

Nathan W. Klingbeil, Ph.D.

Professor, Department of Mechanical & Materials Engineering
Wright State University
Dayton, OH 45435

Education

Institution	Field of Study	Degree/Date
Carnegie Mellon University	Mechanical Engineering	Ph.D., 1998
Carnegie Mellon University	Mechanical Engineering	M.E., 1995
University of Dayton	Mechanical Engineering	B.M.E., Summa Cum Laude, 1993

Appointments

Position	Institution	Dates
Dean	Wright State University, College of Eng & Comp Sci	05/13-06/18
Senior Associate Dean	Wright State University, College of Eng & Comp Sci	05/12-04/13
Associate Dean for Academic Affairs	Wright State University, College of Eng & Comp Sci	01/10-04/12
Professor	Wright State University, Mech. & Mat. Eng.	09/08-Present
Director of Student Retention and Success	Wright State University, College of Eng & Comp Sci	07/07-12/09
Distinguished Professor of Teaching	Wright State University	07/05-06/08
Associate Professor	Wright State University, Mech. & Mat. Eng.	09/04-08/08
Assistant Professor	Wright State University, Mech. & Mat. Eng.	09/99-08/04
Materials Research Engineer	Air Force Research Laboratory (AFRL/MLLN)	06/98-08/99
Graduate Research Assistant	Carnegie Mellon University, Dept. of Mech. Eng.	06/94-06/98
Graduate Teaching Assistant	Carnegie Mellon University, Dept. of Mech. Eng.	08/93-05/94
Undergraduate Grader	University of Dayton, Dept. of Mech. Eng.	01/93-05/93
Undergraduate Teaching Assistant	University of Dayton, Dept. of Mathematics	08/91-05/93
Engineering Co-Op	DAP, Inc.	05/91-08/93

Academic Leadership Experience

Dean, College of Engineering and Computer Science (CECS), May 2013-June 2018

- Provided strategic and academic leadership for a college of four academic departments, seven ABET accredited undergraduate degree programs and a wide range of graduate programs at both the M.S. and Ph.D. levels, with a total peak enrollment of over 3500 students, over 90 tenure and non-tenure track faculty members, and a base budget exceeding \$23.2 million.
- Led CECS to all-time record highs in enrollment, credit hours and degrees awarded at both the undergraduate and graduate levels, making CECS the largest academic unit (in terms of total headcount) on campus. This was fueled by all-time record highs in new-direct-from-high-school (NDFHS) enrollment, university-leading student retention and success, and an unprecedented growth in international student enrollment.
- Grew the number of CECS faculty to an all-time high, earning its leadership a 4th seat in the Faculty Senate.
- Focused both faculty hiring and administrative leadership appointments in areas of strategic research growth, including cyber security and big data in CSE; biomedical imaging and tissue engineering in BIE; sensors and autonomous systems in EE; advanced manufacturing and aerospace in MME. Led by Kno.e.sis and the sensors group of EE, this contributed to a five-year high in externally funded research awards by CECS faculty PIs, whose total F&A generated reached its highest level on record.
- Demonstrated an unwavering commitment to diversity and inclusion in the hiring of CECS faculty and administrators. These included the first female administrator in the history of CECS as Associate Dean for Research and Graduate Studies; an Hispanic male as the Chair of the Department of Biomedical, Industrial and Human Factors Engineering; the first-ever domestic-born female on the tenure-track faculty in Mechanical and Materials Engineering; the first-ever African-American male on the tenure-track faculty in Electrical Engineering; and two additional females on the tenure-track faculty in Computer Science.

- Awarded an NSF S-STEM scholarship program to bring \$520K in scholarships to CECS from 2014-2019.
- Established data-driven enrollment management practices to better link recruitment and scholarship resource allocation to program capacity, likelihood of student retention, and untapped white spaces in Ohio's NDFHS market. Under the leadership of the CECS Director of Enrollment Management, this included targeted marketing to 'support seekers' – those students with below median ACT math scores but above median high school GPA's – who are well poised for success in our innovative first-year curriculum and associated student support structures, yet are overlooked by our competitors. This also included targeted marketing and a housing scholarship program for students outside Raider Country, which filled the available beds on campus and yielded dozens of additional NDFHS students.
- Established the CECS Faculty Recruitment Fellows Program to make Wright State University the first choice of area high school students interested in engineering and computer science. With logistical support from the CECS Student Success Center, expanded the program to include the cumulative participation of more than 20 faculty members in nearly 200 high school visits since 2013, with an estimated 10,000 prospective students directly engaged in their high school classrooms. Coupled with a 4+1 scholarship program to recruit top students for both their B.S. and M.S. degrees, this contributed not only to all-time highs in NDFHS enrollments, but also to an increase in average ACT and high school GPA of our incoming students.
- Developed an asynchronous online version of EGR 1010 for large-scale roll-out of Wright State's engineering math program to high school students enrolled in CC+, as well as other university/community college partners across the country. The online materials are also being used to facilitate SCALE-UP (student-centered active learning) implementations of EGR 1010 in the new student success and classroom building.
- Established unprecedented college-level infrastructure for both the recruitment and academic support of international students, at both the undergraduate and graduate levels. This contributed to record numbers of degrees awarded to international students, as well as record high CECS tuition revenues.
- Established the Brandeberry Career Development Center (BCDC) to make Wright State University the first choice for area employers of engineering and computer science graduates. In addition to internship and career placement for hundreds of CECS students, the BCDC serves as the primary gateway for interaction of our students, faculty and staff with our external constituencies, including more than 200 regional and national employers. This has resulted in more than a dozen corporate partners, all currently donating funds to CECS at various levels, and an unprecedented level of their engagement on campus.
- Expanded CECS advancement and development activity to an all-time high level, exceeding our \$10M capital campaign goal by over 50%. Notable major gifts included \$3.0M to establish the Bison Gear and Engineering Innopreneurship Laboratory and associated Ronald D. Bullock Endowed Professorship in Engineering Design and Innovation, a \$2.0M scholarship bequest to establish the Otten Scholars Program, and a \$675K corporate gift to establish the O'Neil Center for Research Communication.
- Continued to give a wide range of invited presentations on Wright State's National Model for Engineering Mathematics Education and other CECS student success initiatives at local, state, and national venues, including invited workshops for the national student success and professional development organizations Complete College America and Academic Impressions. This has solidified the growing reputation of Wright State University as a national leader in the area of engineering student success and degree completion.

*Associate Dean for Academic Affairs, College of Engineering and Computer Science, January 2010-April 2013
(Promoted to Senior Associate Dean in May 2012)*

- Maintained responsibility for all CECS undergraduate student recruitment and retention activities. Supervised the Academic Affairs Coordinator, a staff of three Enrollment Advisors and multiple student workers in support of high school visits, college fairs, K-12 outreach programs, dual-enrollment programs, transfer student and scholarship programs, new student orientation scheduling, incoming student and first-year programs, learning communities, peer tutoring/mentoring programs, and undergraduate academic advising.
- Maintained responsibility for all CECS academic affairs, including the review of all course inventory requests and modifications at both the undergraduate and graduate levels, the review and approval of all undergraduate transfer student admissions, the coordination and scheduling of all CECS courses, the prosecution of academic integrity violations and the resolution of academic mediations.
- Supervised a staff of up to 6 instructors and 12 TA's in support of the first-year engineering math program (EGR 101/1010 and EGR 199/1980) serving a combined enrollment of over 500 students annually.
- Assumed responsibility for the orientation scheduling and academic advising of all intending CECS students, which was formerly done at the university level. Established bi-weekly academic advising meetings to better align advising procedures and enhance communication between the department and college levels.

