Resume for Dr. Mark H. Polczynski
(Please see http://www.technologyforge.net/MHPCV for additional information)

Summary of academic activities as Director – MS Engineering Management (ENMA) Program – Marquette University College of Engineering (2005 – Current):

Financial
- ENMA program enrollment: Increased ENMA program enrollment from eleven students to twenty seven students.
- ENMA course enrollment: Increased annual ENMA course hour enrollment by a factor of 3+.
- ENMA course offerings: From four ENMA courses per year to seven courses per year.

Curriculum
- ENMA course development: Developed five ENMA course from scratch: Engineering Innovation and Entrepreneurship; Innovation and Technology; System Modeling, Simulation, and Analysis; Reliability, Failure Analysis, and Risk Assessment; Lean Systems.
- Four additional courses developed by ENMA part-time temporary adjuncts.
- ENMA certificates: Developed two new ENMA certificates for Fall 2008 offering: Engineering Innovation, and New Product and Process Development.
- Project facilitation: Facilitate average of twenty five industry/business-sponsored ENMA student project teams per year.
- Virtual learning and teaming environment: Converted one ENMA course for distance learning as of Fall, 2009. Conversion in-process for four more ENMA courses.

Assessment
- ENMA course assessment: Implemented on-line course and instructor assessment for all ENMA courses, available on-line to students.
- ENMA program assessment: Implementing on-line program assessment for ENMA program graduates and current ENMA students, available to students.
- ENMA student performance assessment: Implementing student performance assessment tool, results to be available to students.
- ENMA Program Continuous Improvement: Established formal continuous improvement and communication process, see: www.technologyforge.net/ENMAImprovementActivities

Outreach
- ENMA program communications: Created public web portal for ENMA-related materials, see: www.technologyforge.net/enma
- New business development: Key facilitator in spin-out of MU-COE technology to new venture Paradigm Sensors LLC. Technology advisor to Paradigm Sensors.
- University partnerships: Signed letters of intent to cooperate with five major Polish technical universities. Teach summer courses at Poznan and Warsaw, Poland.

Research
- Industry partnership: Initiated KDAM knowledge Discovery and Analysis in Manufacturing consortium (with international participation), see: www.technologyforge.net/KDAM
- Academic partnership: Initiated KDAM research effort with Warsaw University of Technology.

Publications:
- M. Polczynski, Kochanski, A., "Knowledge Discovery and Analysis in Manufacturing", Quality Engineering, accepted for publication.
- M. Polczynski, "Development Process for a Virtual Learning and Teaming Environment", ASEE NMS Conference, Milwaukee, WI, October 8-10, 2009
- M. Polczynski, "The Impact of Technology and Globalization on the Engineering Profession and Education", ASEE NMS Conference, Milwaukee, WI, October 8-10, 2009
- M. Polczynski, "An International Engineering Research and Exchange Initiative", 36th Annual ASEE/IEEE Frontiers in Education Conference, San Diego, CA, October 28-31, 2006.

- Borkowski, P., Sowinski, T., Kwiatkowski, K., Skalski, K., Zabicka, M., Polczynski, M., "Geometrical Modeling of Knee Joint Including Anatomical Properties", Proceedings of the International Conference on Biomechanics, Zakopane, Poland, September 6-8, 2006.
- Polczynski, M, "Expanding Extracurricular Learning Opportunities Through International Engineering Student and Faculty Exchange", Proceedings of the Tenth Annual Conference of the National Collegiate Inventors and Innovators Alliance, Portland OR, March 23-25, 2006.
- Polczynski, M., S.V. Jaskolski "Entrepreneurial Engineering Education", Proceedings of Ninth Annual Conference of the National Collegiate Inventors and Innovators Alliance, San Diego, CA, March 17-19, 2005.

