

CURRICULUM VITAE

A. MICHAEL ERDMAN

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EDUCATION

M. Sc. 1972 Mechanical Engineering, University of Southern California

B. Sc. 1969 Engineering Science, The Pennsylvania State University

CONTINUING EDUCATION

1973-1987 24 graduate credits in Mechanical Engineering (Heat Transfer, Two Phase Flow, Advanced Mathematics and Numerical Methods)

Rensselaer Polytechnic Institute (R.T. Lahey Advisor)

1974-1976 6 graduate credits in Two Phase Flow and Convective Heat Transfer, Union College

Short Technical Courses and Seminars

2007 Short Course on Thoroughbred Breeding (TOBA)

2006 Short Course on Foaling Methods

2000 Computational Fluid Dynamics: Engineering Analysis and Applications (ASME)

1995 Workshop on Computation and Modeling of Multiphase Flow (UCSB)

1993 Turbulence Modeling for CFD (Stanford)

1992 Turbulence Models for CFD (Penn State)

1991 Seminar on Reactor Safety (MIT)

1990 Numerical Heat Transfer and Fluid Flow (U. of Minnesota)

1990 Computational Fluid Dynamics: Theory, Computer Codes & Applications (UCLA)

1985 Corrosion Technology Seminar (NACE)

1985 International Workshop on Two Phase Flow Fundamentals, Editorial Committee (DOE/Univ. of Minnesota)

1980 Non-Linear Regression Analysis (KAPL)

1979 Mathematical Modeling of Turbulent Flow (Penn State)

1979 Reactor Plant Technology (KAPL)

1979 Second Two Phase Symposium & Workshop (NSF, ONR, U. of Miami)

1975 Two Phase Flow and Heat Transfer in Water Cooled Nuclear Reactors (ASME, Dartmouth College)

Attendance at numerous ASME and DOE sponsored technical meetings on heat transfer and fluid flow (1972 – 2005)

Executive Development Courses & Seminars

- 1995 LMC Executive Strategic Leadership Institute (Emery College, Atlanta, GA) – intensive, week-long, corporate-wide executive development program.
- 1990 GE Manager Development Program (Crotonville, NY) – intensive, month-long, corporate-wide management development program

PROFESSIONAL EXPERIENCE

1991-present Nicker Barker Farm, President

Raising Thoroughbred Horses and Golden Retriever Dogs; selling quality dogs from Alabama to Maine and breeding horses from New York, Kentucky, New Jersey, and Virginia. Farm currently has 4 horses and 11 dogs.

1997-2005 Member, Alternative Work Schedule Team, Naval Reactors (NR) Program

Researched and implemented alternative work schedule options across the NR Program.

1972-2005 Knolls Atomic Power Laboratory (KAPL), Manager, Reactor Safety Analysis

Experimental Engineering, and Fluid Dynamics Technology
Developed new analytical and experimental techniques for a wide range of technologies supporting naval nuclear propulsion; responsible for developing new experimental facilities and techniques using modeling fluids to provide insight into fundamentally based models of two-phase flow phenomena.

1969-1972 Rocketdyne (Boeing), Member, Technical Staff, Advanced Projects

Design of Space Shuttle Main Engine – developed system performance models and method to account for non-ideal gas properties in high pressure combustion processes.

SERVICE TO PENN STATE

2005-present Member, Parmi Nous Alumni Interest Group

2000-present Member, College of Engineering Industrial Professional and Advisory Council for the Engineering Science and Mechanics department (Chair, 2005-2006)

2000-present Penn State President's Club

1975-present Season ticket holders, Penn State Football

1972-present Member, Nittany Lion Club

1969-present Lifetime Member, Penn State Alumni Association; Member, New York Capital District Penn State Alumni Association Chapter

- 1983-2008 Lecturer on various topics to Penn State students, including Engineering Science and Mechanics and Mechanical and Nuclear Engineering Departments (two-phase flow research, motivation, interviewing skills – see below)
- 2007, 2008 Candidate, Penn State Board of Trustees
- 2006-2007 Founding Chair, Alumni Advisory Board, Department of Engineering Science and Mechanics
- 1980-2005 Recruiter, General Electric, Martin Marietta, and Lockheed Martin, including mentoring students on interview techniques, leadership and personal development topics
- 1968-1969 Secretary/Treasurer, Parmi Nous senior honorary society
- 1968-1969 Penn State InterFraternity Council
- 1966-1969 Member Phi Eta Sigma and Tau Beta Pi honorary societies
- 1966-1969 Theta Delta Chi social fraternity

