

# Curriculum Vitae

## Steven Evans

### EDUCATION

1967-1971      Doctoral Studies in Computer Science  
  
Carnegie-Mellon University (C-MU)  
  
(M.S., Computer Science, 1971, C-MU)

1965-1967      Doctoral Studies in Mathematics  
  
University of Colorado

1961-1965      Tulane University ( B.A., 1965)

### EMPLOYMENT/POSITIONS

2001 - present      President and Senior Research Scientist  
  
Therapeutics Research Institute, Omaha, NE

2000 - present      President and Chief Science Officer  
  
Genetic Services Management, Inc., Omaha, NE,

1999 - 2000      Vice President and Chief Science Officer  
  
Genetic Services Management, Inc., Omaha, NE

1997 - 1999      Senior Research Scientist and Director of R&D - Omaha branch  
  
Gene Logic, Inc, Gaithersburg, Maryland

1993 - 1997      Senior Research Scientist and Director of R&D - Omaha branch  
  
OncorMed, Inc., Gaithersburg, Maryland

1990 - 1993      President and CEO  
  
Genetic Systems Management, Inc., Omaha, NE  
  
(acquired by OncorMed, Inc., Gaithersburg, Maryland, 1993)

1989 - 1993      Vice President for Research and Development  
  
Health Care Expert Systems, Inc., Omaha, NE and Des Moines, IA

1983 - present Senior Research Scientist,  
Hereditary Cancer Institute, Omaha, NE

1975 - 1989 Senior Research Scientist and Director, Office of Instructional Science Research,  
Creighton University Health Sciences, Omaha, NE

1971 - 1974 Research Associate, Faculty of the Graduate School of Industrial Administration,  
Carnegie-Mellon University, Pittsburgh, PA

#### **PUBLICATIONS:**

Evans, S and Fusaro, R.M. "Central Dogma: The Clinical View," The Scientist 19(16):9, Aug. 29, 2005.

Evans, S. "Interim Clinical Study Results for A Supplement for Cancer Risk Reduction." Townsend Letter for Doctors & Patients, July, 2005.

Evans, S. "Addressing Human Dimensions in Implementing a Nutraceutical Product Trial." The Journal of the American Nutraceutical Association 2:3-6, 2004.

Block, J.B. and Evans, S. "Strategies for More Effective CAM Clinical Practice." The Journal of the American Nutraceutical Association 4:14-19, 2002..

Evans, S, and Block, J..B. "Why Funding for Nutraceutical Clinical Trial Research Will Remain Minimal." The Journal of the American Nutraceutical Association 1:12-15, 2002

Block JB, Evans S. "A Review of Recent Results Addressing the Potential Interactions of Antioxidants with Cancer Drug Therapy." The Journal of the American Nutraceutical Association 1:11-20,2001.

Evans, S. and Block, J.B. "Ethical Issues Regarding Fee-for-Service Funded Research within a Complementary Medicine Context," The Journal of Alternative and Complementary Medicine, Vol. 7, No. 5, 2001.

Block, J.B. and Evans, S. "Clinical Evidence Supporting Cancer Risk Reduction with Antioxidants and Implications for Diet and Supplementation," The Journal of the American Nutraceutical Association, Vol. 3, No. 3, fall, 2000, pp 6-16.

Evans, S., et al. "Automated Detection of Hereditary Syndromes Using Data Mining," Computers and Biomedical Research, Vol. 30, No.5, 1997, pp. 337-348.

Evans, S, Lynch, HT, and Fusaro, RM. "Clinical Results Using Informatics to Evaluate Hereditary Cancer Risk," in Gardner, RM, ed. Proceedings of the Nineteenth Annual Symposium on Computer Applications in Medical Care. New Orleans: Hanley & Belfus, October, 1995 pp 834-838.

Evans, S. "Successful Strategies for the Dissemination of PACE/CPC: A Nursing Expert System for Clinical Care," in Proceedings of the 7th World Congress on Medical Informatics, Geneva, Switzerland, 1993.

