

**Curriculum Vitae
for
Richard A. Springman**

General Information

Current Position:

Assistant Professor, Associate Chair and Director of Student Support

Member of Graduate Faculty

Department of Engineering Technology MS #402

The University of Toledo

2801 West Bancroft Street

Toledo, Ohio 43606

(419) 530-3276

(419) 530-3068 fax

richard.springman@utoledo.edu

Education

BME, 1970

(Bachelor of Mechanical Engineering – five-year degree)

The Ohio State University

Columbus, Ohio

MSME, 1972

(Master of Science in Mechanical Engineering)

The Ohio State University

Columbus, Ohio

Ph.D. ABD in Mechanical Engineering

(no degree; all coursework and exams completed)

The Ohio State University

Registration

Registered Professional Engineer

State of Ohio

Registration Number E-39661

Employment History - Education

The University of Toledo

College of Engineering

Toledo, Ohio

- Associate Chair, Engineering Technology (January 2017 – present)

- Director of Student Support (August 2000 – present)
- Assistant Professor, Engineering Technology (May 2012- present)
- College of Engineering Executive Committee
 - Chair (2010-11, 2012-13 and 2015-16)
 - Vice Chair (2011-12 and 2014-15)
 - Secretary (2013-14)
- Parliamentarian, College of Engineering Faculty (2010 – present)
- Instructor, Engineering Technology (September 1995 – 2012)
- Program Director, Mechanical Engineering Technology (March 1996 – August 2000)
- Assistant Dean for Undergraduate Studies (June 1989 - July 1995)
- Interim Assistant Dean for Undergraduate Studies (June 1988 – June 1989)
- Assistant Chairman of Mechanical Engineering (January 1987 – June 1988 and January 1986 – February 1986)
- Acting Chairman of Mechanical Engineering (February 1986 – January 1987)
- Instructor of Mechanical Engineering (December 1979 – September 1995)

The Ohio State University
Department of Mechanical Engineering
Columbus, Ohio

- Graduate Research Associate (1971-72, 1973-78)
- Graduate Teaching Associate (1972-73, 1978-80)
- Teaching Aide (1969-71)

The Ohio State University
Division of Continuing Education

- Instructor (1977)

North American Heating and Air Conditioning Wholesalers
National Home Study Institute
Columbus, Ohio

- Instructor (1971-80)

Employment History – Other

Ohio Department of Highways, Division 10
Marietta, Ohio

- Inspector (Summers 1966-1967)

Shell Chemical Company
Belpre, Ohio

- Production Technician (Summer 1968)

Union Carbide Corp., Mining and Metals Division
Marietta, Ohio

- Engineer (Summers 1969-1972)

Employment History – Consulting

Midwest Environmental Research Corp., Columbus, Ohio (1971-1980)
Cleveland Electric Illuminating Co., Cleveland, Ohio (1975)
Owens-Corning Fiberglass Corp., Granville, Ohio (1976)
Robert H. Fuller and Associates (1972-1979)
Systems Engineering Associates, Columbus, Ohio (1979-1990)
Expert witness for various clients (1979-1991)

Technical and Honorary Societies

American Society of Heating, Refrigerating and Air Conditioning Engineers
 Toledo Chapter Education Committee (1980, 81, 86, 87)
 Chairman (1984, 85)
 UT Student Liaison (1982, 83, 88, 89)
American Society for Engineering Education
 Unit Director for Administration, North Central Section (1991-94)
 Annual Conference Committee (1991-92)
National Society of Professional Engineers
Ohio Society of Professional Engineers
 Professional Engineers in Education Committee (1988)
Toledo Society of Professional Engineers
 Treasurer (1992-94)
 Student Chapter Advisor (1990-92 and 2002-present)
 Education and Young Engineers Committee (1988, 89 and 2002-present)
 Scholarship Selection Committee
 Chair (2009-present)
 First Vice President (2003-2004 & 2004-2005)
 President (2005-07)
 First Past President (2007-2008)
 Second Past President (2008-2009)
 Third Past President (2009-2010)
 Trustee (2010-present)
Technical Society of Toledo
 Board of Directors (2009-2016)
 President (2010-2012)
 Treasurer (2012-2014)
Toledo Area Engineers Week Committee
 Vice Chairman (2006-2007)
 General Chairman (2007-2008)
 Past General Chairman (2008-2009)
 Speaker Selection Committee (2010-present)
 Chair (2010-2011, 2011-2012 and 2012-2013)
 Scholarship Selection Committee (2006-present)
 Chair (2009-present)
 Engineer of the Year Selection Committee (2011-2012)

Society for Information Technology and Teacher Education (2006-07)
Pi Tau Sigma Mechanical Engineering Honor Society
Chapter Advisor (1988-94)
Phi Kappa Phi Honorary Society
Sigma Xi Scientific Research Society

