

**VITA**  
**ROGER E. CAVALLO**

**PERSONAL DATA**

Home Address: 1648 Holland Avenue, Utica, New York, 13501  
Home Phone: (315) 793-0379  
Office Address: Department of Computer and Information Science, State University of New York, Institute of Technology, P.O. Box 3050, Utica, New York, 13504-3050  
Office Phone: (315) 792-7231 or 792-7354  
Birth Date: October 24, 1944  
Birth Place: Somerville, Mass.  
Marital Status: Married in 1975 (Colleen)  
Children: Daughter (Lydia) born in 1976; son (Ruggiero) born in 1980; son (Giancarlo) born in 1982; daughter (Maria Corrina) born in 1985; daughter (Cristiana Joan) born in 1992

**EDUCATION**

1978, Ph.D., School of Advanced Technology, State University of New York at Binghamton (Systems Science). Dissertation Title: "The Role of General Systems Methodology in Social Science Research".  
1973, M.S., School of Advanced Technology, State University of New York at Binghamton. Thesis Title: "Optimization with Multi-Criterion Objective Functions".  
1967, B.A., Boston College (Economics).

**EMPLOYMENT**

1993-present, Professor, Department of Computer and Information Science, SUNY Institute of Technology, Utica, NY, 13504  
2003-2007, Chairman, Department of Computer and Information Science, SUNY Institute of Technology, Utica, NY, 13504  
1989-1993, Chairman, Department of Computer and Information Science, SUNY Institute of Technology, Utica, NY, 13504  
1980-1993, Associate Professor, Department of Computer and Information Science, SUNY Institute of Technology, Utica, NY, 13504  
1983-1987, Adjunct Professor, Thomas J. Watson School of Engineering, Applied Science, and Technology, SUNY University Center at Binghamton, Binghamton, NY, 13901

- 1982 (Summer), Research Faculty, Rome Air Development Center, Rome, NY
- 1981 (Summer), Visiting Researcher, Department of Computing Technology, Bell Laboratories, Piscataway, NJ, 08854
- 1980 (Spring), Visiting Assistant Professor, Department of Systems Science, SUNY Binghamton, Binghamton, NY, 13901
- 1979-1980, Visiting Research Professor/Lecturer, Ordinariat für Systemtheorie, Johannes Kepler Universität, Linz, Austria
- 1979 (Sept/Oct.), Guest Professor, Institute for Educational Informatics, Forschungs und Entwicklungszentrum für Objectivierte Lehr- und Lehrverfahren, GmbH, Paderborn, Federal Republic of Germany
- 1979 (May), Guest Researcher, Institute for Information Systems Research, Gesellschaft für Mathematik und Datenverarbeitung, MBH, Bonn, Federal Republic of Germany
- 1973-1978, Lecturer, School of Advanced Technology, State University of New York, Binghamton, NY, 13901
- 1971-1973, Teaching Assistant, School of Advanced Technology, State University of New York, Binghamton, NY, 13901
- 1968-1971, Mathematics Teacher, Windsor Central High School, Windsor, NY
- 1967-1968, Teaching Assistant, Economics Department, State University of New York, Binghamton, NY, 13901
- 1964-1967, Spectrophotometrist, Children's Cancer Research Foundation, Boston, MA.

## **AWARDS AND HONORS**

- Certificate of Recognition, Russian Federation State Committee for Higher Education, for development and participation in distance education (Masters Degree) program (1995)
- Faculty Exchange Scholar of the State University of New York (1990; lifetime appointment)
- William Goodell Research Creativity Award (1989); Awarded by SUNY Institute of Technology
- NYS/UUP Professional Development and Quality of Working Life Experienced Faculty Travel Award (1987)
- Air Force Office of Scientific Research Grant: Summer Faculty Research Program (1982)
- NSF Research Grant, co-investigator (three years, 1979-1982, SUNY -- \$157,838)
- Research Grant (1979-1980), Austrian Society for Cybernetic Studies (\$6,000)
- Distinguished Ph.D. Dissertation Award, Science and Mathematics Category, State University of New York, University Center at Binghamton, 1978