- Evans, S. "COMMES: An Expert System for Nursing Continuing Education," in Proceedings of the International Symposium on Medical Informatics and Education, Victoria, May, 1989.
- Evans, S. "Expert Systems in Nursing Care: Issues and Expectation," in Proceedings of the 12th Annual Symposium on Computer Applications in the Medical Care, Washington, D.C., November, 1988.
- Evans, S. "A Clinical Tool for Nursing," Computers in Healthcare, August, 1988, pp. 41-44.
- Evans, S. "The COMMES Nursing Consultant System - A Practical clinical Tool for Patient Care," in Proceedings of 3rd International Symposium on Nursing Use of Computers and Information Science, Dublin: Mosby, 1988.
- Cuddigan, J., S. Logan, S. Evans, and H. Hoelsing, "Evaluation of an Artificial-Intelligence-Based Nursing Decision Support System in a Clinical Setting," in Proceedings of 3rd International Symposium on Nursing Use of Computers and Information Science, Dublin: Mosby, 1988.
- Cuddigan, J., J. Norris, S. Ryan and S. Evans, "Validating of the Knowledge in a Computer-based consultant for Nursing Care," in Proceedings of the 11th Annual Symposium on Computer Applications in Medical Care, Washington, D.C., 1987.
- Evans, S. "An Overview of the COMMES System: A Computer-based Health Care System," Acta Chirurgica Italica, 42, 1986.
- Evans, S. "Artificial Intelligence Applications in Higher Education," in Proceedings of the Fourth Annual Conference Applying New Technology in Higher Education, Kansas State University, 1985.
- Evans, S. "Marketing a Artificial-Intelligence-Based System for Nursing: Issues, Barriers, and Challenges," in Proc. of the 18th Hawaii Int'l Conference on System Sciences, Hawaii, January, 1985.
- Evans, S. "A Computer-Based Nursing Diagnosis Consultant," in Proceedings of the Eighth Annual Symposium on Computer Applications in Medical Care, Washington, D.C., 1984.
- Evans, S. "Preliminary Results With the Design and Implementation of an Academic Management Information System," in Proc. of the 8th Annual Symposium on Computer Applications in Medical Care, Washington, D.C., 1984.
- Evans, S. "Implementation of a Computer-Based Testwriting Consultant," in Proceedings of the Eighth Annual Symposium on Computer Applications in Medical Care, Washington, D.C., 1984.
- Evans, S. "Foundations of Medical Informatics," Medical Informatics, Vol. 9, Nos. 3/4, 1984, pp. 199-206.
- Evans, S. "A Computer-based Nursing Practice Protocol Writer," in Proceedings of the Seventeenth Hawaii International Conference on Systems Sciences, Hawaii, January, 1984.
- Evans, S. "Fundamentals of Computer Literacy," in Proceedings of the Second Annual conference of the American Association for Medical Systems, Baltimore, October, 1983.
- Evans, S. "Nursing Applications of An Expert System," in Proceedings of the Fourth World Congress of Medical Informatics, Amsterdam, August, 1983.

Evans, S. "A Computer-based Educational Consultant in Geriatrics for Health Professionals," in Proceedings of the International conference on Systems Science in Health-Social Services for the Elderly and the Disabled, Montreal, July, 1983.

Evans, S. "Implementation of a Computer-based Test Generator to Evaluate Health Professions Continuing Education," in Proceedings of the First Annual conference of the American Association for Medical Systems and Informatics, Volume 1, Washington, D.C., October, 1982. Reprinted with permission in the Journal of Medical Systems (1984).

Evans, S., Mordeson, J. and Innes, J. "A New Approach to Scenario Generation and Scenario Analysis for Long-Range Planning," Futurics., Vol. 6, No. 1, 1982.

Evans, S. "The Impact of national Information System Networks on Educational Health Sciences Centers," in Proceedings of the First IEEE Computer Society International conference on Medical Computer Science/Computational Medicine, Philadelphia, September, 1982.

Evans, S. "Differentiation of the Information Needs of Health Professionals Using Expert Systems," in Proceedings of the First IEEE Computer Society International Conference on Medical Computer Science/Computational Medicine, Philadelphia, September, 1982.

Evans, S. "Some Results in the Use of a Computerized Educational Consultant," in Proceedings of the First AMIA Congress on Medical Informatics, San Francisco, May, 1982.