- Established the CECS Student Success Center as the focal point for all undergraduate recruitment and retention activities. Located in 280 JC, the center provides a centralized location for recruitment, college-level academic advising, peer tutoring/mentoring programs, the first-year engineering math program, internship/co-op/career placement and other student support services.
- Chaired the search committees for both the Associate Dean for Research and Graduate Studies and the Chair of the Department of Computer Science and Engineering.
- Hired a full-time Lecturer and one Adjunct faculty member to support the college-wide implementation of EGR 3350 Technical Communications for Engineers and Computer Scientists.
- Secured funding from the Provost and hired the CECS Director of International Programs to help manage and shape our international student enrollments, including the orientation scheduling and initial academic advising of all incoming undergraduate international students, as well as the recruitment of international students at both the undergraduate and graduate levels.
- Served as the CECS College Coordinator for Semester Transition. Served on the University Semester Transition Team. Reviewed all semester course inventory requests at both the undergraduate and graduate levels. Coordinated the semester scheduling of all CECS courses.
- Represented the University in both the semester workload and contract negotiations with the AAUP. Helped secure the standard 2-2 semester course load for CECS tenured and tenure-track faculty while maintaining flexibility for alternative workload assignments.
- Worked closely with CECS and University development officers to raise funds for student success initiatives. Raised over \$100,000 to date.
- Represented the Dean and/or the College at a wide range of University and public events.

Director of Student Retention and Success, College of Engineering and Computer Science, July 2007-Dec. 2009

- Led the continued development, implementation and assessment of Wright State's National Model for Engineering Mathematics Education, supported by \$4.6M in NSF grant awards. In addition to improved student performance in both math and engineering courses, the longitudinal impact of EGR 101 has resulted in at least 25 additional CECS *graduates* per incoming class of new direct-from-high-school students, with additional impact on other student populations.
- Introduced EGR 199 as a pre-cursor to EGR 101 for initially underprepared students, which expanded college-wide enrollment in EGR 101 by roughly 50%. This contributed to 70% first-year retention of CECS majors by 2008-2009, the highest level on record.
- The combination of EGR 101 and EGR 199 has contributed to a steady and significant rise in the annual number of CECS baccalaureate degrees awarded, which increased from 168 degrees in 2006-2007 to a record 232 degrees in 2011-2012. In addition to its impact on the lives of our students, the needs of our regional employers and the global competitiveness of our great nation, the increased retention and success of our students has resulted in millions of dollars in gross tuition revenue for WSU.
- Supervised the expansion of EGR 101 to Sinclair Community College. The course has since been institutionalized as part of the Engineering University Transfer (EUT) Program.
- Established the dual-enrollment implementation of EGR 101 at Bellbrook High School, which has run each Fall since 2008.
- Directed the engineering component of the WSU Summer STEM Academy, 2007-2010.
- Represented CECS on University-level committees to support student success, including the First-Year Coordinating and Advisory Council and the MapWorks Oversight Committee.

Professional Memberships (Past and Present)

1. American Society for Engineering Education (ASEE)
2. American Society of Mechanical Engineers (ASME)
3. ASM International
4. IEEE Education Society
5. Honorary Membership, Golden Key International Honor Society
6. Honorary Membership, Phi Kappa Phi National Honor Society
7. Sigma Xi, The Scientific Research Society
8. Tau Beta Pi

Awards and Recognition

1. Lifetime Achievement Award, Dayton Defense Educational Foundation, 2017.
2. Lifetime Achievement Award, American Society of Mechanical Engineers, Dayton Section, 2016.
3. CECS awarded 1st Place, Dayton Business Journal Innovation Index Awards, Workforce Development, 2014.
4. Ohio Magazine Excellence in Education Honoree, December, 2011.
5. Excellence in Teaching Award, College of Engineering and Computer Science, Wright State University, 2011.
6. President's Award for Excellence, Outstanding Collaborative Unit - Dual Enrollment Program, Wright State University, Fall 2010.
7. Senior Vice President for Curriculum and Instruction Award, Wright State University, Fall 2008.
8. Academy Award, Chantilly High School Academy, Fairfax County Public Schools, VA, June 2008.
9. Nominated, U.S. Professors of the Year Program, Carnegie Foundation for the Advancement of Teaching and Council for Advancement and Support of Education, 2008.
10. Excellence in Teaching Award, College of Engineering and Computer Science, Wright State University, 2007.
11. Nominated, U.S. Professors of the Year Program, Carnegie Foundation for the Advancement of Teaching and Council for Advancement and Support of Education, 2007.
12. Nominated, ASEE Ralph Coates Roe Award, American Society for Engineering Education, 2007.
13. Nominated, IEEE Mac Van Valkenburg Early Career Teaching Award, 2007.
14. Outstanding Engineers and Scientists Award, Affiliate Societies Council of Dayton, 2006.
15. Nominated, Robert Foster Cherry Award for Great Teaching, Baylor University, 2006.
16. Finalist, Excellence in Teaching Award, College of Engineering and Computer Science, Wright State University, 2006.
17. Robert J. Kegerreis Distinguished Professor of Teaching, Wright State University, 2005-2008.
18. Ohio Professor of the Year, Carnegie Foundation for the Advancement of Teaching and Council for Advancement and Support of Education, 2005. Related Recognition:
 - 18.1. United States Senate Certificate of Commendation, signed by U.S. Senator Mike DeWine.
 - 18.2. Ohio House of Representatives Resolution, signed by Rep. Kevin DeWine and Speaker Jon Husted.
 - 18.3. Greene County Board of Commissioners Resolution
 - 18.4. Honorary Lifetime Membership, Fairborn Rotary Club
 - 18.5. Featured articles in local press: Dayton Daily News (article and full page advertisement), Fairborn Daily Herald (front page), Xenia Post Gazette, WSU Community Magazine, WSU Guardian
 - 18.6. Invited guest on "SOCHE College Bound," Dayton Access Television
19. Nominated, ASEE National Teaching Medal, ASEE North Central Section, 2005.
20. Best Zone Paper Award, ASEE Zone II, "Redefining Engineering Mathematics Education at Wright State University," American Society for Engineering Education, 2005.
21. Best Paper Award, "Redefining Engineering Mathematics Education at Wright State University," ASEE North Central Section Conference, 2005.
22. ASEE North Central Section Outstanding Teaching Award, American Society for Engineering Education, 2004.
23. Excellence in Professional Service Award, College of Engineering and Computer Science, Wright State University, 2004.
24. Early Career Achievement Award, College of Engineering and Computer Science, Wright State University, 2003.
25. Excellence in Teaching Award, College of Engineering and Computer Science, Wright State University, 2002.
26. Finalist, Excellence in Teaching Award, College of Engineering and Computer Science, Wright State University, 2001.
27. Finalist, Excellence in Teaching Award, College of Engineering and Computer Science, Wright State University, 2000.
28. First Prize, Sixth Annual Bennett Poster Exhibition, for "Continuous Delamination of Sprayed Deposits Via Applied Curvature," Department of Mechanical Engineering, Carnegie Mellon University, Spring 1997.
29. The T.A. Award for Outstanding Teaching in Mechanical Engineering, Department of Mechanical Engineering, Carnegie Mellon University, Spring 1994.
30. The T.A. Award for Outstanding Teaching in Mechanical Engineering, Department of Mechanical Engineering, Carnegie Mellon University, Fall 1993.
31. Graduate Research Assistantship (full tuition and stipend), Department of Mechanical Engineering, Carnegie Mellon University, June 1994-May 1998.
32. Graduate Teaching Assistantship (full tuition and stipend), Department of Mechanical Engineering, Carnegie Mellon University, August 1993-May 1994.

