

# Dr. Timothy Wilking Finin

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## Professional Preparation

- S.B. in Electrical Engineering, Massachusetts Institute of Technology, 1971. thesis: Three Problems in Analyzing Scenes, advisor: Patrick H. Winston
- M.S. in Computer Science, University of Illinois, Urbana-Champaign, 1977. thesis: An Interpreter and Compiler for Augmented Transition Networks, advisor: David L. Waltz
- Ph.D. in Computer Science, University of Illinois, Urbana-Champaign, 1980. dissertation: The Semantic Interpretation of Compound Nominals, advisor: David L. Waltz

## Appointments

- 17- Willard and Lillian Hackerman Chair in Engineering, UMBC
- 91-: Professor of Computer Science and Electrical Engineering, UMBC
- 14-15: Johns Hopkins University (Sabbatical leave)
- 07-: Research Scientist, Human Language Technology Center of Excellence, Johns Hopkins Univ.
- 07-08: Johns Hopkins Applied Physics Laboratory (Sabbatical leave)
- 99- 01: Director, Institute for Global Electronic Commerce, UMBC, Baltimore, MD
- 91-95: Professor and Chair, Department of Computer Science, UMBC
- 87-91: Technical Director, Knowledge Based Information Processing, Unisys Center for Advanced Information Technology, Paoli PA
- 87-91: Adj. Assoc. Professor, Computer & Information Science, U. of Pennsylvania, Philadelphia PA
- 80-87: Assistant Professor, Computer and Information Science, U. of Pennsylvania, Philadelphia PA
- 74-80: Research Assistant, Research Associate, Coordinated Science Lab, U. of Illinois, Urbana IL
- 77: Visiting Research Staff, Computer Science Department, IBM Research Lab, San Jose CA
- 71-74: Research Staff, Artificial Intelligence Laboratory, M.I.T., Cambridge MA
- 70: Research Assistant, The Cambridge Project, M.I.T., Cambridge MA

## Recent relevant publications (profiles on [Google Scholar](#) and [DBLP](#))

- Varish Mulwad, Vijay S Kumar, Jenny Weisenberg Williams, Tim Finin, Sharad Dixit, Anupam Joshi, Towards Semantic Exploration of Tables in Scientific Documents, Workshop on Semantic Technologies for Scientific, Technical and Legal Data, Proc. ESWC 2023, May 2023. Best paper award.
- Aritrano Piplai, Mike Anoruo, Kayode Fasaye, Anupam Joshi, Tim Finin, Ahmad Ridley, Knowledge Guided Two-player Reinforcement Learning for Cyber Attacks and Defenses, Int. Conf. on Machine Learning and Applications, IEEE, Dec. 2022.
- Priyanka Ranade, Sanorita Dey, Anupam Joshi, Tim Finin, Computational Understanding of Narratives: A Survey, IEEE Access, v10, pp. 101575-101594, September 2022.
- Ankur Padia, Francis Ferraro, Tim Finin, Jointly Identifying and Fixing Inconsistent Readings from Information Extraction Systems, 3rd Workshop on Knowledge Extraction and Integration for Deep Learning Architectures, ACL, May 2022.
- Ramin Ayanzadeh, John Dorband, Milton Halem, and Tim Finin, Multi-Qubit Correction for Quantum Annealers, Nature Scientific Reports, Springer, July 2021

## Other significant publications

- Casey Hanks, Michael Maiden, Priyanka Ranade, Tim Finin, and Anupam Joshi, Recognizing and Extracting Cybersecurity-relevant Entities from Text, Workshop on Machine Learning for Cybersecurity, International Conference on Machine Learning, July 2022.
- Sai Sree Laya Chukkapalli, Anupam Joshi, Tim Finin, and Robert F. Erbacher, CAPD: a context-aware, policy-driven framework to support secure and resilient IoBT Operations, Artificial Intelligence and Machine Learning for Multi-Domain Operations Applications IV, SPIE Defense + Commercial Sensing, April 2022.
- Priyanka Ranade, Aritrani Piplai, Anupam Joshi, and Tim Finin, CyBERT: Contextualized Embeddings for the Cybersecurity Domain, Workshop on Big Data for Cybersecurity, IEEE International Conference on Big Data, December 2021.
- Lavanya Elluri, Sai Sree Laya Chukkapalli, Karuna Pande Joshi, Tim Finin, Anupam Joshi, A BERT Based Approach to Measure Web Services Policies Compliance with GDPR, IEEE Access, October 2021.
- Aritrani Piplai, Sudip Mittal, Anupam Joshi, Tim Finin, James Holt, and Richard Zak, Creating Cybersecurity Knowledge Graphs from Malware After Action Reports, IEEE Access, Nov. 2020.
- Sai Vallurupalli, Jennifer Sleeman, Tim Finin, Fine and Ultra-Fine Entity Type Embeddings for Question Answering, Int. Semantic Web Conf., Nov. 2020.

## Synergistic Activities

- I have mentored 31 Ph.D. students who have completed their degrees at UMBC or the University of Pennsylvania. I have mentored more than 30 M.S. students who have done a thesis.
- I have received more than 90 research awards, contracts and gifts to support research from government agencies and companies, including support from NSF, DARPA, NSA, NASA, NIST, ONR and AFOSR.
- I was an editor-in-chief of the Elsevier Journal of Web Semantics (2006-2016). This journal was established in 2003 and is ranked second by Google Scholar Metrics in the category *Database and Information Systems*. I am co-editor of Viewpoints opinion column in the Communications of the ACM (2013-present).
- I am a former AAAI councilor and former member of the board of directors of the Computing Research Association. I am an ACM Fellow (2018), a AAAI Fellow (2013), UMBC Presidential Research Professor (2012-2015), FIPA Fellow (1997) and IEEE Technical Achievement Award recipient (2009). I was appointed as the Willard and Lillian Hackerman Chair in Engineering at UMBC in 2017.
- I have been involved in a number of significant standardization efforts. I was a member of the DARPA-NSF Knowledge Sharing Effort in the 1990s that defined standards for multi-agent systems as well subsequent FIPA effort that followed. I served as a member of the W3C Web Ontology Working Group that developed the specification for the OWL Semantic Web ontology language and the PI of one of the original DARPA DAML program projects that explored and evolved Semantic Web technology. I was a member of the W3C CSV on the Web Working Group that is developing a recommendation to provide higher interoperability when working with datasets using the CSV (Comma-Separated Values) or similar formats.
- I have been general or program chair of major conferences, including IEEE Conference on Artificial Intelligence for Applications (twice), ACM Conference on Information and Knowledge Management (twice), ACM Autonomous Agents Conference, ACM Conference on Mobile and Ubiquitous Computing, the International Semantic Web Conference, AAAI's *AI and the Web* track (twice), and IEEE Conference on Intelligence and Security Informatics.