Evans, S. "A Multi-functional Health Sciences Consultant System," in Proceedings of the Fourteenth International Conference on Systems Sciences, Hawaii, January, 1981.

Evans, S. "The COMA System: An Inquiry/Answer On-Line System as the Basis for a Network-wide Redistribution of Health Sciences Instruction," in Proceedings of the Third Annual Symposium on Computer Applications in Medical Care, Washington, D.C., October, 1979.

Evans, S., Fierer, J., and Heaney, R.P. "Developing Sharable Building Blocks of Instruction in Health Sciences," Pathology Ed., 3, 3, 1977.

Evans, S. "Automated Curriculum construction: Toward Computer Constructed Education," Simulation and Games, December, 1976.

Evans, S. "Introducing Behavioral Subjectives," Educational Technology, August, 1976.

Evans, S. "The Redistribution of Education: Computer Constructed Education as an Educational Equalizer," Educational Technology, 1974.

Evans, S. "Non-numeric Simulation," in Proceedings of the 1974 Winter Simulation Conference, Washington, D.C., January, 1974.

Evans, S. "The Structure of Instructional Knowledge: An Operational Model," Instructional Science, 2, 1974, pp. 421-50.

## **BOOKS**

PACE: An Expert Nursing System, New York: Springer-Verlag, 1996 (invited volume for Springer's *Computers and Medicine* Series)

## **CONTRIBUTED BOOK CHAPTERS**

Evans, S. "Software Applications for Nursing: Education and Decision-Support Systems," Geisow, M. J. and A. N. Barrett, Microcomputers in Medicine, Elsevier Biomedical Press, Amsterdam, 1986.

Evans, S. "Decision Support Systems for the Outpatient Office: Two Examples of Medical Expert Systems," Zimmer, J., ed., Primary Care, Vol. 12, No. 3, W. B. Saunders, 1985, pp. 445-413.

Evans, S. "Computer Literacy in Family Medicine," Zimmer, J., ed., Primary Care, Vol. 12, No. 3, W. B. Saunders, 1985, pp. 403-413.

## **PATENTS ISSUED**

"Interpretative Systems for Systematic Learning and Support for Decision-Making."

"Methods [of data mining] for Identifying Human Disease Patterns."

"Process to Modulate Disease Risk with Doses of a Nutraceutical"

## **INVITED KEYNOTE ADDRESSES, PRESENTATIONS, & PANELS:**

Clinical Results Using Informatics to Evaluate Hereditary Cancer Risk (presented at the 19th Annual Symposium on Computer Applications in Medical Care) New Orleans, 1995.

Description of a 10-Year Project to Automate HCI Risk Assessment and Risk Management (presented at the Creighton School of Medicine Conference on Genetic Counseling in Hereditary Breast Disease and Other Cancer-Associated Disorders), Omaha, Nebraska, December 2-5, 1994.

Essential Features of the Redesigned PACE/CPC Nursing Expert System (presented at the 7th World Congress on Medical Informatics) Geneva, 1992.

International Applications of the COMMES Clinical Care System (presented to the Jaslok Hospital and Research Centre), Bombay, 1988.

Possible Applications of the COMMES System for Primary Care in India (presented at the Indian Society of Hospital Administrators 1st National Seminar on Medical Informatics), Jaipur, India, 1988.

Barriers and Pitfalls in the Implementation of Software Systems in Hospital Settings (presented at the Indian Society of Hospital Admin. 1st National Seminar on Medical Informatics), Jaipur, India, 1988.

Expert Systems in Nursing Care (Chair and Panelist at the 12th Annual Symposium on Computer Applications in Medical Care), Washington, D.C., 1988.

Overview of an Expert Nursing Consultant System (invited presentation at the HISSG Seminar on Expanding Horizons in Nursing Information Systems - co-sponsored by the NLN), Boston, Massachusetts, July 10-13, 1988.

Practical Clinical Tools for Nursing (Presentation at the Third International Symposium on Nursing and Computers), Dublin, Ireland, June 20-23, 1988.

Developing Expert Systems (Nebraska Information Communication Exchange), Omaha, Nebraska, January 21, 1980.

Hospital Health Care Systems (keynote presentation for the World Health Organization Select Workshop for Health Administrators of Europe), Gutersloh, Germany, December 4-7, 1987.

