

Curriculum Vitae

Mark Edward Zipf

PROFESSIONAL PROFILE

- Internationally recognized expert and award winning author with over 29 years of experience in the field of Cold Rolled Flat Products focusing on the rolling process; rolling mill equipment; mill set-up, scheduling and operations; mathematical modeling / simulation; control, automation and drive systems; thickness measurement and control; shape / flatness measurement and control; mill performance and production analysis; material quality analysis.
- 34 years experience in the design, development, and implementation of embedded real-time controls; servo and motion control systems; signal processing, and integrated data acquisition for scientific and industrial applications.
- 33 years experience in the design and implementation of analog / digital electronics and advanced instrumentation.
- 31 years experience in advanced theoretical / applied controls, modeling, simulation, analytic performance analysis.
- 29 years experience in heavy industry, process / operational automation, equipment installation, and field service.
- 28 years experience in metrological systems involving probing, sensing, spectroscopy, and precision measurements.
- 23 years experience in marketing, sales, proposals, presentations and pricing for domestic and international interests.
- Wide-ranging hands-on experience in remote field installations, heavy mill / industrial facilities and scientific / laboratory / observatory environments, in foreign, domestic and government / military / agency settings.
- Extensive experience in long duration international travel [33 Countries: Asia, Pacific Rim, South America, Europe, Middle East]. Broad exposure to foreign cultures. Expertise with difficult / challenging language barrier situations.
- 110+ technical publications, including: book chapters, journal / magazine articles, conference and invited papers. Experienced in specification writing, documentation, technical / educational presentations, and marketing materials.
- Industry Lecturer: Providing educational training seminars for the Association of Iron & Steel Technology (AIST).

EDUCATION

- B.S.E.E. with honors, University of Pittsburgh, 1984, Departmental QPA: 3.69
- M.S.E.E. University of Pittsburgh, 1988, Departmental QPA: 3.64. Thesis: "A Synchronized Redundant System for High Speed Critical Computations"
- Ph.D.E.E. University of Pittsburgh, 1997, Departmental QPA: 3.71. Dissertation: "Loop Transfer Recovery in Multivariable Disturbance Estimation and Compensation"

EMPLOYMENT HISTORY

- Cold Rolling Technologies, Inc., Middlefield, CT
2013-* Owner, President, Rolling Mill Consultant
- Intergrated [*sic*] Industrial Systems, Inc. / Tenova I2S (I2S ,LLC), Yalesville, CT
2006-13 Vice President – Controls Technologies
2000-06 Director of Electrical Engineering
- University of Pittsburgh, Department of Electrical & Computer Engineering, Pittsburgh, PA
2000 Lecturer
- M.E. Zipf Associates, Pittsburgh, PA & Meriden, CT
1997-14 Metals Industry Engineering Consultant
- Optomation, Inc., Pittsburgh, PA
1997-01 Principle Scientist
- Mill Equipment & Engineering Co. (MECO), Pittsburgh, PA
1996-97 Technical Assistant to the President
1995-96 Assistant Vice President – Control & Automation Systems
1994-95 Manager of Process Automation
1992-94 System Design Engineer
-

EMPLOYMENT HISTORY (continued)

ISTcom, Inc. (Innovative Science & Technologies), Pittsburgh, PA

1989-08 Vice President – Instrumentation & Systems Engineering

Center for Motion Control (Modicon, Inc. / International Cybernetics Corp. / University of Pittsburgh), Pittsburgh, PA

1988-90 Research Fellow

NASA Lewis Flight Center / University of Pittsburgh, Cleveland, OH

1986-88 Research Assistant

University of Pittsburgh, Departments of Electrical and Chemical Engineering, Pittsburgh, PA

1984-87 Teaching Assistant / Lecturer / Lab Instructor

University of Pittsburgh, Department of Physics and Astronomy, Pittsburgh, PA

1983-93 Research Assistant

PROFESSIONAL ACTIVITIES

2013-* Invited Lecturer – Association for Iron & Steel Technology (AIST) : Cold Rolling Fundamental – Specialty Training Seminar / Short Course

- Rolling Theory Indianapolis, IN, March 8, 2017

Mobile, AL, March 3, 2015

- Automatic Gauge Control (AGC) Indianapolis, IN, March 8, 2017

Mobile, AL, March 4, 2015

- Shape / Flatness : Measurement & Control Indianapolis, IN, March 8, 2017

Mobile, AL, March 4, 2015

Detroit, MI, March 27, 2013

- Intermediate Concepts & Special Topics Indianapolis, IN, March 8, 2017

2012-15 Co-Principal Investigator – National Science Foundation (NSF) Grant No.: 1100651, “Reliability-Based Design and Operation of Metal Rolling Mills Using Bayesian Theory and a New Rolling Model”, Sponsor: Saint Louis University, St. Louis, MO.

2009-* Invited Lecturer – Association for Iron & Steel Technology (AIST) : Systems Automation Fundamentals – Specialty Training Seminar / Course (formerly: Process Systems)

- Shape / Flatness : Measurement Indianapolis, IN, March 7, 2017

Mobile, AL, March 3, 2015

Detroit, MI, March 27, 2013

- Process Modeling & Simulation Indianapolis, IN, March 8, 2017

Mobile, AL, March 4, 2015

Detroit, MI, March 27, 2013

- Strip Thickness Measurement Orlando, FL, February 22, 2011

Jacksonville, FL, February 2, 2009

2007-* Technical Committee Member – Association of Iron and Steel Technologies (AIST)

- Computer Applications Committee

- Cold Sheet Rolling Committee

2006-09 Adjunct Professor – Wright State University, Departments of Mechanical Engineering and Material Sciences Engineering, Dayton, OH.

2004-07 Board of Directors – Controlling Technologies International, Inc., Dayton, OH.

2000-06 Curriculum Selection and Oversight Committee Member – Three Rivers Technical College, Norwich, CT.

HONORS AND AWARDS

- 2015 Best Paper Award – Association of Iron & Steel Technology (AIST) Computer Applications, “A Unified Spatial Curvature Framework for Coordinated Pass Scheduling, Shape Targeting and Mill Setup.”
- 2009 Invited Lecturer – CEFSA : Faculdade de Tecnologia : Termomecanica, Sao Paulo, Brazil, Febuary 10, 2009. Topic: “Rolling Mill Automation Technologies – Concepts, Techniques & Advancements”.
- 1989 Research Fellowship - Center for Motion Control, Corporate Sponsors: Modicon, Inc. / International Cybernetics Corp.
- 1985 Millstone Hill Graduate Student Researcher - Massachusetts Institute of Technology (MIT), in conjunction with the Haystack Observatory and Millstone Hill Field Station, Westford, MA.
- 1984 National Runner-up - Gerhart Industries Technical Paper Competition, "A Photomultiplier Gain Stabilization Technique", (\$1000 cash prize), Gerhart Industries Inc., Fort Worth, TX.
- 1983 Engineering Honor Societies - Tau Beta Pi, Eta Kappa Nu.
- 1982 University Scholar - University of Pittsburgh.
- 1982 Most Outstanding Engineering Student - University of Pittsburgh at Titusville.
- 1980-84 Dean's List - School of Engineering, University of Pittsburgh.
- 1980-82 President - Engineering Society of the University of Pittsburgh at Titusville.

References, academic transcript, technical publication list, project portfolio, presentation portfolio, list of design / application skills and comprehensive resume are available upon request.