Honors and Awards

- Dr. Robert Schlembach Award for outstanding service in promoting UT, awarded by the Office of Admissions, University of Toledo; September 16, 1994.
- Service Recognition Award for outstanding academic and administrative service to the College of Engineering, University of Toledo; June 14, 1995.
- Outstanding Teacher Award, College of Engineering, University of Toledo, May 11, 2002.
- Listed in *Who's Who in Engineering*
- Listed in *Who's Who in Teaching*
- Recognition Award for service as President of Toledo Society of Professional Engineers, 2005-07; September 19, 2007.
- Outstanding Engineering Educator Award, Ohio Society of Professional Engineers, May 16, 2008.
- Toledo Area Engineer of the Year Award, Toledo Society of Professional Engineers & Technical Society of Toledo, February 21, 2011
- Award of Appreciation for efforts and support of 2016 activities, Saudi Club at University of Toledo and Saudi Arabian Cultural Mission to the U.S., May 2016.
- Third Place, Best Paper Award, 2017 ASEE North Central Section, ASEE Zone 2 Conference, paper entitled "Using the Capstone Senior Design Project to Retrofit or Design Laboratory Demonstration Units", March 2-5, San Juan, Puerto Rico.
- First Place, Best Paper Award, 2018 ASEE North Central Section, ASEE Zone 2 Conference paper entitled "Using Peer Review in Engineering Technology Courses", March 23-24, 2018, Akron, OH.

Papers and Publications

R. A. Springman, A Study of the Effect of Branch Spacing on the Pressure Loss Coefficient for Converging Divided Flow Fittings in Exhaust Systems, MS Thesis, The Ohio State University, 1970.

R. A. Springman, "Preliminary Load Program for DOW Project Houses", internal report for Research Project EES-480X, The Ohio State University, 1974.

Sespy, Jones and Springman, "Simulation and Validation of Building Environmental Control Systems for Energy Conservation", final report for Research Project RF-3642-A1, The Ohio State University, 1977.

Springman, Sepsy and Jones, "Energy Conservation Through Retrofit Heat Recovery", Energy Conservation in Building Heating and Air Conditioning Systems, American Society of Mechanical Engineers, New York, 1978.

Little and Springman, "Effective Teaching through Classroom Discipline", presented at 91st Annual ASEE Conference, Rochester Institute of Technology, 1983.

Springman and Jakubowski, "Multiple Choice Examinations: An Increase in Efficiency or a Decrease in Quality?", presented and published in Proceedings of 1984 ASEE Annual Conference, University of Utah, 1984.

Springman and Little, "The Authoritarian Professor – A Classroom Despot or a Builder of Character?", presented and published in Proceedings of Frontiers in Education 14th Annual Conference, Philadelphia, PA., 1984.

Rinker, Springman and Little, "A Numerical comparison of the finite Difference and Finite Element Methods", presented at the 94th Annual Meeting of the Ohio Academy of Science, University of Cincinnati, April 1985 (abstract published in Ohio Journal of Science, Vol. 85, No. 2).

Al-Khalil, Jakubowski and Springman, "Transient Response of a Concentric Evacuated Tubular Solar Collector" presented and published in Proceedings of 22nd Intersociety Energy Conversion Engineering Conference, Philadelphia, PA, 1987.

Springman and Lovett, "Setting a New PACE for Engineering Students", presented at the Freshman Year Experience in Science and Technology Education Conference, June 11-13, 1992, Worcester, MA.

Springman and Lovett, "Setting a New PACE: A Peer Advising Program for First-Year Engineering Students", presented at the National Conference on Student Retention, July 15-18, 1992, San Francisco, CA.

Developing a College Orientation Course that Provides a Personal Touch: Blending On-Line Modules to Enhance Teacher Effectiveness, by Mentzer, Springman, Fridman and Shelangoskie, presented at 17th Annual Conference of Society for Information Technology and Teacher Education, March 20-24, 2006, Orlando, Florida.

Mentzer, G., Springman, R., Fridman, E. & Shelangoski, S. (2006). *Developing a College Orientation Course that Provides a Personal Touch: Blending Online*

Modules to Enhance Teacher Effectiveness. In C. Crawford, et al. (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2006* (pp. 459-462). Chesapeake, VA: AACE.

Cioc, Carmen; Carmen, Soren; Springman, Richard, *Using the Capstone Senior Design Project to Retrofit or Design Laboratory Demonstration Units*, presented at ASEE Zone II Conference, March 2-5, 2017, San Juan Puerto Rico; abstract published in conference proceedings (Paper D1D5, pp 98-99). Paper received Third Place for Best Paper Award, 2017 ASEE North Central Section, ASEE Zone 2 Conference.