Using Decision-Support Systems for Nursing (a keynote presentation at the World Health Organization Conf. on Health Technology Assessment), Linkoping, Sweden, October 27-28, 1987.

Applications of the COMMES Nursing Consultant System (invited seminar/workshop hosted by the British Journal of Health Care Computing), London, England, October 23, 1987.

Applying the COMMES Nursing Consultant System in the United Kingdom (invited seminar hosted by the Welsh Office, Government of Wales), Cardiff, Wales, October 21, 1987.

Microcomputer Expert Systems (invited presentation for the Nebraska Association of Business and Communication Experts), Omaha, Nebraska, April 11, 1987.

Expert Systems and Caring (invited presentation at the Regional Nurses Association of British Columbia), Vancouver, Canada, March 3, 1987.

COMMES as a Clinical Consultant (invited presentation and demonstration to the World Congress on Medical Informatics), Washington, D.C., October, 1986

Nursing Expert Systems (invited seminar leader for a "Meet the Expert" Session at the World Congress on Medical Informatics), Washington, D.C., October, 1986.

Update '86: Artificial Intelligence Nursing Consultant Systems (invited presentation to the 3rd Annual Computers in Nursing Conference), Las Vegas, Nevada, March, 1986.

COMMES: An In-depth Presentation (invited presentation to the 3rd Annual Computers in Nursing Conference), Las Vegas, Nevada, March, 1986.

Organizational and Behavioral Requirements for Implementing Major Nursing Systems (invited talk at the 3rd Annual Computers in Nursing Conference), Las Vegas, Nevada, March, 1986.

After Basic Computer Literacy: Key Concepts in Taking the Next Steps (invited presentation at the 3rd Annual Computers in Nursing Conference), Las Vegas, Nevada, March, 1986.

Artificial Intelligence Approaches to Decision-Support in Nursing (Graduate colloquium Speaker, School of Nursing, Northern Illinois University), DeKalb, Illinois, September 3, 1985.

Artificial Intelligence Expert Systems in Medical Practice Today (invited presentation to the Greenbriar Conf. on Pulmonary Care, Amer. Lung Assn.), Greenbriar, W. Virginia, August, 1985.

COMMES -- Artificial Intelligence (invited presentation to the 14th Annual Meeting of the MUMPS User's Group), Chicago, Illinois, June, 1985.

Artificial Intelligence Expert Systems Applied to Surgery and General Post-operative and Patient Care (invited presentation to the 2 Congresso Nazionale of the Societa Italiana per le Applicazioni Tecnologiche in Chirurgia), Genova, Italy, May, 1985.

Multi-National Use of Advanced Sys. Development (invited presentation to 2nd Congresso Nazionale of the Societa Italiana per le Applicazioni Tecnologiche in Chirurgia), Genova, Italy, May, 1985.

Clinical and Academic Uses of COMMES: An Implemented AI Expert System (invited demonstration to the 9th Annual Symp. on Computer Applic. in Medical Care), Baltimore, November, 1985.

Decision-Support and Artificial Intelligence Expert Systems for Nursing practice: The Promises, Problems, and Payoffs (Nursing Panel Chair and Panelist to the 9th Annual Symposium on Computer Applications in Medical Care), Baltimore, Maryland, November, 1985.

Introduction to Artificial Intelligence Applications in Nursing: The Concept, the Potential, and an Example (invited plenary talk to the 2nd Annual Computers in Nursing Conference), Las Vegas, Nevada, April, 1985.

Artificial Intelligence Applications in Nursing Clinical Decision Making (invited session to the 2nd Annual Computers in Nursing Conference), Las Vegas, Nevada, April, 1985.

New Roles for Nurses in the Field of Medical/Nursing Informatics (invited nursing plenary panelist to the 2nd Annual Computers in Nursing Conference), Las Vegas, Nevada, April, 1985.

New Challenges in AI: Capturing the Richness and Complexity of the Human Mind in Judgment and Decision Making (invited speaker to the 2nd Annual Computers in Nursing Conference), Las Vegas, Nevada, April, 1985.