NSF Grant for Knox College Summer Institute in Mathematics, 1971

Undergraduate Economics Honors Program, Boston College, 1967

## **PUBLICATIONS**

### **Books**

- 1979, *The Role of Systems Methodology in Social Science Research*, Martinus Nijhoff, Boston.
- 1979, *Systems Research Movement: Characteristics, Accomplishments, and Current Developments* (editor), International Report published by the Society for General Systems Research. Translated into Hungarian (Rendszerkutató Mozgalom: Jellemzők, eredmények, és jelenlegi fejezetek), published, and distributed to all Hungarian schools by the Bureau For Systems Analysis, Budapest, Hungary.
- 1981, Special Issue of *International Journal of General Systems* (co-editor), Vol. 7, no. 1.
- 1982, *Systems Methodology in Social Science Research: Recent Developments* (editor), Kluwer Nijhoff Publishing, Boston and The Hague.

### **Papers**

- 1976, "General Systems Methodology and Large-Scale Systems" (with S. Islam). In: *Cybernetics and Modelling and Simulation of Large-Scale Systems*, T. Oren (editor), International Association for Cybernetics, Namur, Belgium.
- 1977, "Systems Methodology in Sociology" (with M. Conklin). *International Journal of Systems Science*, vol. 8, No. 1.
- 1977, "On the Solution of Multi-Attribute Problems Involving Counting in Intersecting Sets" (with H. Hellerman). *International Journal of Computer and Information Sciences*, vol. 6, No. 1.
- 1978, "A Conceptual Foundation For Systems Problem Solving" (with G. Klir). *International Journal of Systems Science*, vol. 6, No. 1.
- 1978, "A Problem-Solving Basis for General Systems Research" (with G. Klir). In: *Applied General Systems Research*, G. Klir (editor), NATO Conference Series, Plenum Press, NY.
- 1978, "General Systems Methodology and Political Science" (with E. Ziegenhagen). In: *Applied General Systems Research*, G. Klir (editor), NATO Conference Series, Plenum Press, NY.
- 1978, "Survey of Main Influences on Systems Views". Appendix B of: *Applied General Systems Research*, G. Klir (editor), NATO Conference Series, Plenum Press, NY.

- 1979, "Reconstructability Analysis of Multi-Dimensional Relations: A Theoretical Basis for Computer-Aided Determination of Acceptable Systems Models" (with G. Klir). *International Journal of General Systems*, vol. 5, No. 3.
- 1979, "A Primer on Formal Languages and Their Acceptors". *SAT Document Series*, 79-01-39, School of Advanced Technology, State University of New York at Binghamton.
- 1979, "General Systems Methodology: Designs for Intuition-Amplification" (with F. Pichler). In: *Improving the Human Condition: Quality and Stability in Social Systems*, R. Ericson (editor), Springer-Verlag.
- 1979, "The Structure of Reconstructable Relations: A Comprehensive Study" (with G. Klir). *Journal of Cybernetics*, vol. 9; reprinted in *Progress in Cybernetics and Systems Research*, Vol. VII, Hemisphere Press, Washington.
- 1980, "Reconstructability, Identifiability, and the Evaluation of Structure Hypotheses: an Issue in the Logic of Modelling". In: *Systems Science and Science*, B. Banathy and R. Rosen (editors), Society for General Systems Research, Louisville, Kentucky.
- 1981, "General Systems Concepts for Process Control" (with F. Pichler). In: *INFO II: Proceedings of the Second International Conference on Information Sciences and Systems*, Birkhauser-Verlag, Basel; also in *Advances in Control*, D.G. Lainiotis and W.S. Tzannes (editors), D. Reidell Publ., Dordrecht, Boston, London.
- 1981, "Reconstructability Analysis: Overview and Bibliography" (with G. Klir). *International Journal of General Systems*, vol. 7, no. 1.
- 1981, "Reconstructability Analysis: Evaluation of Reconstruction Hypotheses" (with G. Klir). *International Journal of General Systems*, vol. 7, no. 1.
- 1981, "Systems of Overall Possibilities: Reconstruction Aspects" (with G. Klir). In *Applied Systems and Cybernetics*, G.E. Lasker (editor), Pergamon Press, Oxford.
- 1982, "Reconstruction of Possibilistic Behavior Systems" (with G. Klir). *Fuzzy Sets and Systems*, vol. 8, pp.175-197.
- 1982, "General Systems Modelling of Conflict Within Nations" (with E. Ziegenhagen). In *Systems Methodology in Social Science Research: Recent Developments*, R. Cavallo (editor), Kluwer Nijhoff Publishing, Boston.
- 1982, "Science, Systems Methodology, and the 'Interplay Between Nature and Ourselves'". In *Systems Methodology in Social Science Research: Recent Developments*, R. Cavallo (editor), Kluwer Nijhoff Publishing, Boston.
- 1982, "Decision Making in Reconstructability Analysis" (with G. Klir). *International Journal of General Systems*, vol. 8, no. 4.
- 1983, "An Expert System for Systems Research in Command and Control". USAF-SCEEE Faculty Research Reports, St. Cloud, FL.