Cioc, Carmen; Carmen, Soren; Springman, Richard, *Using Peer Review in engineering Technology Courses*, presented at ASEE Zone II Conference, March 2-5, 2018, Akron, OH; abstract published in conference proceedings. Paper received First Place for Best Paper Award, 2018 ASEE North Central Section, ASEE Zone 2 Conference.

Cioc, Carmen; Carmen, Soren; Springman, Richard, *Using Capstone Projects for community Outreach*, presented at ASEE Annual Conference and Exposition, Salt Palace Convention Center, Salt Lake City, UT, June 24-27, 2018, abstract published in conference proceedings.

Thesis Supervision

“Heating Season Performance Analysis of the Solar System in Sunforest Medical Building”, MSME thesis of Ida-Matika S. Sevi, 1982.

“Finite Element and Finite Differencing Techniques as Applied to Heat Transfer Analysis”, MSME thesis of Elizabeth A. Rinker, 1984 (co-adviser with R. Little).

“Design and Analysis of Solar Assisted Space Heating”, MSME thesis of Farid Antoun, 1984 (co-adviser with G. Jakubowski).

“Transient Analysis of Evacuated Tube Solar Collector Performance”, MSME thesis of Kamel M. Al-Khalil, 1986 (co-adviser with G. Jakubowski).

“Survey of Dynamic Performance Predictors for Wind Turbines”, Project of Martha Waldon, 1985.

“A Model Development and Evaluation of Energy Savings Associated with Thermostat Setback in a Residential Structure”, MSME thesis of Michael A. Reighard, 1990.

“A Numerical Solution for the Transient and Steady State Ice Layer Profile on a Constant Temperature State in a Forced Convective Flow”, MSME thesis of Douglas B. Kiefer, 1990.

“Finite Element Accuracy and Cost Effectiveness of Two-Dimensional Finite Elements in the Torsion of Prismatic Bars”, MSME thesis of Mark S. Williams, 1994 (co-advisor with R. Little).

“Tooling DOE for Spiral Hose Manufacturing”, MSE project of Paul Bieszczad, 2003.

“Torque DOE Applied to Engine Assembly Diagnosis”, MSE project of David Marshall, 2006.

“Bushing Inner Metal Serration Design”, MSE project of Scott K. Braddock, 2008.

“Development of a Waterborne Spray Applicator”, MSE project of Jessica Bryant, 2009.

“Optimization of Rack Wire”, MSE project of Richard L. Kretz, Jr., 2009.

“Production Management Analysis”, MSE project of Robert E. Herman, 2010.

“Selection of a Small Commercial Outside-Air System”, MSE project of Jonathan C. Maglott, 2011.

“Automated External Defibrillator Safety”, MSE project of Joshua D. Simms, 2012.

“Total Cost Analysis for the Implementation of Chilled Beams in Alternative Building Cooling Methods”, MSE project of Andrew R. Tuttle, 2012.

“Development of Tire Bead Geometry and its Effect on Sealing Pressure and Resistance to Mounting Damage”, MSE project of Stephen L. Fought, 2013.

“Conveyor/Personnel Bridge Design and Detail Program”, MSE project of Thomas L. Downey, 2014.

“MFG: Prototype to Production – Redesigning a Powdered Metal Sprocket CNC Grinder into a Production Design”, MSE project of Christine Hernandez-Hauser, 2015.

“Vehicle Cooling System Design”, MSE project of Zeile A. Klaiss, 2016.

“Network Analysis: Online Course Development”, MSE project of Nicole L. Winhoven-Kamm, 2017.

“Imbalance Reduction in TCC”, MSE project of Nicholas W. Kundmueller, in progress (Fall 2018, Spring 2019)

Participation on Thesis Committees

“The Design and Use of a Solar Simulator for Predicting Outdoor Collector Performance”, Bradley W. Fintel, MSME, 1984.

“Development of a Suboptimal Controller for a Residential Solar Cooling System”, Michel G. Nahed, MSEE, 1985.

“The Design of an Apparatus for Testing High Pressure Reciprocating Pumps”, Jamal A. Hussein, MSME, 1986.

“Heat Transfer Analysis with Graphics Using the Apple Computer”, Susan D. LaRoe, MSME, 1986.

“Determination of NPSHR for High-Pressure Reciprocating Pumps”, Naji J. Nassif, MSME, 1986.

“Numerical Investigation of the Unsteady Heat Transfer from a Single Sphere”, Ali M. Attar, MSME, 1988.

“A Predictive Model of Float Heights on a Negative Thrust Air Bearing”, James P. Schnabel, Jr., MSME, 1988.

“Figue Life Prediction of a Sleeve Yoke Using Finite Element Analysis”, Jeffrey A. Dutkiewicz, MSME, 1990.

“Flow about a Sphere in a Stratified Fluid Column”, Thomas A. Kiriyanthan, MSME, 1990.