Future Directions for Artificial Intelligence Research in Nursing and Patient Care Support Systems (invited speaker to the 2nd Annual Computers in Nursing Conference), Las Vegas, April, 1985.

Medical Informatics -- Current Barriers and Future Program Strategies, (one of the keynote presentations at the AAMSI 1948 Congress), San Francisco, California, 1984.

The Use of Computers for Pulmonary Assessment and Education (Invited Presentation to the American Thoracic Society), Miami, Florida, May 1984.

Expert Systems in Artificial Intelligence (presented to the Midlands Association of Computing Machinery), Omaha, Nebraska, 1984.

A Health Care Science for the Future (one of the keynote presentations at the Invitational Workshop on a Framework for Medical Information Science), Baltimore, Maryland, October, 1983.

Applications of Artificial Intelligence to Health Sciences (presented to the Midlands Association of Computing Machinery), Omaha, Nebraska, 1982.

Artificial Intelligence and Expert Systems: Progress in Artificial Intelligence App. to Computer-Assisted Instruction (invited presentation to the USE-1982 Conference), Houston, TX. Nov., 1982.

The Design of and Requirements for a National Health Sciences Education Network, (invited panelist, First American Medical Informatics Association Conference), San Francisco, 1982.

Pathology Instruction within an Integrative Health Sciences Environment (presented to the 7th Annual Summer Meeting of the Group for Research in Pathology Education, Seattle, June, 1977).

An Educational Assembly System for Student Executed Educational Design: Toward a System of Computer Constructed Education (Presented at the American Educational Research Association Conference, April, 1974 with David Klahr).

Computer Constructed Education for the Reallocation of Educational Resources (invited presentation at the Educational Technology Conference), Miami, Florida, 1974.

On Modeling the Artistic Activity, (invited panelist and moderator - The 1974 Annual CMU Symposia on Creativity), Pittsburgh, Pennsylvania, 1974.

Modeling Some of the Cognitive Behavior of University Professors (guest speaker at the Interdisciplinary Program in Information Sciences Annual Symposia, University of Pittsburgh), Pittsburgh, Pennsylvania, 1974.

Toward an Initial Structuring of the Components of Creativity in complex Problem Solving (guest speaker at the Interdisciplinary Prog. in Information Sciences Annual Symposia, University of Pitt.), Pittsburgh, PA, 1971.

**GRANTS OBTAINED [as principal Investigator, co-principal investigator, or director] include:**

1. Ford Foundation [extension] Grant (1972, 1973) \$400,000 each year.
2. IBM Research Foundation Grant - co-principal investigator (1972) \$100,000
3. Kellogg Foundation Grant - co-principal investigator (1977-81) \$975,000
4. Sperry/Unisys Grant (1983) \$50,000
5. Sperry/Unisys Grant (1984) \$100,000
6. SBIR Grant (1984) \$2500
7. Health Futures Foundation Grant (1985-87) \$400,000
8. Nebraska Arts Council Grant (1987) \$2500
9. Kellogg Foundation Grant (1987) \$40,000

**SELECTED TECHNICAL PAPERS (Unpublished):**

- Continuing Medical Education: Present Fallacies & Future Alternatives
- The Complete Module: Form And Content
- A Unified Taxonomy For The Health Sciences
- A Brief Guide For Constructing Educational Objectives
- The Encoder's Manual
- The Potentiality for Applications Of Artificial Intelligence To Education



- A Project To Augment The Integration Of LRC Materials With Creighton's
- Transformations Of Representations: Toward An Analytic Approach
- A Definition For A Health Science Undergraduate Program
- Program Definition For Health Instruction In The Care Of The Elderly
- Computer Science Instruction For The Health Sciences
- A Guide To Indexing Instructional Goals
- Research Into Nursing Care Plan Generation
- Problem Sensors For Problem Detection
- Meeting The Challenges Of The 80s: Some Suggested Directions For C.U.
- Discovering IRIS: Institute for Research In Instructional Science
- Future Research Directions Of Artificial Intelligence In Medicine
- Developing Instructional Opportunities To Encourage Re-entry of Students
- A User's Guide For Managing Continuing Medical Education Programs
- Summary Report Of A Project To Evaluate A Medical Information System
- Feasibility Study: Early Warning System For Small Business Problems
- Inventory Analysis For Process Control
- Incorporating The External Environment In Problem Solving
- The Use Of Dialects In Problem Solving
- The Design Of A Non-Overloadable System
- Fundamental Principles In The Management Of A Knowledge Base
- Preliminary Results With A Hereditary Cancer Expert System
- Organizational Hurdles In Achieving Faculty Implementation Of TSD
- Clinical Tools For Nursing
- Knowledge Base Validation Of A Nursing Expert System (with J. Cuddigan, J. Norris, S. Ryan)