33. President's Scholarship (partial tuition), University of Dayton, August 1989-April 1993.

TEACHING

Courses Taught at WSU

1. EGR 199 Preparatory Mathematics for Engineering & Computer Science
2. EGR 101 Introductory Mathematics for Engineering Applications (Now EGR 1010)
3. ME 313 Strength of Materials
4. ME 412/612 Finite Element Analysis
5. ME 414/614 Mechanical Design I (Now ME 4140/6140)
6. ME 415/615 Mechanical Design II
7. ME 720 Advanced Mechanics of Solids
8. ME 890 Advanced Mechanics of Solids II

Aggregate Student Evaluation Data (Spring 2000 – Spring 2013)

<i>Question</i>	<i>Average over all courses (1848 Total Responses)</i>
Q1. Instructor available for consultation	4.76/5.00
Q2. Student responsibilities well-defined	4.85/5.00
Q3. Class time was well spent	4.81/5.00
Q4. I learned a lot from the instructor	4.77/5.00
Q5. Materials contributed to my learning	4.64/5.00
Q6. I was challenged in this course	4.82/5.00
Q7. Coming in, I was motivated to learn	4.55/5.00
Overall Average:	4.74/5.00

Graduate Students Supervised (Thesis/Dissertation Advisor)

Student	Thesis/Dissertation Title	Support	Degree/Date
Levkulich, N.	An Experimental Investigation of Residual Stress Development during Selective Laser Melting of Ti-6Al-4V	Research Assistantship	M.S. December, 2017
Sheridan, L.	An Adapted Approach to Process Mapping Across Multiple Alloy Systems and Additive Manufacturing Processes	Teaching/Research Assistantship	M.S. August, 2016
Kuntz, S.	Feasibility of Attaining Fully Equiaxed Microstructure through Process Variable Control for Additive Manufacturing of Ti-6Al-4V	Teaching/Research Assistantship	M.S. May, 2016
Loughnane, G.	A Framework for Uncertainty Quantification in Microstructural Characterization with Application to Additive Manufacturing of Ti-6Al-4V	Teaching/Research Assistantship	Ph.D. August, 2015
Bourne, T. (Co-Chaired with F. Ciarallo)	Development of the Academic Performance-Commitment Matrix (APCM): Understanding the Effects of Motivation and an Engineering Mathematics Curricular Intervention on Student Self-Efficacy and Success in Engineering	WSU Full-Time Employee	Ph.D. May, 2014
Thompson, J.	Relating Microstructure to Process Variables in Beam-Based Additive Manufacturing of Inconel 718	Teaching/Research Assistantship	M.S. May, 2014
Doak, H.	Effect of Process Variables on Sub-Melt Thermal Behavior and Solid-State Phase Transformations in Beam-Based Additive Manufacturing of Ti-6Al-4V	Teaching/Research Assistantship	M.S. August, 2013

Baudendistel, C.	Effect of a Graded Layer on the Plastic Dissipation During Mixed-Mode Fatigue Crack Growth on Bimaterial Interfaces	AFRL/DAGSI Ohio Student-Faculty Research Program	Ph.D. May, 2013
Davis, J.	Effect of Free-Edges on Solidification Microstructure in Beam-Based Additive Manufacturing	Teaching/Research Assistantship	M.S. August, 2010
Kuchi, S.	The Effect of Finite Geometry on Solidification Microstructure in Beam-Based Fabrication of Thin-Wall and Bulky Features	Teaching Assistantship, Research Assistantship	M.S. August, 2009
Baudendistel, C.	Effect of a Graded Layer on the Plastic Dissipation During Mixed-Mode Fatigue Crack Growth on Plastically Mismatched Interfaces	Teaching/Research Assistantship, Grad Council Scholar	M.S. August, 2008
Daily, J.	Dissipated Energy at a Bimaterial Crack Tip Under Cyclic Loading	DAGSI Ph.D. Assistantship	Ph.D. June, 2006
Bontha, S.	The Effect of Process Variables on Microstructure in Laser Deposited Materials	Research Assistantship	Ph.D. August, 2006
Gaddam, D.	Three-Dimensional Modeling of Melt Pool Geometry and Solidification Microstructure in Laser Deposited Ti-6Al-4V	Teaching Assistantship	M.S. August, 2005
Daily, J.	Plastic Dissipation Energy in Mixed-Mode Fatigue Crack Growth on Ductile Bimaterial Interfaces	OSGC Fellowship	M.S. June, 2003
Brown, C.	Modeling of Solidification Microstructure in Laser Deposited Ti-6Al-4V	Research Assistantship	M.S. June, 2003
Bontha, S.	The Behavior of Short Interface Edge-Cracks in Bonded Bimaterial Layers	Teaching Assistantship	M.S. April, 2002

Other Thesis Committee Memberships

Student	Thesis Title	Chair	Degree/Date
Abhyankar, K.	Enhancing Engineering Education Using Mobile Augmented Devices	S. Ganapathy	Ph.D. May, 2017
Shanmugam, V.	Efficient Risk Assessment Using Probability of Fracture Nomographs	R. Penmetsa	Ph.D. Nov., 2011
Hinton, J.	A Study on the Effects of Coil Wedge During Rewinding of Thin Gauge Metals	R. Grandhi	M.S. June, 2011
Spradlin, T.J.	Process Sequencing for Fatigue Life Extension of Large Scale Laser Peened Components	R. Grandhi	Ph.D., August, 2011
Thomas, M.	Framework for Cohesive Zone Model Based Multiscale Damage Evolution in a Fatigue Environment	R. Penmetsa	M.S. June, 2011
Singh, G.	Effective Simulation, Uncertainty Quantification and Optimization of a Laser Shock Peening Process	R. Grandhi	Ph.D. August, 2009
Hansel	The Influence of Thickness on the Properties of Air Plasma Sprayed Ceramic Coatings	J. Slater	M.S. Dec., 2008
Cherukuri	Microstructural Stability and Thermomechanical Processing of Boron Modified Beta Titanium Alloys	R. Srinivasan	Ph.D. Nov., 2008
Oleg	Improved Structural Health Monitoring Using Random Decrement Signatures	J. Slater	Ph.D. March, 2008
Anisetti, A.	Non-linear Shunting of Piezo-actuators for Vibration Suppression	J. Slater	M.S. March, 2008
Dwire, H	Risk Based Analysis and Design of Stiffened Plates	R. Penmetsa	M.S. March, 2008

Buchanan, D. (Univ. of Dayton)	A Coupled Creep-Plasticity Model for Residual Stress Relaxation of a Shot-Peened Nickel-Base Superalloy	B. Brockman	Ph.D. May, 2007
Malik, A.	Rolling Mill Optimization Using an Accurate and Rapid New Model for Mill Deflection and Strip Thickness Profile	R. Grandhi	Ph.D. May, 2007
Adduri, P.	Robust Estimation of Reliability in the Presence of Multiple Failure Modes	R. Penmetsa	Ph.D. Nov., 2006
Repalle, J.	Robust Preform and Die Shape Design Techniques for 3D Metal Forging Components	R. Grandhi	Ph.D. August, 2006
Choi, S.	Propagation of Uncertainty in Complex Structural Systems Using Stochastic Approach	R. Grandhi	Ph.D. April, 2006
Lee, J.J.	Design and Simulation of a Capacitive Sensor for Simultaneously Measuring Normal and Shear Forces	D. Reynolds	M.S. June, 2006
Varghese, B.	FEM Analysis and Testing of Diseased Bone	T. Hangartner	M.S. Nov, 2005
Khambswadkar, R.	Acoustic Optimization of an Underwater Vehicle	R. Penmetsa	M.S. June, 2005
Runyon, B.	The Influence of Boundary Conditions and Aspect Ratio on Approximate Solutions for Constrained Layer Damping Treatments on Beams and Plates	J. Slater	M.S. Nov, 2004
Valivate, A.	Semi-Active Vibration Control of a Beam Using Embedded Magneto-Rheological Fluids	J. Slater	M.S. August, 2004
Beachkofski, B.	Minimization of Probabilistic Analysis Confidence Interval through a Novel Experimental Design Process	R. Grandhi	Ph.D. August, 2004
Joyce, B.	Deformation and Recrystallization Behavior of Coarse Grain Beta Titanium	R. Srinivasan	Ph.D. Nov, 2004
Indrakanti, S.	Flow Behavior of AA 6061 processed by Equal Channel Angular Pressing (ECAP)	R. Srinivasan	M.S. Nov, 2003
Eric Roush	Undergraduate Honors Thesis	M. Wolff	B.S. June, 2002
Penmetsa, R.	Uncertainty Analysis Techniques Using Approximation Concepts in Multidisciplinary Structural Design Environment	R. Grandhi	Ph.D. March, 2002
Srinivas, K.	Experimental and Computational Investigation of Valves in Reciprocating Compressors for Prediction of Performance	K. Cornelius	M.S. Dec, 2001
Qureshi, M.	Robust Semi-active Control of a Dry Friction Damper for a Cantilever Beam	J. Slater	M.S. April, 2001
Cole, C.	Low-Cost Design Guide for Composite General Aviation Air Craft	M. Amer	M.S. Feb, 2001

