Curriculum Vitae

Timothy R. Colburn

Associate Professor Emeritus
Department of Computer Science
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Education

- B.A. in Philosophy, 1974, Gustavus Adolphus College, St. Peter, MN.
- M.A. in Philosophy, 1978, Brown University, Providence, RI.
- Ph.D. in Philosophy, 1979, Brown University, Providence, RI. Dissertation Title: *A Foundational Theory of Empirical Justification.*
- M.S. in Computer Science, 1981, Michigan State University, East Lansing, MI.

Research Interests

Philosophy of computer science.

Books Published

1. *Philosophy and Computer Science*, (sole author), M.E. Sharpe (Armonk, NY), 2000. Translated to Korean and published by Seokwangsa Publishing, 2005.
2. *Program Verification: Fundamental Issues in Computer Science* (co-editor with J. Fetzer and T. Rankin), Studies in Cognitive Systems, Kluwer Academic Publishers, 1993.

Book Chapters Published

1. Abstraction, Law, and Freedom in Computer Science, in *Putting Information First: Luciano Floridi and the Philosophy of Information*, P. Allo, editor, Wiley-Blackwell, 2010.
2. Knowledge, Truth, and Values in Computer Science, in *Thinking Machines and the Philosophy of Computer Science: Concepts and Principles*, J. Vallverdú, editor, IGI Global Publishing, 2010.
3. Computer Science Methodology, in *The Blackwell Guide to the Philosophy of Computing and Information*, L. Floridi, editor, Blackwell Publishers (Malden, MA), 2003.
4. Computer Science and Philosophy, in *Program Verification: Fundamental Issues in Computer Science*, Studies in Cognitive Systems, T. Colburn, J. Fetzer, and T. Rankin, eds., Kluwer Academic Publishers, 1993.
5. Program Verification, Defeasible Reasoning, and Two Views of Computer Science, in *Program Verification: Fundamental Issues in Computer Science*, Studies in Cognitive Systems, T. Colburn, J. Fetzer, and T. Rankin, eds., Kluwer Academic Publishers, 1993.

Papers Published

1. Type and Metaphor for Programmers, *Techné: Research in Philosophy and Technology 21*, no. 1, pp. 72–106.

2. The Role of Types for Programmers, *Proceedings of the 2012 AISB/IACAP World Congress*, July 2–6, 2012, University of Birmingham, UK.

3. Decoupling as a Fundamental Value in Computer Science, *Minds and Machines: Journal for Artificial Intelligence, Philosophy, and Cognitive Science 21 (2011)*, pp. 241–259.

4. Abstraction, Law, and Freedom in Computer Science, *Metaphilosophy 41*, no. 3, (April 2010), pp. 345–364.

5. Metaphor in Computer Science, *Journal of Applied Logic 6*, no. 4, (December 2008), pp. 526–533.

6. Abstraction in Computer Science, *Minds and Machines: Journal for Artificial Intelligence, Philosophy, and Cognitive Science 17:2*, (Summer 2007), pp. 169–184.

7. Information, Thought, and Knowledge, *Proceedings of the 4th World Multiconference on Systemics, Cybernetics, and Informatics*, July 23–26, 2000, Orlando, Florida. Volume 10, pp. 467–71.

8. Software, Abstraction, and Ontology, *The Monist*, 1999, 82:1. pp. 3–19.

9. Information Modeling Aspects of Software Development, *Minds and Machines: Journal for Artificial Intelligence, Philosophy, and Cognitive Science*, 1998, 8:3. pp. 375–393.

10. Review of Daniel Crevier's *AI: The Tumultuous History of the Search for Artificial Intelligence*, in *Minds and Machines: Journal for Artificial Intelligence, Philosophy, and Cognitive Science*, 1996, 6:1. pp. 109–112.

11. Heuristics, Justification, and Defeasible Reasoning, *Minds and Machines: Journal for Artificial Intelligence, Philosophy, and Cognitive Science*, 1995, 5:4. pp. 467–487.

12. Correlation Between Structure and Normal Boiling Points of Haloalkanes $C_1 - C_4$ Using Neural Networks (co-author with A. Balaban, S. Basak, and G. Grunwald), *Journal of Chemical Information and Computer Science* 1994, v. 34, pp. 1118–1121.

13. Program Verification, Defeasible Reasoning, and Two Views of Computer Science, *Minds and Machines: Journal for Artificial Intelligence, Philosophy, and Cognitive Science*, 1991, 1:1, pp. 97–116.

14. Defeasible Reasoning and Logic Programming, *Minds and Machines: Journal for Artificial Intelligence, Philosophy, and Cognitive Science*, 1991, 1:4, pp. 417–436 (special issue on defeasible reasoning).

15. The Heuristic Control of Logic Programs (co-author with J. Carciofini), *Proceedings of the Third Florida AI Research Symposium*, April 3–6, 1990, Cocoa Beach, FL, pp. 13-18.

16. An Automated Software Design Evaluator (co-author with N. Giddings), *Proceedings of the 1984 ACM Annual Conference* (San Francisco, Oct. 8–10). ACM, New York, 1984.

Papers Presented

1. The Role of Types for Programmers, 2012 AISB/IACAP World Congress, University of Birmingham, UK, July 2–6, 2012.

2. Knowledge, Truth, and Values in Computer Science, 2009 European Conference on Computing and Philosophy, Barcelona, Spain, July 2–4, 2009.

3. Law, Freedom, and Constraint in Computer Science, 2008 European Conference on Computing and Philosophy, Montpellier, France, June 16–18, 2008.