## **WORKSHOPS, TRAINING, AND EDUCATIONAL CONFERENCES ATTENDED**

19th Annual Symposium on Computer Applications in Medical Care, New Orleans, 1995.

Creighton School of Medicine Conference on Genetic Counseling in Hereditary Breast Disease and Other Cancer-Associated Disorders, Omaha, Nebraska, December 2-5, 1994.

7th World Congress on Medical Informatics, Geneva, Switzerland, 1992.

Indian Society of Hospital Administrators 1st National Seminar on Medical Informatics, Jaipur, India, 1988.

12th Annual Symposium on Computer Applications in Medical Care, Washington, D.C., 1988.

HISG Seminar on Expanding Horizons in Nursing Information Systems - co-sponsored by the NLN, Boston, Massachusetts, July 10-13, 1988.

Third International Symposium on Nursing and Computers, Dublin, Ireland, June 20-23, 1988.

World Health Organization Select Workshop for Health Administrators of Europe, Gutersloh, Germany, December 4-7, 1987.

World Health Organization Conf. on Health Technology Assessment, Linkoping, Sweden, October, 1987.

Nebraska Association of Business and Communication Experts, Omaha, Nebraska, April, 1987.

World Congress on Medical Informatics, Washington, D.C., October, 1986

3rd Annual Computers in Nursing Conference, Las Vegas, Nevada, March, 1986.

Greenbriar Conference on Pulmonary Care, Amer. Lung Assn., Greenbriar, West Virginia, August, 1985.

14th Annual Meeting of the MUMPS User's Group, Chicago, Illinois, June, 1985.

2nd Congresso Nazionale of the Societa Italiana per le Applicazioni Tecnologiche in Chirurgia), Genova, Italy, May, 1985.

9th Annual Symposium on Computer Applications in Medical Care), Baltimore, Maryland, November, 1985.

2nd Annual Computers in Nursing Conference, Las Vegas, Nevada, April, 1985.

AAMSI 1948 Congress, San Francisco, California, 1984.

American Thoracic Society Conference, Miami, Florida, May 1984.

Invitational Workshop on a Framework for Medical Information Science, Baltimore, Maryland, October, 1983.

USE-1982 Conference, Houston, TX. Nov., 1982.

First American Medical Informatics Association Conference, San Francisco, 1982.

International NATO Scientists Conference on Behavioral Learning, Banff, Canada, 1979

7th Annual Summer Meeting of the Group for Research in Pathology Education, Seattle, June, 1977.

American Educational Research Association Conference, April, 1974.

Educational Technology Conference, Miami, Florida, 1974.

The 1974 Annual CMU Symposia on Creativity, Pittsburgh, Pennsylvania, 1974.

Interdisciplinary Program in Information Sciences Annual Symposia, University of Pitt., Pittsburgh, PA., 1974.

Interdisciplinary Program in Information Sciences Annual Symposia, University of Pitt., Pittsburgh, PA., 1971.

**MONOGRAPHS (unpublished):**

Artificial Intelligence Study Guide (with Allen Newell), Carnegie-Mellon University, 1972.

A Case Study in Information Processing Problem Solving, Creighton University, 1974.

Institutionalizing Change: A Total-System Design of Health Professions Instruction, Creighton University (funded by the Kellogg Foundation), 1975.

Feasibility Study Concerning the Design and Construction of an Early Warning System for the Identification of Small Business Problems, Creighton University (funded by Policy Research Div., State of Nebraska), 1985.

**VIDEO DOCUMENTARIES**

Lifting the Veil: Alternatives to Health Care [see “Clover Water Sizzle” trailer at <https://vimeo.com/41775062>]

Pennies A Day ... [in production]