Student Projects Supervised (Senior Design/Independent Study)

Student(s)	Project	Project Dates
N. Dittes, M. Goubeaux, J. Wish, D. Rickey	Senior Design Project: Continuously Variable Transmission (CVT)	Winter-Spring, 09
C. Anglin, J. Wetzel, J. Wheatcraft, S. Zirkle	Senior Design Project: Merkur XR4Ti Racing Front Suspension Redesign	Winter-Spring, 09
C. Bevington, J. Davis, D. Pranno, J. Van Oss	Senior Design Project: Suspension Design: 1997 Ford Ranger	Winter-Spring, 09
Davis, J.	Undergraduate Honors Thesis: Free-Edge Effects on Melt Pool Geometry and Solidification Microstructure in Beam-Based Solid Freeform Fabrication of Thin-Walled Geometries	Fall, 08-Spring, 09
Gockel, B.	Undergraduate Honors Thesis: Can One Predict Worst-Case Lifetimes Based on a Crack Growth Approach?	Winter-Spring, 08

B. Gockel, M. Abel, M. Mattioda, M. Palumbo, M. Rutledge	Senior Design Project: Jeep Off-Road Suspension Design	Winter-Spring, 08
B. Sexton, M. Radick, R. Whittington, M. Durham	Senior Design Project: Dragster Four Link Suspension Design	Winter-Spring, 07
D. Moore, S. Sowders, D. McMenamin, J. Coyle	Senior Design Project: Decline Bench Design	Fall, 06-Winter, 07
S. Reece	ME 499 Independent Study: Flow Modeling of the Sub-Liquidous (Semi-Solid) Process	Summer, 06-Fall, 06
T. Hemmer, A. Grubb, S. Nutbrown	Senior Design Project: Dana 20 Transfer Case Shifter Linkage	Winter-Spring, 06
J. Creachbaum	Senior Design Project: Micro-Manipulator Motion System	Fall, 05-Winter, 06
Marsh, J., Lowe, J., Jurich, K., Dwire, H.	Senior Design Project: Human Powered Boat	Winter-Spring, 05
Everhart, J., Stanfield, S. and Tumpak, J.	Senior Design Project: Car Rotisserie	Fall, 04-Winter, 05
Jacobs, L., Egan, M., Serres, D.	Senior Design Project: Flux-Core Welding Wire Spool	Fall, 04-Winter, 05
Cypher, W., Myers, C. Arthur, C.	Senior Design Project: Detachable One-Arm Wheel Chair Propulsion System	Winter-Spring, 04
Arnold, D., Enochs, J.	Senior Design Project: Marshall Compression Testing Machine	Winter-Spring, 04
Walthall, L.	Senior Design Project: Single Body Deformable Flashlight	Fall, 03-Winter, 04
Pease, K.	Senior Design Project: Design of a Bend Die Mill Fixture	Winter-Spring, 03
Willson, J.	Senior Design Project: Design of a Model Hydroplane Boat	Winter-Spring, 03
Tingley, J.	Senior Design Project: Design of a Horizontal Punching Unit	Winter-Spring, 03
McCarty, R.	ME 899 - Independent Study: Levelite Spring Analysis	Spring, 03
Boyle, D.	ME 899 - Independent Study: Modal Analysis of a Bracket	Winter, 03
Shook, A., Goss, B.	Senior Design Project: Design of Modified Hydraulic Press	Fall, 02 - Winter, 03
Brown, C.	Undergraduate Research Assistant - DAGSI Project	Summer, 01-Winter, 02
E. Morris, S. Dooley, W. Ward, C. Campbell	Senior Design Project: Motorcycle Lift Design	Fall, 01-Winter, 02
Haferd, J.	Senior Design Project: Fretting Fatigue Fixture Design	Fall, 01-Winter, 02
Dooley, S.	ME 499 - Independent Study (FEM Lab Manuals)	Summer, 01
Slominski, K.	ME 499 - Independent Study (Laser-Deposition Lit Search)	Summer, 01
Daily, J.	ME 499 - Independent Study (FEM PC Configuration)	Spring, 01
Daily, J.	Senior Design Project: Motorcycle Maintenance Lift	Winter - Spring, 01

Teaching Workshops Attended

1. UTEP Engineering Education Workshop, University of Texas at El Paso, August 2007.
2. A Dialogue on Engineering Education II: The Role of the First Year, ASEE First Year Engineering Workshop, Notre Dame University, July 2007.
3. AP Engineering Workshop, Carnegie Mellon University, November 2006.
4. A Dialogue on Engineering Education: The Role of the First Year, ASEE First Year Engineering Workshop, Notre Dame University, July 2006.
5. Effective Teaching: A Workshop, Wright State University, February 2003.
6. National Effective Teaching Institute, Montreal, Canada, June 2002.
7. WSU Winter Quarter Faculty Workshop on Improving Student Learning, Winter 2002.

Curriculum/Course Development

1. Lead PI on Wright State's National Model for Engineering Mathematics Education, an NSF supported curriculum reform initiative to address math-related attrition in engineering. The project involves the development of a novel freshman-level engineering mathematics course (EGR 101), as well as a large-scale restructuring of the early engineering curriculum. As part of an NSF CCLI Phase 3 initiative and TUES Type 3 supplement for HBCU institutions, the approach has been expanded to 18 collaborating institutions at all levels of engineering education (primarily university, but also at the community college and K-12 levels). These institutions represent strategic pockets of interest in some of the nation's most STEM critical regions, including Ohio, Michigan, Texas, Oklahoma, California, Washington and Virginia. The dissemination component of the project has resulted in numerous unfunded collaborators, and the Wright State approach is now under consideration by dozens of institutions across the country.
2. Lead PI (replacing M. Wheatly) on an NSF STEP Type 1 collaboration between WSU and Sinclair Community College to develop a common first-year STEM experience, with the goal of increased retention and articulation of STEM majors. The approach has included the adoption of EGR 101 and associated engineering curriculum reforms at SCC, as well as the development of SM 101, a companion first-year course for science majors.
3. Development of a pilot engineering mathematics program for incoming freshman, which was run as part of EGR 191 in 2002-2003.
4. Development of course materials for the Academic Advantage Program, Section 04.
5. Development of a graduate-level solid mechanics course (ME 890 Advanced Mechanics of Solids II) in support of the Engineering Ph.D. program.

SCHOLARSHIP

Journal Articles

1. Gockel, J., Sheridan, L., Narra, S., Klingbeil, N.W. and Beuth, J.L., 2017, "Trends in Solidification Grain Size and Morphology for Additive Manufacturing of Ti-6Al-4V," *JOM Journal of the Minerals, Metals and Materials Society*, Vol. 69, No 12, pp. 2706-2710.
2. Gockel, J., Klingbeil, N.W. and Bontha, S., 2016, "A Closed-Form Solution for the Effect of Free Edges on Melt Pool Geometry and Solidification Microstructure in Additive Manufacturing of Thin-Wall Geometries," *Metallurgical and Materials Transactions B*, Vol. 47B, pp. 1400-1408.
3. Baudendistel, C.M. and Klingbeil, N.W., 2013, "Effect of a Graded Layer on the Plastic Dissipation in Mixed-Mode Fatigue Crack Growth Along Plastically Mismatched Interfaces," *International Journal of Fatigue*, Vol. 51, pp. 96-104.
4. Daily, J.S. and Klingbeil, N.W., 2010, "Plastic Dissipation Energy at a Bimaterial Crack Tip Under Cyclic Loading," *International Journal of Fatigue*, Vol. 32, No. 10, pp. 1710-1723.
5. Bontha, S., Klingbeil, N.W., Kobryn, P.A. and Fraser, H.L., 2009, "Effects of Process Variables and Size-Scale on Solidification Microstructure in Beam-Based Fabrication of Bulky 3-D Structures," *Materials Science and Engineering: A*, Vol. 513-514, pp. 311-318.
6. Klingbeil, N.W., Daily, J.S. and Baudendistel, C.M., 2008, "A Dissipated Energy Approach to Fatigue Crack Growth in Ductile Solids and Layered Materials," *Key Engineering Materials*, Vols. 378-379, pp. 385-404.
7. Daily, J.S. and Klingbeil, N.W., 2006, "Plastic Dissipation in Mixed-Mode Fatigue Crack Growth Along Plastically-Mismatched Interfaces," *International Journal of Fatigue*, Vol. 28, No. 12, pp. 1725-1738.
8. Bontha, S., Klingbeil, N.W., Kobryn, P.A. and Fraser, H.L., 2006, "Thermal Process Maps for Predicting Solidification Microstructure in Laser Fabrication of Thin-Wall Structures," *Journal of Materials Processing Technology*, Vol. 178, No. 1-3, pp. 135-142.
9. Daily, J.S. and Klingbeil, N.W., 2004, "Plastic Dissipation in Fatigue Crack Growth Under Mixed-Mode Loading," *International Journal of Fatigue*, Vol 26, No. 7, pp. 727-738.

