

Michael Mastodon

Michael Mastodon, Ph.D.
4527 Cross Cut Court
Fort Wayne, IN 46804

(260) 482-1111 (H)
(260) 481-2222 (W)

CAREER SUMMARY

Leadership administrative position with an innovative institution of higher learning, using my background in the Computer Science and Software Engineering disciplines. Demonstrated leadership and technical competence in both academia and industry. Used four decades of leadership, management, and technical experience in computing and technology. Demonstrated expertise includes leadership of academic and industry departments, academic/industry collaboration, team-building across disciplines, information technology, and research with leading-edge technology, strategic planning, and innovation in aerospace and manufacturing industries. Technical areas of international renown as evidenced by publications, grants, and positions held include software engineering, expert knowledge-based systems, and distributed learning.

PROFESSIONAL EXPERIENCE

*20xx-Present Title,
School of XXXXX, /Division of XXXXX
UniversityXXX, City, State*

- Duties include: Develop an infrastructure for the School through which faculty and students can collaborate more effectively and directly with external partners throughout northeast Indiana and beyond, including ETCS/OLS alumni; Strengthen external professional advisory boards; Promote research and scholarship opportunities for faculty and students; Expand the base of research funding from federal agencies, foundations, and the private sector; and broaden opportunities for student financial support through internships, scholarships, and cooperative education appointments.
- Serve as chair of Search and Screen Committee for Mechanical and Industrial Engineering Technology (MIET) Chair (20xx-20xx).
- Served as chair of Search and Screen Committee for Civil and Architectural Engineering Technology (CAET) Chair (20xx-20xx).
- Served as only IPFW representative to Eli Lilly Northeast Indiana Business Plan Competition. Reviewed 20+ applications and served as one of four judges to award \$40K to top three competitors (20xx).
- Serve as SETCS/OLS liaison the Advocates: industry advisory group
- Reinvigorated SETCS/OLS Newsletter in 20xx.
- School representative on Ad-Hoc committee for search of new ETCS/School of Performing Arts. Reviewed 20+ applicants (20xx-20xx).
- School representative on Ad-Hoc committee for search of new ETCS/School of Business liaison librarian. Reviewed 20+ applicants (20xx-20xx).
- Serve on Allen County Education Partnership and ITT grant group for Allen County Public Schools: helped decide on awardees for \$20K each year.
- Chaired Research section for School Retreat: May, 20xx
- Developed ETCS Colloquium Series for 20xx-20xx, involved five new faculty (20xx-20xx) and three new faculty and two returning from sabbatical (20xx-xx). Details at <http://www.etc.ipfw.edu/dean/colloquium/index.php>
- Served as external faculty on OLS P&T case.
- Developed System Engineering Workshop involving three nationally-known experts and 50 professionals from local industry and faculty (20xx). See <http://www.etc.ipfw.edu/~sysengr/index.php>

*20xx-Present Title (20xx-20xx), Department of XXXX
XXXXX University, City, State*

- Was primary person for preparing ABET/CAC accreditation material for B.S. Computer Science degree; granted one course release time in conjunction with appointment as Associate Chair. Primary responsibility for self-study and official visits in October, 20xx. The Department received official notice on August 23rd, 20xx that the program was accredited, retroactive to October, 20xx. We subsequently learned that the Computer Science program at XXX is the first and only such accredited program in the state of Indiana. Prepared required interim report.
- Developed and taught new “CS 0” course CS 112 – Survey of Computer Science. Developed to address major retention issues with CS 160 and CS 161.

- Developed and taught CS 360 – Software Engineering. First time the course had been taught in over 10 years
- Developed and taught CS 460 – Capstone Design and Professional Practice. This is the only place in the CS program where direct assessment measures are possible; required for CAC/ABET.
- Teach first two programming courses [Java] for CS majors and others, using pair programming and team approaches to emphasize importance of software process; also taught courses in programming language design, theory of computation, and graduate courses in artificial intelligence, and expert systems. Independent Studies in software engineering survey, web-enabled databases, Java Beans, distributed learning, ontologies.
- Made extensive use of distributed learning using WebCT to enable students to work more flexibly, as many of them are full-time or part-time employees in local industry. Used new version WebCT Vista for all 20xx-xx courses.
- Initiated Computer Science Professional Advisory Board in 20xx, now composed of 21 senior technologists from local and regional industry, business and universities to assist the department in arenas of students, faculty, curriculum, labs, grants, and other areas. Website is at <http://www.cs.ipfw.edu/pab/pab.php>
- Initiated Computer Science Student Advisory Board in 20xx, now composed of 20 students from all levels to assist the department in arenas of recruitment, retention, faculty interaction, curriculum, labs, scheduling, and other areas. Website is at <http://www.ipfw.edu/cssab/public/homepage.htm>

1994-2001 Title, Department of XXXX

University of XXX, City, State

Department Level [www.department website.edu]

