

NAME

George S. Cowan

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HOME ADDRESS INFO

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EDUCATION

Wayne State University, PhD, Computer Science, 1999, Advisor: R. G. Reynolds
Illinois Institute of Technology, MS, Operations Research, 1978
Georgia State University, BA, Mathematics, 1970

CONSULTING CLIENTS AND POSITIONS HELD

Pfizer Global Research and Development, Ann Arbor, Michigan, 1996 – 2007
Principal Senior Scientist, Computer Aided Drug Discovery and Lead Discovery Computational Chemistry.
Before that: Manager, Application Development Programming. 1996 – 2001: Consultant in Software Engineering and Artificial Intelligence.

Wayne State University, Detroit, Michigan, 1994 - 1996
Research Assistant, then Instructor in Computer Science

George S. Cowan and Associates, Ypsilanti, Michigan, 1987 – 1994
Database and software consulting in the Detroit area

Telaction Corporation, Schaumburg, Illinois, 1986 - 1987
Decision Support Director at a short-lived startup company; managed modeling effort for technical and business issues

George S. Cowan and Associates, Chicago, Illinois, 1980 - 1986
Operations research and database consulting in the Chicago area

Walgreen Drug Company, Deerfield, Illinois, 1973 - 1980
Data Processing Training and Standards Coordinator, then Inventory Control Programming Manager

United of America Insurance, Chicago, Illinois, 1971 - 1973
Programmer-Analyst

Colonial Stores, Inc., Atlanta, Georgia, 1970 - 1971
Programmer Trainee

PROFESSIONAL ACTIVITIES

Global Vision, Inc., a non-profit volunteer educational and research organization in the area of simulation of global social and environmental issues. Vice President and Board Member, 2007-Present.

Association for Computing Machinery (ACM),
Southeast Michigan ACM SigART Chapter Chair, 1995

Institute of Electrical & Electronics Engineers (IEEE), and
IEEE Computer Society

Institute for Operations Research and the Management Sciences (INFORMS)
Chair of Operations Research Section (ORSA), Chicago chapter, 1986 - 1987

PUBLICATIONS

George S. Cowan and Robert G. Reynolds, *The Automatic Acquisition of Software Engineering Knowledge: Evolution-Based Approaches to Knowledge Acquisition in Automatic Programming Systems*, World Scientific Press, 2003.

George S. Cowan and Robert G. Reynolds, "Learning to Assess the Quality of Genetic Programs using Cultural Algorithms", Proceedings of the 1999 Congress on Evolutionary Computation, IEEE Computer Society, Los Alamitos, CA, 1999, pp. 1679-86.

George S. Cowan and Robert G. Reynolds, "The Metrics Apprentice: Using Cultural Algorithms to Formulate Quality Metrics for Software Systems", Proceedings of the 1999 Congress on Evolutionary Computation, IEEE Computer Society, Los Alamitos, CA, 1999, pp. 1664-71.

George S. Cowan and Robert G. Reynolds, "Evolving Distributed Software Engineering Environments", Proceedings of the Seventeenth IEEE Symposium on Reliable Distributed Systems, IEEE Computer Society, Los Alamitos, CA, 1998, pp. 151-157.

V. Rajlich and G. S. Cowan, "Towards Standards for Experiments in Program Comprehension", Proceedings of the 5th International Workshop on Program Comprehension, IEEE Computer Society, Los Alamitos, CA, 1997, pp. 160-161.

R. G. Reynolds, J. J. Maletic, E. Zannoni, G. S. Cowan (presenter), "Software Reuse in the PM System", Proceedings of the 5th Annual Workshop on Software Reuse, Palo Alto, CA, October, 1992.

George S. Cowan, Mark J. Jakiela, and Brian C. Kuttner, "MEX: An Object Oriented Approach to Feature-Based Design", Proceedings of the 2nd Annual Expert Systems Conference and Exposition, Detroit, MI, April, 1988.

GRANTS, REPORTS, AND PRESENTATIONS

George S. Cowan, "Active Learning for Drug Discovery", Pfizer C4 Computational Chemistry Conference, Groton, CT, October, 2006.

George S. Cowan, "Modeling and prediction in early stage drug discovery", invited presentation and research visit at the Microsoft Research – University of Trento Centre for Computational and Systems Biology. Trento, Italy, September 11 – 15, 2006.

George S. Cowan, "The transition from scientific computation to computing with scientific concepts", Converging sciences, Trento, Italy, December, 2004.

George S. Cowan, "Problems and Opportunities for Machine Learning in Drug Discovery", Lecture given at the International School on Computational Sciences for Complex Systems in Biology (CSSB 2004), Università di Trento, Rovereto, Italy, 2004.

George S. Cowan, "13 Ominous Threats to Machine Learning in Drug Discovery", Ford Infotronics and Systems Analytics Seminar, Dearborn, MI, Sept. 17, 2002.