- 1984, "Rekonstrukcja Posibilistycznych Systemow Behavioralnych" (with G. Klir). Polish translation of "Reconstruction of Possibilistic Behavior Systems"; in *Projectowanie i systemy*, vol. VI.
- 1985, "Programming Languages, Databases, Artificial Intelligence: Conceptual Modelling: Systems Methodology", (with M. Pittarelli). In: *Systems Inquiring: Theory, Philosophy, Methodology*, Bela H. Banathy (editor), Intersystems Publ., Seaside, CA.
- 1987, "The Theory of Probabilistic Databases", (with M. Pittarelli). In: *Proceedings of the 13th International Conference on Very Large Databases*, P. Hammersley, (editor), Morgan Kaufmann Publ., Los Altos, CA.
- 1992, "Iterative and Recursive Algorithms for Tree Search and Partition Search of the Lattice of Structure Models" (with J. DeVoy). *International Journal of General Systems*, vol.20, No. 3
- 1992, "Lattices of Structure Models and Database Schemes". *International Journal of General Systems*, vol. 20, No. 3
- 2006, "Whither Reconstructability Analysis" (Abstract of talk at 6th International Conference on Complex Systems (ICCS) Boston, MA).

#### **PAPERS DELIVERED, PROFESSIONAL SERVICE**

- 1974, Invited talk/seminar: "Discrete and Algorithmic Methods: A Needed Focus in Mathematics Education", Regional Meeting of New-York State Mathematical Association of Two-Year Colleges.
- 1976, Invited symposium participant: *General Epistemology*. Panel: "Simulation: Modeling Format for Scientists of the Second Bicentennial", AAAS/SGSR Annual Meeting.
- 1977, Papers delivered: "A Problem Solving Basis for General Systems Research" (with G. Klir); "General Systems Methodology and Political Science" (with E. Ziegenhagen), NATO International Conference on Applied General Systems Research - Recent Developments and Trends.
- 1978, Organized and chaired symposium (with P. Gomez): *General Systems Problem-Solving: Prospects and Perspectives*", AAAS/SGSR Annual Meeting.
- 1978, Paper delivered: "Explanation and Amplification in Systems Investigations", Fourth European Meeting on Cybernetics and Systems Research, Linz, Austria.
- 1978, Paper delivered: "General Systems Methodology: an Integrated Framework for Operations Research", Annual Meeting of the Institute of Management Science/Operations Research Society.
- 1978, Papers delivered: "Intra-National Conflict as Signals of System Disfunction: Empirical and Interpretive Results" (with E Ziegenhagen); "General Systems Methods: Contributions to Peace Science Research", Fifth Annual Meeting of the Northeast