10. Klingbeil, N.W. and Bontha, S., 2003, "A Maximum Allowable Flaw Size for Debond-Resistant Bimaterial Layers," *Engineering Fracture Mechanics*, Vol. 70, No. 15, pp. 2103-2114.
11. Klingbeil, N.W., 2003, "A Total Dissipated Energy Theory of Fatigue Crack Growth in Ductile Solids," *International Journal of Fatigue*, Vol. 25, No. 2, pp. 117-128.
12. Klingbeil, N.W., Beuth, J.L., Chin, R. K. and Amon, C.H., 2002, "Residual Stress-Induced Warping in Direct Metal Solid Freeform Fabrication," *International Journal of Mechanical Sciences*, Vol. 44, No. 1, pp. 57-77.
13. Beuth, J.L. and Klingbeil, N.W., 2001, "The Role of Process Variables in Laser-Based Direct Metal Solid Freeform Fabrication," *JOM Journal of the Minerals, Metals and Materials Society*, Vol. 53, No. 9, pp. 36-39.
14. Klingbeil, N.W. and Beuth, J.L., 2000, "On the Design of Debond-Resistant Bimaterials, Part I: Free-Edge Singularity Approach," *Engineering Fracture Mechanics*, Vol. 66, pp. 93-110.
15. Klingbeil, N.W. and Beuth, J.L., 2000, "On the Design of Debond-Resistant Bimaterials, Part II: A Comparison of Free-Edge and Interface Crack Approaches," *Engineering Fracture Mechanics*, Vol. 66, pp. 111-128.
16. Klingbeil, N.W. and Beuth, J.L., 1998, "Continuous Delamination of Sprayed Deposits via Applied Curvature," *International Journal of Mechanical Sciences*, Vol. 40, No. 1, pp. 1-13.
17. Klingbeil, N.W. and Beuth, J.L., 1997, "Interfacial Fracture Testing of Deposited Metal Layers Under Four-Point Bending," *Engineering Fracture Mechanics*, Vol. 56, No. 1, pp. 113-126.
18. Beuth, J.L. and Klingbeil, N.W., 1996, "Cracking of Thin Films Bonded to Elastic-Plastic Substrates," *Journal of the Mechanics and Physics of Solids*, Vol. 44, No. 9, pp. 1411-1428.

Textbooks

1. Rattan, K. S. and Klingbeil, N.W., Introductory Mathematics for Engineering Applications, John Wiley & Sons, 2015. ISBN 978-1-118-14180-9.
2. Rattan, K. S. and Klingbeil, N.W., Introductory Mathematics for Engineering Applications, Revised Preliminary Edition, John Wiley & Sons, 2013. ISBN 978-1-118-46616-2.
3. Rattan, K. S. and Klingbeil, N.W., Introductory Mathematics for Engineering Applications, Preliminary Edition, John Wiley & Sons, 2011. ISBN 978-1-118-11409-4.

Patents

1. Beuth, J.L., Klingbeil, N.W. and Gockel, J.D. *Process Mapping of Cooling Rates and Thermal Gradients*. U.S. Patent No. US 9,939,394 B2. United States Patent and Trademark Office. Filed August 16, 2013 and Issued April 10, 2018.

Conference Papers¹

1. Loughnane, G., Kuntz, S., Klingbeil, N., Sosa, J., Irwin, J., Nassar, A. and Reutzel, E., 2015, "Application of a Microstructural Characterization Uncertainty Quantification Framework to Widmanstätten α -Laths in Additive Manufactured Ti-6Al-4V," Solid Freeform Fabrication Symposium, Austin, TX, August, 2015. (R)
2. Klingbeil, N. and Bourne, T., 2015, "The Wright State Model for Engineering Mathematics Education: Longitudinal Impact on Initially Underprepared Students," *Proceedings 2015 ASEE Annual Conference and Exposition*, Seattle, WA, June 2015. (R)

¹ "R" and "N" denote refereed and non-refereed, respectively

3. Bourne, T., Klingbeil, N. and Ciarallo, F., 2015, "Measuring the Impact of a Mathematics Intervention on Student Mathematics Self-Efficacy: Development and Application of Revised Measurement Tool," *Proceedings 2015 ASEE Annual Conference and Exposition*, Seattle, WA, June 2015. (R)
4. Klingbeil, N. and Bourne, T., 2014, "The Wright State Model for Engineering Mathematics Education: A Longitudinal Study of Student Perception Data," *Proceedings 2014 ASEE Annual Conference and Exposition*, Indianapolis, IN, June 2014. (R)
5. Bourne, T., Klingbeil, N. and Ciarallo, F., 2014, "Developing the Academic Performance Commitment Matrix: How Measures of Objective Academic Performance Can Do More than Predict College Success," *Proceedings 2014 ASEE Annual Conference and Exposition*, Indianapolis, IN, June 2014. (R)
6. Klingbeil, N., 2013, "A National Model for Engineering Mathematics Education: Uncorking the Bottleneck to URM Student Success," *Research and Policy Journal: 2013 NACME National Symposium*, Washington, DC, October 2013. (N)
7. Beuth, J., Fox, J., Gockel, J., Montgomery, C., Yang, R., Qiao, H., Soylemez, E., Reeseewatt, P., Anvari, A., Narra, S. and Klingbeil, N., 2013, "Process Mapping for Qualification Across Multiple Direct Metal Additive Manufacturing Processes," *Proceedings Solid Freeform Fabrication Symposium*, Austin, TX, August 2013. (N)
8. Klingbeil, N. and Bourne, T., 2013, "A National Model for Engineering Mathematics Education: Longitudinal Impact at Wright State University," *Proceedings 2013 ASEE Annual Conference and Exposition*, Atlanta, GA, June 2013. (R)
9. Klingbeil, N. and Bourne, T., 2012, "The Wright State Model for Engineering Mathematics Education: A Longitudinal Study of Program Impacts," *Proceedings 4th First Year Engineering Experience (FYEE) Conference*, Pittsburgh, PA, August 2012. (R)
10. Klingbeil, N., High, K., Keller, M., White, I., Brummel, B., Daily, S., Cheville, A. and Wolk, J., 2012, "The Wright State Model for Engineering Mathematics Education: Highlights from a CCLI Phase 3 Initiative, Volume 3," *Proceedings 2012 ASEE Annual Conference & Exposition*, San Antonio, TX, June 2012. (R)
11. Klingbeil, N., Molitor, S., Randolph, B., Brown, S., Olsen, R. and Cassady, R., 2011, "The Wright State Model for Engineering Mathematics Education: Highlights from a CCLI Phase 3 Initiative, Volume 2" *Proceedings 2011 ASEE Annual Conference & Exposition*, Vancouver, BC, June 2011. (R)
12. Beuth, J., Soylemez, E., Esola, S., Klingbeil, N. and Davis, J., 2011, "A Modeling Base for Process Development of Electron Beam Manufacturing," *Proceedings 2011 NSF Engineering Research and Innovation Conference*, Atlanta, GA, January, 2011. (N)
13. Davis, J., Klingbeil, N. and Bontha, S., 2010, "Effect of Free-Edges on Melt Pool Geometry and Solidification Microstructure in Beam-Based Fabrication of Bulky 3-D Structures," *Proceedings Solid Freeform Fabrication Symposium*, Austin, TX, August 2010. (N)
14. Klingbeil, N., Newberry, B., Donaldson, A. and Ozdogan, J., 2010, "The Wright State Model for Engineering Mathematics Education: Highlights from a CCLI Phase 3 Initiative," *Proceedings 2010 ASEE Annual Conference & Exposition*, Louisville, KY, June 2010. (R)
15. Baudendistel, C.M. and Klingbeil, N.W., 2009, "Effect of a Graded Layer on the Dissipated Energy During Fatigue Crack Growth on Plastically Mismatched Interfaces Under Mixed-Mode Loading," Paper Number IMECE2009-11395, *Proceedings of the ASME 2009 International Mechanical Engineering Congress and Exposition*, November 2009. (R)
16. Davis, J., Klingbeil, N. and Bontha, S., 2009, "Effect of Free-Edges on Melt Pool Geometry and Solidification Microstructure in Beam-Based Fabrication of Thin-Wall Structures," *Proceedings Solid Freeform Fabrication Symposium*, Austin, TX, August 2009. (N)

