

PROFESSIONAL EXPERIENCE

General Motors Company, Warren, MI

- 2008 – present Director, Manufacturing Systems Research Lab, Global Research & Development
Responsible for corporate manufacturing research strategy and portfolio
Represent General Motors on USCAR Manufacturing Technical Leadership Council
Co-Director, General Motors / UM Collaborative Research Lab – Advanced Vehicle Manufacturing
Invented and implemented several key manufacturing technologies for Volt, BAS3/HEV4, and currently BEV3 – partners with GPS-ME / Adv. Prop. Center
2x Boss Kettering Award winner – 2011, 2014
University research partnerships: Michigan, Michigan State, MIT, Stanford, Wayne State, Wisconsin, Kettering, Lawrence Tech (not inclusive)
- 2006 – 2008 Technical Manager, Robust Synthesis, Global CAx Methods and Integration
Managed development and implementation of math-based tools: metal forming, vehicle electrical architecture, and engine and driveline controls
- 2003 – 2006 Manager, Global Engineering Integration (International Service Personnel assignment, Adam Opel, AG, Rüsselsheim, Germany)
Managed Global Design Engineer single point product release team: defined engineering processes for global, single point product release with change management, BOM & Reuse, and design operations teams
Managed global team responsible for Global Key Characteristic Description System / Key Product Characteristic (KCDS/KPC) content alignment for Global Epsilon vehicle architecture
- 2002 – 2003 Engineering Group Manager – Vehicle Development Process Engineering, Engineering Process & Math Strategy Group
- 2000 – 2002 Engineering Group Manager – Program Implementation, Engineering Process & Math Strategy
- ### **DaimlerChrysler Corporation, Advance Manufacturing Engineering, Auburn Hills, MI**
- 1998 – 2000 Senior Systems Specialist, Manufacturing Technical Support
Managed Manufacturing Simulation & Analysis development team – robotic off-line and throughput simulation; robotic systems (testing & calibration)
Managed Post-Merger Integration (w/ Daimler) for math-based tools

Delphi Interior & Lighting Systems, General Motors Corporation, Troy, MI

1994 – 1998 Advanced Manufacturing Engineer, Advanced Development Group
Advanced technologies for design, simulation, and analysis of manufacturing processes

SA Consulting, Novi, MI

1992 – 1994 Senior Consultant
Development team for plant scheduling system (Ford – Sandusky, OH)

GMI Engineering & Management Institute, Flint, MI

1985 – 1994 Asst. Professor – Industrial & Mfg. Systems Engineering; Mechanical Eng.

Inland Division, General Motors Corporation, Dayton, OH

1985 Associate Manufacturing Engineer, Manufacturing Development Laboratory

1980 - 1985 GMI Cooperative Education Student (Mechanical Engineering)

EDUCATION

1992 **Doctor of Philosophy**, Systems Engineering, Oakland University, Rochester, MI

1987 **Master of Science**, Systems Engineering, Oakland University, Rochester, MI

1985 **Bachelor of Science**, Mechanical Engineering, Kettering University (GMI), Flint, MI

2016 Harvard Business School - GM Emerging Leader II (certificate)

INTELLECTUAL PROPERTY / SPONSORED RESEARCH / PUBLICATIONS

15 granted patents / 7 patents implemented for production use

Eight Tool-Method-Secret classified inventions; one defensive publication

\$1.275M in collaborative sponsored research / ~\$14M DOE Grant - “GM Li-ion Battery Pack Manufacturing” (\$105M total grant to GM)

40 journal and conference publications

AWARDS / LICENSURE / SERVICE

2x Boss Kettering Award winner (2011, 2014); Finalist (2016)

GM Transformers Award (2016)

College of Fellows, SME (2015)

IEOM Distinguished Industry Award (2016)

Professional Engineer (Michigan)

Certified Manufacturing Engineer (Robotics) - SME

ABET – Vice-Chair, Industrial Advisory Council (2015-present)

SME – Chair, Education and Accreditation Committee (2012-present)

Lawrence Technological University - Mechanical Eng. Industrial Advisory Board (2012-present)

Kettering University Alumni Board (2000-2002)