- 1979, Chairman of International Task Force commissioned by SGSR to prepare a State of the Art Report on Systems Research.
- 1979, Organized and chaired symposium: *General Systems Methodology*, AAAS/SGSR Annual Meeting.
- 1979, Panel participation: *Symposium on General Systems Research: A Science, A Methodology, A Technology*, AAAS/SGSR Joint Symposium, Annual Meeting.
- 1979, Lecturer: Summer School on Systems Methodology, organized by The Netherlands Society for Systems Research at Delft, The Netherlands.
- 1979, Main presentation summarizing report on the *Systems Research Movement: Characteristics, Accomplishments, and Current Developments*, Silver Anniversary Annual Meeting of the Society for General Systems Research, London, England.
- 1979, Paper delivered: "Philosophy and Systems Research", Second Annual workshop on Philosophische Aspekte der Bildungsinformatik, Paderborn, Federal Republic of Germany.
- 1980, Paper delivered: "Reconstructability, Identifiability, and the Evaluation of Structure Hypotheses", AAAS/SGSR Annual Meeting.
- 1980, Chairman: Editorial Committee on General Systems Methodology for the *General Systems Yearbook*.
- 1980-1982, SGSR representative on AAAS Section Committee (K) on Social and Economic Science
- 1980, Papers presented: "Reconstructability Analysis" and "System Complexity Measures for Comparative Social Research", Fifth European Meeting on Cybernetics and Systems Research, Vienna, Austria.
- 1980, Invited series of lectures, Spring School on Methodological Foundations of Systems Research, Science and Technology; Polish Academy of Sciences, Committee of the Science of Science, Warsaw, Poland.
- 1980, Workshop: Presentation of the General Systems Problem Solver (Conceptual Background, Development, Theory, and Use) for Data Processing Experts and Statisticians working in the Social Sciences in West Germany; organized by Informationszentrum Sozialwissenschaften, Bonn, Federal Republic of Germany.
- 1981, Invited contributor: Concordia International Symposium on Educational Systems Theory and Analysis, Concordia University, Montreal, Canada.
- 1981, Lecturer: International School of Cybernetics and Systems, organized by Asociacion Mexicana De Sistemas y Cibernetica, at Mexico City.
- 1982, Program Committee: Organizer of Plenary Sessions; Invited Symposium Speaker: International Conference on Systems Methodology, sponsored by SGSR and the International Federation for Systems Research.
- 1983, Paper delivered: "Graphic Elements of an Expert System for System Investigation" (with J. Dolan), AAAS/SGSR Annual Meeting.

- 1984, Paper delivered: "Inductive Ambiguities and Intuition-Amplification" (with M. Pittarelli), New York State Center for Advanced Technology in Computer Applications and Software Engineering, Winter Meeting.
- 1987, Paper delivered: "Theory of Probabilistic Databases" (with M. Pittarelli), 13th International Conference on Very Large Databases, Brighton, England.
- 1991, International Program Advisory Committee, **Eurocast '91**: Second International Workshop on Computer Aided Systems Theory
- 1983-1993, Research Review Committee member, Research Advisory Committee member, New York State Center for Advanced Technology in Computer Applications and Software Engineering
- 1993/1994, International Program Committee, **CAST '94**: Fourth International Workshop on Computer Aided Systems Technology
- 1997, "Systems and Computer Science" (Talk at 10th Las Palmas Seminar on Computer Science, Systems and Applications, International Center for Research in Computer Science, Universidad de Las Palmas de Gran Canaria, Las Palmas, Spain)
- 1997, "Teaching Systems Science in Computer and Informatics Curricula" (Round Table at 10th Las Palmas Seminar on Computer Science, Systems and Applications, International Center for Research in Computer Science, Universidad de Las Palmas de Gran Canaria, Las Palmas, Spain)
- 2006, "Whither Reconstructability Analysis" (Talk at 6th International Conference on Complex Systems (ICCS) sponsored by New England Complex Systems Institute, Boston, MA).