17. Klingbeil, N., Rattan, K., Raymer, M., Reynolds, D., Mercer, R., Kukreti, A. and Randolph, B., 2009, "The Wright State Model for Engineering Mathematics Education: A Nationwide Adoption, Assessment and Evaluation." *Proceedings 2009 ASEE Annual Conference & Exposition*, Austin, TX, June 2009. (R)
18. Beuth, J., Soylemez, E., Esola, S., Klingbeil, N., Davis, J. and Kuchi, S., 2009, "A Modeling Base for Process Development of Electron Beam Manufacturing," *Proceedings 2009 NSF Engineering Research and Innovation Conference*, Honolulu, Hawaii, June 2009. (N)
19. Daily, J.S. and Klingbeil, N.W., 2009, "Determining the Scatter in Fatigue Crack Growth Rate Based on Variations in Bulk Property Data," Paper Number GT2009-59117, *Proceedings of ASME Turbo Expo 2009: Power for Land, Sea and Air*, Orlando, FA, June 2009. (R)
20. Kendricks, K., Klingbeil, N., Koenig, K., Wheatly, M., 2009, "Transformative Pedagogy: Engaging and Retaining Students in STEM," *Proceedings 2009 Higher Learning Commission Annual Meeting*, Chicago, IL, April 2009. (N)
21. Klingbeil, N., Rattan, K., Raymer, M., Reynolds, D., Mercer, R., Kukreti, A. and Randolph, B., 2008, "The WSU Model for Engineering Mathematics Education: A Multiyear Assessment and Expansion to Collaborating Institutions," *Proceedings 2008 ASEE Annual Conference & Exposition*, Pittsburgh, PA, June, 2008. (R)
22. Beuth, J.L. and Klingbeil, N.W., 2008, "A Modeling Base for Process Development of Electron Beam Manufacturing," *Proceedings 2008 NSF Engineering Research and Innovation Conference*, Knoxville, TN, January, 2008. (N)
23. Klingbeil, N., Rattan, K., Raymer, M., Reynolds, D., Mercer, R., Kukreti, A. and Randolph, B., 2007, "A National Model for Engineering Mathematics Education," *Proceedings 2007 ASEE Annual Conference & Exposition*, Honolulu, HI, June, 2007. (R)
24. Wheatly, M., Klingbeil, N., Jang, B, Sehi, G. and Jones, R., "Gateway into First-Year STEM Curricula: A Community College/University Collaboration Promoting Retention and Articulation," *Proceedings 2007 ASEE Annual Conference & Exposition*, Honolulu, HI, June, 2007. (R)
25. Bontha, S. and Klingbeil, N.W., 2006, "Effect of a Distributed Heat Source on Melt Pool Geometry and Microstructure in Beam-Based Solid Freeform Fabrication," *Solid Freeform Fabrication Proceedings*, Austin, TX, August 2006. (N)
26. Klingbeil, N.W., Bontha, S., Gaddam, D., Brown, C., Beuth, J.L., Birnbaum, A. and Aggarangsi, P., 2006, "Modeling of Melt Pool Size and Solidification Microstructure in Laser-Based Additive Manufacturing," *Proceedings 2006 NSF DMII Grantees and Research Conference*, St. Louis, MI, July 2006. (N)
27. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer M.L. and Reynolds, D.B., 2006, "Redefining Engineering Mathematics Education at Wright State University," *Proceedings 2006 ASEE Annual Conference & Exposition*, Chicago, IL, June 2006. (R)
28. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer, M.L. and Reynolds, D.B., 2006, "The WSU Model for Engineering Mathematics Education: Student Performance, Perception and Retention in Year One," *Proceedings 2006 ASEE Illinois-Indiana and North Central Conference*, Fort Wayne, IN, April 2006. (R)
29. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer, M.L. and Reynolds, D.B., 2005, "Work-in-Progress: The WSU Model for Engineering Mathematics Education," *Proceedings 2005 Frontiers in Education Conference*, Indianapolis, IN, October, 2005. (R)
30. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer, M.L. and Reynolds, D.B., 2005, "The WSU Model for Engineering Mathematics Education," *Proceedings 2005 ASEE Annual Conference & Exposition*, Portland, Oregon, June, 2005. (R)

31. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer M.L. and Reynolds, D.B., 2005, "Redefining Engineering Mathematics Education at Wright State University," *Proceedings 2005 ASEE North Central Conference*, Ada, Ohio, April 2005. (R)
32. Klingbeil, N.W., Bontha, S. Beuth, J.L., Birnbaum, A. and Aggarangsi, P., 2005, "Prediction and Control of Melt Pool Size and Microstructure in Laser-Based Additive Manufacturing," *Proceedings 2005 NSF DMII Grantees and Research Conference*, Scottsdale, Arizona, January 2005. (N)
33. Klingbeil, N.W., Bontha, S., Brown, C.J., Gaddam, D.R., Kobryn, P.A., Fraser, H.L. and Sears, J.W., 2004, "Effects of Process Variables and Size Scale on Solidification Microstructure in Laser-Based Solid Freeform Fabrication of Ti-6Al-4V," *Solid Freeform Fabrication Proceedings*, (D.L. Bourell, R. H. Crawford, J.J. Beaman, K.L. Wood, H.L. Marcus, eds.), Austin, August 2004. (N)
34. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer, M.L. and Reynolds, D.B., 2004, "Rethinking Engineering Mathematics Education: A Model for Increased Retention, Motivation and Success in Engineering," *Proceedings 2004 ASEE Annual Conference & Exposition*, Salt Lake City, Utah, June 2004. (R)
35. Birnbaum, A., Aggarangsi, P., Beuth, J., Bontha, S. and Klingbeil, N., 2004, "Control of Melt Pool Size and Microstructure in Laser-Based Additive Manufacturing Processes," *Proceedings 2004 NSF Design, Service and Manufacturing Grantees and Research Conference*, Dallas, Texas, January 2004. (N)
36. Bontha, S. and Klingbeil, N.W., 2003, "Thermal Process Maps for Controlling Microstructure in Laser-Based Solid Freeform Fabrication," *Solid Freeform Fabrication Proceedings*, (D.L. Bourell, R. H. Crawford, J.J. Beaman, K.L. Wood, H.L. Marcus, eds.), Austin, August 2003. (N)
37. Klingbeil, N.W. and Bontha, S., 2003, "Thermal Process Maps for Controlling Microstructure in Laser-Deposited Materials," HT2003-47503, *ASME Summer Heat Transfer Conference*, Las Vegas, NV, July 2003. (R)
38. Beuth, J.L. and Klingbeil, N.W., 2003, "GOALI: Laser Additive Manufacturing of Aerospace Components," *Proceedings 2003 NSF Design, Service and Manufacturing Grantees and Research Conference*, Birmingham, Alabama, January 2003. (N)
39. Klingbeil, N.W., Brown, C.J., Bontha, S., Kobryn, P.A. and Fraser, H.L., 2002, "Prediction of Microstructure in Laser Deposition of Titanium Alloys," *Solid Freeform Fabrication Proceedings*, (D.L. Bourell, R. H. Crawford, J.J. Beaman, K.L. Wood, H.L. Marcus, eds.), Austin, August 2002, pp. 142-149. (N)
40. Klingbeil, N.W. and Bontha, S., 2002, "The Behavior of Short Interface Edge-Cracks in Bonded Bimaterial Layers," AIAA-2002-1328, *Collection of Technical Papers - AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference*, Denver, April 2002, Vol. 2, pp. 1008-1014. (R)
41. Klingbeil, N.W., Beuth, J.L., Chin, R.K., and Amon, C.H., 1998, "Measurement and Modeling of Residual Stress-Induced Warping in Direct Metal Deposition Processes," *Proc. 1998 Solid Freeform Fabrication Symposium*, (D.L. Bourell, J.J. Beaman, R.H. Crawford, H.L. Marcus, J.W. Barlow, eds.), Austin, August 1998, pp. 367-374. (N)
42. Klingbeil, N.W. and Beuth, J.L., 1997, "Free-Edge Stress Intensity Factors for Edge-Loaded Bimaterial Layers," *Application of Fracture Mechanics in Electronic Packaging* (W.T. Chen and D.T. Read, eds.), AMD-Vol.222, EEP-Vol.20, ASME International Mechanical Engineering Congress and Exposition, Dallas, November 1997, pp. 153-162. (R)
43. Klingbeil, N.W., Zinn, J.W. and Beuth, J.L., 1997, "Measurement of Residual Stresses in Parts Created by Shape Deposition Manufacturing," *Proc. 1997 Solid Freeform Fabrication Symposium* (D.L. Bourell, J.J. Beaman, R.H. Crawford, H.L. Marcus, J.W. Barlow, eds.), Austin, August 1997, pp. 125-132. (N)

44. Beuth, J.L. and Klingbeil, N.W., 1995, "Thin Film Cracking on Ductile Substrates," *Advances in Information Storage and Processing Systems* (G.G. Adams, B. Bhushan, D. Miu and J. Wickert, eds.), ISPS-Vol. 1, ASME International Mechanical Engineering Congress and Exposition, San Francisco, November 1995, pp. 141-149. (R)

Published Abstracts (No Full Paper)

1. Levkulich, N., Klingbeil, N., Gockel, J. and Middendorf, J., "The Effect of Process Parameters and Texture Evolution on Residual Stress in Selective Laser Melting of Ti-6Al-4V," Solid Freeform Fabrication Symposium, Austin, TX, August, 2017.
2. Levkulich, N., Loughnane, G. and Klingbeil, N., "The Effect Process Parameters have on Residual Stress and Texture of Additively Manufactured Ti-6Al-4V Components," TMS 2017, San Diego, CA, February 2017.
3. Levkulich, N., Loughnane, G., Middendorf, J. and Klingbeil, N., "Correlating In-process Statistical Data Collected during SLM to As-built Material Properties, Microstructure and Residual Stress," MS&T 2016, Salt Lake City, UT, October, 2016.
4. Kuntz, S., Gockel, J., Klingbeil, N. and Beuth, J., "The Effect of Process Parameters on Grain Morphology Consistency in Beam Based Additive Manufacturing of Ti-6Al-4V," Solid Freeform Fabrication Symposium, Austin, TX, August, 2016.
5. Sheridan, L., Kuntz, S., Gockel, J. and Klingbeil, N., "A Closed Form Solution for Application in Process Mapping Across Multiple Alloy Systems," Solid Freeform Fabrication Symposium, Austin, TX, August, 2016
6. Loughnane, G., Levkulich, N., Middendorf, J. and Klingbeil, N., "Implementing Off-the-Shelf In-Process Monitoring Capability on an Open Source, Low-Cost SLM R&D Test Bed, Solid Freeform Fabrication Symposium, Austin, TX, August, 2016
7. Loughnane, G., Kuntz, S., Sosa, J., Reutzel, E. and Klingbeil, N., "Application of a Microstructural Characterization Uncertainty Quantification Framework to Additive Manufactured Ti-6Al-4V," MS&T 2015, Columbus, OH, October, 2015.
8. Kuntz, S. and Klingbeil, N., "Pursuit of Fully Equiaxed Microstructure through Process Parameter Control in Additive Manufacturing of Ti-6Al-4V," MS&T 2015, Columbus, OH, October, 2015.
9. Gliebe, L., Francis, Z., Klingbeil, N., Beuth, J., "Microstructural Characterization of Additively Manufactured Ti-64," MS&T 2015, Columbus, OH, October, 2015.
10. Christiansen, D., Beuth, J., Beckman, J., Klingbeil, N., Gong, H., Stucker, B., "Process Mapping of Melt Pool Geometry and Solidification Microstructure of Ti-6Al-4V in the EOS DMLS Proces," MS&T 2015, Columbus, OH, October, 2015.
11. Beckman, J., Seifi, M., Dahar, M., Harrysson, O., Klingbeil, N., Beuth, J., and Lewandowski, J., "Microstructural Characterization of Ti-6Al-4V Made by Electron Beam Melting," Solid Freeform Fabrication Symposium, Austin, TX, August, 2015.
12. Kuntz, S. and Klingbeil, N., "An Investigation of Process Variables Required for Full-Equiaxed Microstructure in Additive Manufacturing of Ti-6Al-4V," Solid Freeform Fabrication Symposium, Austin, TX, August, 2015.
13. Montgomery, C., Beuth, J., Moylan, S., Sheridan, L., Klingbeil, N. "Process Mapping of Inconel 625 in Laser Powder Bed Additive Manufacturing," Solid Freeform Fabrication Symposium, Austin, TX, August, 2015.
14. Gliebe, L., Francis, Z., Klingbeil, N. and Beuth, J., "Quantitative Characterization of α and β Microstructures for Single and Multilayer Builds of Additive Manufactured Ti-6Al-4V for Process Map Development," Solid Freeform Fabrication Symposium, Austin, TX, August, 2015.