General Resume

Education:
- 1978: PhD, Engineering, Marquette University, Milwaukee, WI
- 1972: B.S., Electrical Engineering, Marquette University, Milwaukee, WI

Prior Industry Experience (chronological to present – details below):
- Electronic product manufacturing and quality assurance engineer – Cutler Hammer.
- Electronic controls and instruments hardware, software, and system design engineer – Cutler Hammer.
- Engineering department manager – Square D.
- Electronic manufacturing line supervisor - A.O. Smith.
- Production supervisor for new start-up company - Thor Technologies.
- Materials research and development department manager – Eaton.
- Materials technology forecasting and strategic technology planning coordinator - Eaton.
- New product family planning and project manager - Eaton.
- Director of Innovation, Corporate Technology - Eaton.
- Corprate strategic technology planning and development coordinator – Eaton.

Patents:
- 4926546: PC Board Panel Configuration Technique
- 4964408: Oximeter sensor assembly with integral cable and encoder
- 5041187: Oximeter Sensor assembly with integral cable and method of forming same
- 5069213: Oximeter Sensor assembly with integral cable
- 6278281: Fluid Condition Monitor
- 6377052: Monitoring fluid condition through an aperture
- 6380746: Monitoring fluid condition with a spiral electrode configuration

Eaton Corporation Work Experience:
- '03-'05: Technology Consultant to Eaton Corporate Technology Officer and Vice President of Engineering. Responsible for developing, integrating, and applying corporation-wide processes and tools for voice of the customer discovery, new concept ideation, technology roadmapping, and intellectual property generation.
- '01-'02: Director of Advanced Technology Development, Eaton Innovation Center. Lead group of 25 senior technologists at two locations (Milwaukee, WI and Southfield, MI) providing core technology for Eaton new product growth initiatives. Report directly to Eaton Corporation Chief Technology Officer.
- '99-'00: Business Technology Manager, Eaton Innovation Center. "Key account manager" function providing senior management interface between Innovation Center and Eaton's Aeroquip Operation (approx. $1B annual sales, one of five Eaton operations). Identify and execute product development programs that support Aeroquip's growth strategy.
- '97-'98: Chief Scientist, Materials Technology, Eaton Innovation Center. Lead group of 30 materials technologists at two locations (Milwaukee, WI and Southfield, MI). Developed materials technology forecasts for driving Eaton new product development. Responsible for securing resources (people and funding) to leverage new materials technologies.
- '93-'96: Program Manager, Eaton Corporate Research and Development. Initiated several major new product development programs, including Fluid Condition Monitor and Truck PC. Lead process development improvement activities involving Eaton-wide plastic injection molding capabilities and rapid prototyping capabilities.

- ‘91-’92: Materials Technology Research Manager, Eaton Corporate Research and Development. Lead group of 15 materials technologists. Developed materials technology forecasts for driving Eaton new product development. Responsible for securing resources (people and funding) to leverage new materials technologies.

Previous Work Experience:

- 1990: Manufacturing Manager, Thor Technology Corp., Milwaukee, WI. Supervised production workers for spin-off from the A.O. Smith Corp. Electronics Business Unit. Activities included job scheduling, hiring and evaluation of work crew, and facilities management. Also included responsibility for process/product quality and new process development. Directly involved with sales of contract assembly services.
- ‘87-’89: Program Manager, Electronics Business Unit, A.O. Smith Corp., Milwaukee, WI. Developed advanced electronic assembly processes (SMT assembly, soldering, cleaning, testing, etc.). Activities included equipment evaluation, selection, and installation. End result was fully automated electronic assembly line to support A.O. Smith electric drives business. Directly involved with sales of contract assembly services for this unit.

Other Work Experience:

- ‘85-‘86: Product Group Leader, Automation Products Division, Square D Co., Milwaukee, WI.
- ‘83-’84: Principal Engineer, Advanced Technology Development, Count Control Division, Eaton Corp., Watertown, WI.
- ‘81-’82: Senior Software Engineer, Count Control Division, Eaton Corp.
- ‘78-‘80: Quality Control Engineer, Count Control Division, Eaton Corp.
- ‘72-’78: Research Assistant, Neuroscience Research Lab, VA Center, Wood, WI.
- ‘69-’72: Co-Op Engineer, Allen Bradley Co., Milwaukee, WI.

Awards:

- R&D Magazine 100 Most Significant Products, 1996 and 2008.

Other Activities:

- Webmaster for M and E Flutes – http://www.irishflutes.net