PROFESSIONAL SOCIETY MEMBERSHIPS

- 2006-present Thoroughbred Owners and Breeders Association
- 2006-present New York Thoroughbred Breeders Association
- 1992-present American Kennel Club
- 1992-present The Golden Retriever Club of America
- 1970-Present American Society of Mechanical Engineers
- 1970-Present American Institute of Aeronautics and Astronautics

HONORS AND AWARD

- 2006 Engineering Science and Mechanics Centennial Fellow, Penn State University
- 2003 Lockheed Martin Corporation/KAPL Leadership Award
- 1978 GE Elfun Society Recognition Award
- 1978 Gerald L. Phillippe Award (GE, for community service)
- 1977 NY State Distinguished Service Award
- 1976 Jaycee Outstanding Internal State Chairman
- 1976 Outstanding Young Man – Schenectady County
- 1975 Jaycee International Senatorship
- 1975 Jaycee Outstanding Local President Award

TEACHING AND LEADERSHIP DEVELOPMENT EXPERIENCE

- 1989-present Numerous courses, seminars, lectures, and problem resolution sessions presented at Lockheed Martin/KAPL, Rensselaer Polytechnic Institute and Penn State, including

Facilitating personal development courses

Myers Briggs Type Indicator (MBTI), theory of behavior based on preferences
Strength Deployment Inventory (SDI), theory of behavior during conflict based on motivations
Apter Reversal Theory, theory of behavior choices based on recognizing different situations
Zenger Miller Personal Leadership and Team Leadership topics
Meeting
Black Belt Six Sigma and Lean Management Facilitator

Applying other leadership and team building skills

Effective Writing, Executive Presentations
Human Error Reduction, Finding Root Cause
Benchmarking Methods
Interviewing Techniques
SEI Software Capability Maturity Model
Facilitating effective, constructive meetings
Personal and Management Arbitration – facilitating conflict resolution
Rational Decision Making – applying rational processes to approach situation assessment and decision making
Team Dynamics – facilitating effective individual team member performance and overall team cooperation
Building High Performance Organizations

PUBLICATIONS AND REPORTS

Technical reports have been numerous (from 1972 to 2005), but of a classified nature and are not available to the public. Topics related to two-phase flow analytical and experimental research, including pressure drop, critical heat flux, flow stability, design methods and experimental techniques with an emphasis on the development of advanced methods. Many of the analytical and experimental techniques are in use today in the design and qualification of Naval Nuclear Reactors.

PRESENTATIONS AND LECTURES

Myers Briggs Type Indicator (MBTI) and Strength Deployment Inventory (SDI)

1997-present Periodic lectures at Rensselaer Polytechnic Institute, including
Professional Leadership Program (undergraduate leaders across the Institute)
Professional Leadership Series (graduate students) once per semester
Staff of the Archer Center for Student Leadership Development
1997-2005 Numerous KAPL employee groups to improve individual and team performance

Other topics

- 2002-2005 Led reviews (Black Belt – Six Sigma and Lean Management) of reactor design methods and various plant operation procedures to improve processes in use within the Naval Reactors Program
- 2005 Presentation on Motivational Strategies and The Value of an ESM degree to Penn State university students
- 2004 Presentation on Advances in Two-Phase Flow to Penn State university students and faculty
- 1983-1985 Presentations on Motivational Strategies and other personal leadership topics to the “Leaders of the Future” student seminars at Penn State

SERVICE TO THE COMMUNITY

- 1974-1999 Member, Schenectady Curling Club (President, 1983-84)
- 1985-1995 Member, Board of Directors, Schenectady United Way (Chaired Committee to establish objective methodology for allocation of United Way funds)
- 1987-1989 Vice Chair, Capital Fund Drive for coalition of Schenectady County human service agencies
- 1977-1985 Member, GE Share Board (Chair, 1982, 1984)
- 1974-1984 Member, Board of Directors, Human Services Planning Council (Vice Chair, 1981-83)
- 1975-1977 Member of Department of Social Services Advisory Council (Chair 1976-77); implemented rational, objective decision making process for fund distribution
- 1972-1977 Member, Schenectady Jaycees (President 1974-75, during which chapter was ranked #1 of 225 chapters in New York State; served as NYS Chair of Jaycee Chapter assessment committee 1976)
- 1974-1975 Member, Board of Directors, Schenectady Chamber of Commerce; Chair Environmental Task Force

Other volunteer activities (various dates)

- Volunteer, Schenectady County Red Cross Youth Leadership Training
- Volunteer, Public Television Telethon
- Volunteer, Parkhurst Children’s Shelter
- Volunteer, Schenectady United Way Allocation Committees