4. Metaphor in Computer Science, 2007 European Conference on Computing and Philosophy, Twente, Netherlands, June 21–23, 2007.

5. What is Philosophy of Computer Science?, 2006 European Conference on Computing and Philosophy, Trondheim, Norway, June 22–24, 2006.

6. Abstraction in Computer Science, 2006 European Conference on Computing and Philosophy, Trondheim, Norway, June 22–24, 2006.

7. Information, Thought, and Knowledge, part of an invited session on Cognitive Aspects of Informatics, at the 4th World Multiconference on Systemics, Cybernetics, and Informatics, July 23-26, 2000, Orlando, Florida.

8. Modelling Mutagenicity with Artificial Neural Networks (co-author with S. Basak and G. Grunwald), 10th International Conference on Mathematical and Computer Modeling and Scientific Computing, July 5-8, 1995, Boston, Massachusetts.

9. The Heuristic Control of Logic Programs (co-author with J. Carciofini), Third Florida AI Research Symposium, April 3-6, 1990, Cocoa Beach, Florida.

Technical Reports

1. Modeling Defeasible Reasoning, UMD Computer Science Technical Report 90-7, July 1990.

2. LogLisp Programming System Users Manual, Rome Air Development Center contract number F30602-84-C-0121, Griffiss Air Force Base, Rome, NY.

3. The LogLisp Programming System, *Scientific Honeyweller*, Summer 1988, vol. 9, number 1, Minneapolis, MN.

4. LogLisp: Extending Lisp for Logic Programming, *Proceedings of the 9th Annual Honeywell International Computer Sciences Conference*, May, 1985, Bloomington, MN.

Grants and Leaves Awarded

1. University of Minnesota Office of International Programs Travel Grant, July 2009 (Barcelona, Spain). Project: E-CAP'09.

2. University of Minnesota Office of International Programs Travel Grant, June 2008 (Montpellier, France). Project: E-CAP'08.

3. University of Minnesota Office of International Programs Travel Grant, June 2007 (Twente, The Netherlands). Project: E-CAP'07.

4. University of Minnesota Office of International Programs Travel Grant, June 2006 (Trondheim, Norway). Project: E-CAP'06.

5. UMD Chancellor's Small Grant, Fall 2006. Project: Multimedia support for teaching Computer Ethics.

6. UMD Chancellor's Small Grant, Fall 2005. Project: Multimedia support for teaching Computer Ethics.

7. University of Minnesota Faculty Sabbatical Leave, 1997-98. Project: Book on philosophy and computer science.

8. University of Minnesota Single Quarter Leave, fall quarter 1995. Project: Philosophy and artificial intelligence.

9. National Institute of Health, 1990-93. Project: Structure Activity Relationships for Anticonvulsant Drug Development (collaborator).

10. University of Minnesota Single Quarter Leave, spring quarter 1991. Project: Search Abstraction in Logic Programs.

11. National Science Foundation instrumentation grant, 1989. Computer and Information Science and Engineering (collaborator).

12. University of Minnesota Faculty Summer Research Fellowship, Summer Session, 1989. Project: Heuristically Controlled Logic Programs.

13. Honeywell Systems and Research Center Initiatives Grant, 1987. Project: A Bayesian Probability Model for Data Fusion (collaborator).

14. Honeywell Systems and Research Center Initiatives Grant, 1986. Project: Extending a Logic Programming System for Defeasible Reasoning. (principal investigator)

15. Rome Air Development Center, 1984-1987. Project: The LogLisp Programming System (principal investigator)

Professional Responsibilities

- Book review editor for *Minds and Machines: Journal for Artificial Intelligence, Philosophy, and Cognitive Science*, 2001–2016.

- Paper reviewer for *Minds and Machines* special issue on philosophy of computer science, vol. 21 (2011).

- Paper reviewer, Philosophy of Computer Science track, European Conference on Computing and Philosophy (ECAP'09), Barcelona, Spain, July 2–4, 2009.

- Paper reviewer for *Techné: Research in Philosophy and Technology*, 2008.

- Paper reviewer, Philosophy of Computer Science track, European Conference on Computing and Philosophy (ECAP'07), Twente, Netherlands, June 21–23, 2007.

- Program committee member, Philosophy of Computer Science track, European Conference on Computing and Philosophy (ECAP'06), Trondheim, Norway, June 22–24, 2006.

UMD Computer Science Department Responsibilities

- Alumni Newsletter Editor

- Career Advisor
- Internship Coordinator.
- Honors Coordinator

Work Experience

- 5/22 to present: Associate Professor Emeritus of Computer Science, University of Minnesota, Duluth, Duluth, MN.
- 5/94 to 5/22: Associate Professor of Computer Science, University of Minnesota, Duluth, Duluth, MN.
- 9/88 to 5/94: Assistant Professor of Computer Science, University of Minnesota, Duluth, Duluth, MN.
- 8/83 to 8/88: Principal Research Scientist, Honeywell Systems and Research Center, Minneapolis, MN.
- 8/82 to 8/83: Systems Analyst, American Collectors Association, Minneapolis, MN.
- 6/80 to 6/82: Computer Research Consultant, Institute for Research on Teaching, Michigan State University, East Lansing, MI.
- 1/79 to 6/79: Assistant Professor of Philosophy, Albion College, Albion, MI.
- 9/75 to 6/78: Teaching Assistant, Department of Philosophy, Brown University, Providence, RI