- Assumed total responsibility for growing from a staff of five full-time Ph.D.s in 1994 to 13 funded tenure-track positions in 20xx and ~8 adjunct faculty on a \$1.1M annual budget. Department has 450+ undergraduates and 130+ graduate students. Became second-largest department in the School of Engineering in 1996-97.
- Guided department through first national accrediting process by CSAB -- received maximum accreditation for both computer science and information systems options in June, 1997
- Led department during record growth since 1994: 106.8% increase in graduates/year (91 vs. 44), 55.7% in majors (531 vs. 341); 81.2% in FTE Students (226 vs. 129.8), and 36.8% in credit hours (5481 vs. 4006)
- Helped hire eight new faculty (first two women) in networking, multi-data bases, software engineering, security

College Level [www.departmentwebsite.edu]

- Initiated effort to rename School of Engineering to College of Engineering and Computer Science: 4/1/1998
- Requested by Dean: chair Distance Learning Committee, to offer several graduate degrees via Internet
- Requested by Dean: chair new Information Technology Committee, to serve industry customer base better
- Requested by Dean: chair search for new position of Director of Interdisciplinary Programs

University Level [www.departmentwebsite.edu]

- Requested by Chancellor: serve on Inauguration Committee
- Requested by Provost: serve on Teaching Learning and Technology Roundtable [co-chair]
- Requested by Provost: review RFP for the Student Information System, serve on steering committee
- Requested by Provost: chair search for Chief Information Officer and Executive Director of ITS
- Requested by Chancellor: serve on Distributed Learning Task Force.

Individual Contributor

- Wrote and obtained grant from ACM/IEEE-CS for annual international survey on Software Engineering
- Granted sabbatical during Fall 20xx to develop International Software Engineering University Consortium (ISEUC:www.iseuc.org), based on grant above. Pursued external funding to support ISEUC course release time and infrastructure cost at 30+ institutions, via various grant proposals
- Consulted with Next Generation Software Department of U.S. Army Tank Automotive Command (only federal government laboratory in Michigan), via Intergovernmental Personnel Act (IPA)

1993-1994 Title

Company Name, City, State

Responsible for the management of independent and contract R&D, technology transfer into other departments, developing business strategies and tactics, and identifying short and long-range technology thrusts. My accomplishments during the first six months included:

- Formulated a charter and business plan for Technology Center.
- Managed three projects using technologies of simulation, computer-based training, work flow, document management and imaging, computer-based authoring systems, client/server, object-oriented data bases.

Targeted domains included aircraft crew and maintenance training, re-engineering of organizations, and medical. The budget for these projects exceeded \$1M and involved about 30 professionals.

- Wrote a white paper based on extending the above projects: "Help for Worker Bees -- Smart People and Smart Computers: Networked Adaptive Performance Support Systems." The concept was to extend performance support systems, using both inductive expert systems and PLATO-like networking abilities over the Internet. It was presented at the Society for Learning Technology Interactive Conference in Washington, D.C. in 8/94.
- Initiated a series of technical seminars for software engineers, system engineers, and program managers. These included presentations by world-renowned experts, e.g., Dr. Donald Michie of the Turing Institute, as well as in-house experts and vendors of various technologies.

1988 – 1993 *Title, Department of XXXX*
XXXX University, City, State

Department Level

- Assumed total responsibility for a staff of 11 full-time (10 Ph.D.) and 10-15 part-time faculty on a \$600K annual budget. The department had 250 undergraduates; 30 graduate students.
- Initiated the effort to seek national accreditation for the Department from CSAB, beginning in 1988. Accreditation was received in July, 1993 for the Scientific/Systems option,
- Incorporated software engineering courses in the core curriculum,
- Secured over \$220K worth of advanced PC and Mac-based software for the department at no cost to the University, \$250K worth of hardware for two new student computing laboratories, faculty offices and classrooms at a cost of \$50K to the University, and a new UNIX platform (DEC System 5100) to replace an aging PDP 11/44,
- Initiated active involvement of industry by forming a Computer Science Professional Advisory Board of nine members, including NASA/Marshall Space Flight Center,
- Initiated active involvement of the student body via forming a CS Student Advisory Board
- Helped hire four new faculty (two women, two associate): neural networks, multi-media and computational geometry.

University Level

- Initiated plan for providing vastly increased student computing access across the entire campus (16,000 students) in 1989. Was acted upon favorably by the Board of Regents in 1990, resulting in a continuing source (\$200K+ annually) for computing hardware (PCs and Macs) and software in seven networked student laboratories.
- Developed plan to provide computing resources for all faculty at the University. Plan approved in my last semester: 400+ Macintosh Centris 650 and Zenith '486 networked micros appeared on the desk of every faculty member who desired one during the summer of 1993.

Individual Contributor

- Oversaw selection of and chaired all 20+ technical workshops and symposia for the National ACM SIGCSE Conference in Kansas City in spring of 1992.
- Presented multi-week workshop in the Peoples' Republic of China. While there, recruited first-ever visiting research scholar. Dr. Tong Long En (University of Science and Technology at Beijing) studied expert inductive systems with us during 1991-92.

