William M. Bricken, Ph.D.

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_____ Formal Education _____

- Ph.D., Mathematical Methods of Research, School of Education, Stanford University.
     Multivariate research methods, Artificial Intelligence modeling, and Educational Psychology. 1987
- M.S., Statistics, Stanford University.
     Emphasis on the measurement and analysis of human behavior. 1983
- Diploma of Education, Monash Teachers College, Melbourne, Australia.
     Mathematics teaching and Counseling. 1972
- B.A., Social Psychology, University of California at Los Angeles. 1967

_____ Employment History _____

Mathematics Faculty

Lake Washington Technical College, Kirkland, Washington   2006-current

- Teach mathematics courses. Contribute to organization and management of the department.
- Developmental and first-year courses taught:

Basic Mathematics	Quantitative Reasoning	Precalculus
Introduction to Algebra	Mathematics in Society	Statistics
Intermediate Algebra	Mathematical Methods for Preschool Teachers	

Chief Scientist and Co-founder

BTC, Menlo Park, California   2001-2005
NETWORK OPTIMIZATION SOFTWARE for SEMICONDUCTOR DESIGN

- Provided technical leadership; wrote business plans and product specifications, designed and implemented
     innovative semiconductor models and algorithms for multimillion element design databases.

Assistant Professor of Computer Science and Software Engineering

Seattle University, Seattle, Washington   1996-2001

- Supervised the Master of Software Engineering program, including capstone (full year) software engineering
     project teams writing commercial software. Redesigned the Master of Software Engineering curriculum.
- Contributed to the design of curriculum, marketing, scholarship, and academic policies for Seattle University
     Graduate Programs; member of the Graduate Leadership Board.
- Graduate-level courses taught:

Discrete Mathematics	Applied Formal Methods	Human-Computer Interaction
Programming Methodology	Client/Server Architectures	Artificial Intelligence
Programming the Interface	Computer Graphics	Computer Ethics

Consultant (half-time, concurrent with academic appointments)

Interval Research Corporation, Palo Alto, California   1993-2000
FORMAL MODELS OF COMPUTATION, LOGIC SYNTHESIS

- Contributed to the Natural Computing Project which focused on rebuilding computational theory and mechanism
     from first principles. Designed and implemented innovative algorithmic techniques and inference engines.

Research Associate Professor of Education and of Industrial Engineering (non-salaried)

University of Washington, Seattle, Washington   1992-1994

- Supervised graduate students in Educational Technology and in Industrial Engineering.
- Graduate-level courses taught:

Human-Computer Interaction	Virtual World Development	Management Decision Models

_____ William M. Bricken

Principal Scientist
Human Interface Technology Laboratory, Washington Technology Center, Seattle   1990-1994
ADVANCED HUMAN-COMPUTER INTERACTION, VIRTUAL REALITY SYSTEMS

• Developed innovative software tools for construction of, navigation in, and interaction with virtual environments.

Director
Autodesk Research Laboratory, Autodesk Inc., Sausalito, California   1988-1989
COMPUTER-AIDED DESIGN, GRAPHICS LANGUAGES, GRAPHICS INTERFACE

• Managed the Autodesk Research Laboratory. Developed one of the first immersive interactive VR systems.

Principal Research Scientist
Advanced Decision Systems, Mountain View, California   1984-1988
ARTIFICIAL INTELLIGENCE, HUMAN-COMPUTER INTERACTION

• Designed and implemented innovative software systems and user interface tools.

Intern and Consultant
Atari Research Laboratory, Sunnyvale, California   1983-1984
USER INTERFACE and MODELS

• Research into implementation of advanced user interfaces, fractal graphics and multimedia encyclopedias.

Teaching and Research Associate
Stanford University, Stanford, California   1981-1984

• Full scholarship for two years, teaching associate for the following two years.
• Empirically validated the nature of errors made by students learning algebra, using multivariate experiment,
    factor analysis, protocol analysis, clinical study, and remediation.
• Graduate-level courses taught:
    Computer-based Statistical Analysis   Statistical Analysis in Educational Research
    Interactive Educational Technology   Intelligent Tutoring Systems

Lecturer in Education
University of Hawaii at Hilo, Hilo, Hawaii   1976-1979

• Responsible for development of courses and curriculum.
• Fourth-year courses taught:
    Methods and Materials of Instruction   Teaching Basic Skills in Elementary School   Science Education

Assistant Professor of Social Psychology and Education
State College of Victoria at Rusden, Melbourne, Australia   1973-1975

• Head of Psychology Department, Acting Head of Education Department.
• Fifth-year courses taught:
    General Methods of Teaching   Educational Psychology   Humanistic Education
    Radical School Reform   Social and Personal Interaction in the Classroom
    Teaching Practicum (supervised classroom student teaching for about 150 students)

Principal and Founder
Coonara Children's Community School, Melbourne, Australia   1972-1975

• Managed the daily coordination of this non-profit decentralized educational alternative for primary students.
    Coonara is recognized as a leading example of educational innovation in Australia, and is still in operation.

Secondary Teacher and Founding Faculty
Collingwood Annex, Melbourne, Australia.   1971-1973

• Taught mathematics, guidance, and science in this inner-city alternative high school for otherwise failing students.