“Stiffness Analysis and Experimental Correlation of a Structural Latch for an Orbital Solar Concentrator”, Joseph M. Roche, MSME, 1990.

“Stress Analysis of a Seven Speed Truck Transmission Case”, Gordon McIndoe, MSME, 1995.

“Impacts to a Downstream Delayed Coker Unit from Running Heavy Canadian Crude to an Upstream Crude Unit”, Zachary J. Boehnlein, MSE, 2011.

“The Development of an Electronic Inspection Recording System”, Jeffrey J. Meyer, MSE, 2011.

“Solving Fit Issue for a Wheel Bearing”, Jeff T. Weikinger, MSE, 2011.

“Libbey, Inc. Warehouse Management System Evaluation, Selection and Implementation”, Brian J. Singlar, MSE, 2012.

“Validating User Needs for a Total Knee Arthroplasty though Cadaveric Evaluations”, Robert F. Lindsey, MSE, 2012.

“Parameters of Olivine Sand Control Used on Aluminum Castings”, Jose Luis Macedo, MSE, 2012.

“Improving Efficiency in a Dedicated Customer Cell”, Matonda Highsmith, 2013.

“Engineering & Technical Math on the TI-92”, Charles R. Adams, MSE, 2013.

“Operational Metrics System Design”, Nathan Zeiter, MSE, 2013.

“Procedures and Techniques for Moving Precision machine Tools – An Applied Case”, MSE Project of LeVaughn Duran, 2014.

Advisor to Senior Capstone Projects

(information prior to Fall 2012 not available)

“Rocket Rover” - Matthew Farkas, Jon Hoover, Alex Huff, Patrick Ray, Tyler Wilson
- Fall 2012

“DC Blender Feasibility Study” - Austin Armstrong, Jeremy Butler, Kevin Shinaver,
Bradley Wilson, Josh Zaborski - Spring 2013

“Water Ahoy” - Derek Deland, Eamon Kelly, Jared Leffel, David Lillibridge, Andy
Yang - Spring 2013

“EZ Load” - Tyler Begley, Adam Hahn, Peter Hill, Joel Murphy, Katie Urbanski,
Cory Williams; Fall 2013

“Pallet Jack Safety Brake” -Sean Byrne, Zachary Callihan, Alexander Johnston,
Laura Leaders, Brandon Romer, Patrick Sampson, John Yuhasz - Spring 2014

“Gem Laser Scanner Multi-purpose Mount “- Jack Bung, Matt Hallett, Alex Prosser, Kyle Saha - Fall 2014

“Brush Removal Implement “- Joshua Little, James Rickman - Fall 2014

“Power Steering Rack Test Apparatus” - Janelle Gephart, Michael Framlich, Makenzie Jones, Jordan Margalit - Spring 2015

“Tenneco, Inc. Double Disc Grind Length Gauges” -Jared Dunn, Kurt Jackisch, Jacob Leffel - Fall 2015

“ Handicap Accessible Dental Chair” - Anthony Herman, Brandon Kinsman, Helena Sigler - Spring 2016

“Manual Can Crusher and Recycling Device” - Hussam Alhussain, Abdulrahman Alolayan, Ahmad Alshammari, Ali Alshuaibi, Aron Jarvis - Spring 2017

“Heat-R-Seat” – Colton J. Allums, Derrick T. Brandt – Spring 2018

“Lightning Loader” – Ryan J. Schulze, Joseph A. Simon, Joel M. Tebbe – Fall 2018

“The Consistent Cooler” – Benjamin T. Bowes, Joshua J. Cole, Jeremiah E. Fletcher, Damien Flynn, James Ghesquire, Christian Y. Petousis – Fall 2018

“Autonomous Ultrasonic Lubrication Device” - Andrew S. Naveau, Chase Sniadecki – Spring 2019

“Vulcan” – Abdulaziz S. Alotaibi, Majed A. Alzuabi, Daniel Bender, Nicholas Dochstader, Chenrui Guo – Spring 2019

Other Service

Judge for 2016-2017 National Society Daughters of the American Revolution
American History Essay Contest for the Southeast District of Ohio Society Daughters
of the American Revolution

- Christopher Columbus Essay Contest (high school)
- American History Essay Contest (grades 5-8)

Judge for 2017-2018 National Society Daughters of the American Revolution
American History Essay Contest for the Southeast District of Ohio Society Daughters
of the American Revolution

- Christopher Columbus Essay Contest (high school)
- American History Essay Contest (grades 5-8)

Judge for 2017-2018 National Society Daughters of the American Revolution
American History Essay Contest for the Southeast District of Ohio Society Daughters
of the American Revolution

- Christopher Columbus Essay Contest (high school)
- American History Essay Contest (grades 5-8)

Triangle Fraternity

- Faculty Advisor, 1983-present