1984 - 1988 *Title, Computer Science (Tenured: 1986)*
XXX University, City, state

- Combined challenging academic and industrial experiences on a daily basis in the fields of software engineering, expert systems, and computer-based learning. Developed and taught team courses in expert systems and computer-based learning, based on industrial experience.
- Obtained \$70K worth of new software from over two dozen software vendors at no cost.

EDUCATION

Ph.D. Computer Science, Washington State University, 1972
M.S. Computer Science, Carnegie Institute of Technology (now Carnegie-Mellon University), 1969
M.S. Computer Science, Stanford University, 1965
B.S. Mathematics, University of Illinois, Urbana-Champaign, 1963

PUBLICATIONS AND INVITED TALKS

Over 110 presentations, tutorials and workshops have been given throughout the United States and abroad: Japan, Scotland, England, France, Sweden, Canada, Germany, Austria, Australia, and the People's Republic of China.

Grooming Our Future Software Engineers. Submitted to 19th Conference on Software Engineering and Training (CSEET 20xx), Oahu, HI, April 19-21, 20xx.

Workshop on Real Projects for Real-Clients Courses. Co-authored with D. Klappholz and V. Alstrum, Submitted to 19th Conference on Software Engineering and Training (CSEET 2006), Oahu, HI, April 19-21, 20xx.

A Winning Role for Industry in Computer Science Programs. Accepted for 20xx ASEE Illinois-Indiana and North Central 20xx Conference, Fort Wayne, IN, March 31- April 1, 20xx.

A Practical Assessment Guide to the Use of Professional Advisory Boards. Accepted for Best Assessment Processes VIII of ABET, Rose-Hulman Institute of Technology, February 27-28, 20xx.

ACADEMIC AWARDS/GRANTS

- NSF grant submitted for Demonstration Project of Broadening Participation in Computing Program entitled “Connecting with Excellence: Assessment and Visualization Tools for Recruiting and Retention Programs in Computing.” PI, in conjunction with Dr. Kim (co-PI) and Tammy Toscos (other professional). Three-year period at a cost of \$687,487.
- International Travel Grants to support trip to Beijing, \$2,018, Purdue University, Indiana University, IPFW, 20xx.
- How are we doing now? Graphical Trending of Web-enabled Assessments, \$750 (maximum allowed), IPFW Mini-Assessment Grant, December, 20xx. Balance of funding total of \$1500 from the Department
- An International Software Engineering University Consortium (ISEUC): A Virtual Community of Connected Professionals, Faculty and Students, \$30K, Submitted to IEEE Technical Committee on Software Engineering, August, 20xx.
- International Travel Grant for Innsbruck, Austria, Dean and Office of Sponsored Research, \$2K, University of Michigan-Dearborn (UM-D), February, 20xx

UNIVERSITY SERVICE EXPERIENCE

2004-Present	Associate Dean for External Partnerships and Research, School of Engineering, Technology and Computer Science/Organizational Leadership Supervision, Indiana University-Purdue University Fort Wayne (IPFW)
2004-2005	Chair, Search and Screen Committee, Civil and Architectural Engineering Technology Chair
2003-04	Associate Chair of Computer Science, with specific responsibilities for accreditation and assessment, Indiana University-Purdue University Fort Wayne (IPFW)
2002	Chair, Mixed Enrollment Courses (IPFW)
2002	Department representative, SETCS Promotion and Tenure committee (IPFW)
2002	Various department committees: accreditation (acting chair), student affairs, revision of CS curriculum, ECET BS degree in computer engineering, etc. (IPFW)
2001	Chair, Distance Learning for College Graduate Degrees, College of Engineering and Computer Science, University of Michigan-Dearborn (UM-D)

PROFESSIONAL INTERESTS AND ORGANIZATIONS

Disciplines

Software Engineering
Industry/Academic Relationships
Distributed Learning
Strategic Planning
Expert Knowledge-Based Systems
Assessment
Computer Science Education

Professional Societies

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American Association for Artificial Intelligence (AAAI)

American Society for Engineering Education (ASEE)

Association for Computing Machinery (ACM)

Special Interest Groups for:

Computer Science Education

Chair of Tutorials and Workshops, SIGCSE, Kansas City, 1992

Software Engineering

Reviewer

ACM Computing Reviews

ACM Communications

ACM National Conferences

Conferences on Software Engineering and Training

Educational Technology

Frontiers In Education (FIE) Conferences

IFIPS Conferences

Information and Software Technology Journal

Publishers

Addison-Wesley

Benjamin/Cummings

DC Heath

Horwood Ltd. (John Wiley): Consulting Editor for Space Engineering and Technology

McGraw-Hill

Prentice-Hall

Major Thesis Advisor

Expert Systems

Software Engineering

Computer-based Learning

Relational Data Bases

Software Verification