Artificial Intelligence, 2008

Paul W. Purdom Fellowship, 2008/2009, awarded annually to one student in the School of Informatics, Indiana University

NEH Digital Humanities Start-Up Grant, 2007/2008, with Colin Allen (PI)

Funding for Conference Travel, Cognitive Science Program, 2007

IU New Frontiers in the Arts and Humanities Grant, 2006/2007, with Colin Allen (PI)

Indiana University Graduate Fellowship, 2004/2005

Professional Service and Associations

Member of the Association for Computing Machinery, 2007

External Reviewer, Foundations of Information and Knowledge Systems (FoIKS), 2008

Conference Volunteer, ACM/IEEE Joint Conference on Digital Libraries, 2008

Moderator and organizer, Informatics/Computer Science Graduate Poster Session, 2008