15. Loughnane, G., Klingbeil, N. and Tiley, J., "Application of a Microstructural Characterization Uncertainty Quantification Framework to Additive Manufactured Ti-6Al-4V," Dayton-Cincinnati Aerospace Sciences Symposium, Dayton, OH, March, 2015.
16. Sheridan, L. and Klingbeil, N., "Development of Microstructural Process Maps for Additive Manufacturing of Inconel 625," Dayton-Cincinnati Aerospace Sciences Symposium, Dayton, OH, March, 2015.
17. Kuntz, S. and Klingbeil, N., "Toward Fully-Equiaxed Microstructure in Additive Manufacturing of Ti-6Al-4V," Dayton-Cincinnati Aerospace Sciences Symposium, Dayton, OH, March, 2015.
18. Kuntz, S. and Klingbeil, N., "Additive Manufacturing of Titanium Alloys: Is it Possible to Get Fully Equiaxed Microstructure for Various Melt Pool Geometries," Dayton Engineering Sciences Symposium, October 2014.
19. Loughnane, G., Groeber, M., Uchic, M., Klingbeil, N. and Grandhi, R., "A Framework for Modeling Microstructural Characterization Errors and its Application to Additive Manufacturing of Ti-6Al-4V," Dayton Engineering Sciences Symposium, October 2014.
20. Thompson, J. and Klingbeil, N., "Effect of Process Variables on Solidification Microstructure in Beam-Based Additive Manufacturing of Inconel 718," MS&T 2014, Pittsburgh, PA, October 2014.
21. Thompson, N. and Klingbeil, N., "Extending Process Mapping of Solidification Microstructure in Beam-Based Manufacturing with Metals: From Ti-6Al-4V to Inconel 718," Solid Freeform Fabrication Symposium, Austin, TX, August, 2014.
22. Thompson, N. and Klingbeil, N., "Integrated Control of Beam-Based Additive Manufacturing Microstructure of IN 718 by Linking Design Parameters and Grain Growth," Dayton Engineering Sciences Symposium, October, 2013.
23. Doak, H. and Klingbeil, N., "Process Maps for Solid-State Phase Transformations in Beam-Based Fabrication of Ti-6Al-4V," Dayton Engineering Sciences Symposium, October, 2013.
24. Thompson, J. and Klingbeil, N., "Process Maps for Melt Pool Geometry and Solidification Microstructure in Beam-Based Fabrication of IN 718," Solid Freeform Fabrication Symposium, Austin, TX, August, 2013.
25. Doak, H. and Klingbeil, N., "Process Maps for Solid-State Phase Transformations in Beam-Based Fabrication of Ti-6Al-4V," Solid Freeform Fabrication Symposium, Austin, TX, August, 2013.
26. Thompson, J. and Klingbeil, N., "Toward Integrated Control of Melt Pool Geometry and Microstructure in Beam-Based Additive Manufacturing of IN-718," AIAA Dayton-Cincinnati Aerospace Science Symposium, March, 2013.
27. Doak, H. and Klingbeil, N., "Analysis of Sub-Melt Thermal Behavior and Solid State Phase Transformations in Beam-Based Additive Manufacturing of Ti-6Al-4V," AIAA Dayton-Cincinnati Aerospace Science Symposium, March, 2013.
28. Thompson, J. and Klingbeil, N., "Analysis of Melt Pool Geometry and Solidification Microstructure in Beam-Based Additive Manufacturing of IN 718," Dayton Engineering Sciences Symposium, October, 2012.
29. Doak, H. and Klingbeil, N., "Sub-Melt Thermal Behavior and Solid-State Phase Transformations in Beam-Based Additive Manufacturing of Ti-6Al-4V," Dayton Engineering Sciences Symposium, October, 2012.
30. Doak, H. and Klingbeil, N., "Effect of Process Variables on Sub-Melt Thermal Behavior and Solid-State Phase Transformations in Beam-Based Fabrication of Ti-6Al-4V," Solid Freeform Fabrication Symposium, Austin, TX, August, 2012.
31. Davis, J., Beuth, J.L., Klingbeil, N., Walker, B. and Taminger, K., "Toward Integrated Control of Melt Pool Dimensions and Microstructure in Electron Beam Additive Manufacturing," 2011 Materials Science & Technology Conference (MS&T 2011), Columbus, OH, October, 2011.

32. Baudendistel, C.M. and Klingbeil, N.W., "The Effect of a Graded Layer on General Bimaterial Interfaces," ASME Dayton Engineering Sciences Symposium, October, 2011.
33. Beuth, J., Klingbeil, N., Davis, J., Taminger, K. and Walker, B., "Toward Integrated Melt Pool Dimension and Microstructure Control in Electron Beam Additive Manufacturing," Solid Freeform Fabrication Symposium, Austin, TX, August, 2011.
34. Davis, J., Beuth, J., Klingbeil, N., Walker, B. and Taminger, K., "Microstructure Prediction and Control in Electron Beam Additive Manufacturing," Solid Freeform Fabrication Symposium, Austin, TX, August, 2011.
35. Baudendistel, C.M. and Klingbeil, N.W., "Bimaterial Interface Plastic Dissipation During Mixed-Mode Fatigue Crack Growth in the Presence of a Graded Layer," ASME Dayton Engineering Sciences Symposium, October, 2010.
36. Baudendistel, C.M. and Klingbeil, N.W., "Effect of a Graded Layer on the Plastic Dissipation During Mixed-Mode Fatigue Crack Growth on Bimaterial Interfaces," AIAA Dayton-Cincinnati Aerospace Science Symposium, Dayton, OH, March, 2010.
37. Davis, J. and Klingbeil, N., "Free-Edge Effects on Melt Pool Geometry and Solidification Microstructure in Beam-Based Solid Freeform Fabrication," AIAA Dayton-Cincinnati Aerospace Science Symposium, Dayton, OH, March, 2010.
38. Baudendistel, C.M. and Klingbeil, N.W., "Effect of a Graded Layer on the Plastic Dissipation During Mixed-Mode Fatigue Crack Growth on a General Bimaterial Interface," ASME Dayton Engineering Sciences Symposium, October, 2009.
39. Davis, J. and Klingbeil, N., "Effect of Free-Edges on Melt Pool Geometry and Solidification Microstructure in Beam-Based Fabrication of Thin-Wall Structures," ASME Dayton Engineering Sciences Symposium, October, 2009.
40. Davis, J. and Klingbeil, N., "Effect of Free-Edges on Melt Pool Geometry and Solidification Microstructure in Beam-Based Additive Manufacturing of Ti-6Al-4V," 20th Annual Advanced Aerospace Materials and Processes Conference & Exhibition (AeroMat), Dayton, OH, June, 2009.
41. Baudendistel, C.M. and Klingbeil, N.W., "Effect of a Graded Layer on the Dissipated Energy during Fatigue Crack Growth along Plastically-Mismatched Interfaces," 20th Annual Advanced Aerospace Materials and Processes Conference & Exhibition (AeroMat), Dayton, OH, June, 2009.
42. Davis, J. and Klingbeil, N., "Free-Edge Effects on Melt Pool Geometry and Solidification Microstructure in Beam-Based Manufacturing," AIAA Dayton-Cincinnati Aerospace Science Symposium, Dayton, OH, March, 2009.
43. Kuchi, S. and Klingbeil, N., "The Effect of Finite Geometry in Beam-Based Fabrication of Thin Structures," AIAA Dayton-Cincinnati Aerospace Science Symposium, Dayton, OH, March, 2009.
44. Bontha, S. and Klingbeil, N.W., "A Simulation Based Approach for Understanding the Effect of Process Variables and Size-Scale on Microstructure in Beam-Based Solid Freeform Fabrication," 2008 Materials Science and Technology Conference (MS&T 2008), Pittsburgh, PA, October, 2008.
45. Baudendistel, C. and Klingbeil, N.W., "Effect of a Graded Layer on the Plastic Dissipation During Mixed-Mode Fatigue Crack Growth on Plastically-Mismatched Interfaces," Dayton Engineering Sciences Symposium, October, 2008.
46. Davis, J. and Klingbeil, N.W., "Free-Edge Effects on Solidification Microstructure in Beam-Based Solid Freeform Fabrication of Thin-Wall Geometries," Dayton Engineering Sciences Symposium, October, 2008.
47. Kuchi, S. and Klingbeil, N.W., "Effect of Finite Geometry on Solidification Microstructure in Beam-Based Fabrication of Thin-Wall Structures," Dayton Engineering Sciences Symposium, October, 2008.

48. Klingbeil, N.W., Bontha, S., Kuchi, S. and Davis, J., "Effects of Finite Geometry and Free-Edges on Solidification Microstructure in Beam-Based Solid Freeform Fabrication," Solid Freeform Fabrication Symposium, Austin, TX, August 2008.
49. Kuchi, S. and Klingbeil, N.W., "Effect of Finite Geometry in Beam-Based Fabrication of Thin-Wall Structures," Dayton-Cincinnati Aerospace Science Symposium, March, 2008.
50. Baudendistel, C. and Klingbeil, N.W., "Effect of a Graded Layer on Plastic Dissipation During Mixed-Mode Fatigue Crack Growth in Layered Materials," Dayton Engineering Sciences Symposium, October, 2007.
51. Kuchi, S. and Klingbeil, N.W., "The Effect of Finite Geometry on Solidification Microstructure in Beam-Based Fabrication of Thin Wall Structures," Dayton Engineering Sciences Symposium, October, 2007.
52. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer M.L. and Reynolds, D.B., "Engineering Mathematics Education at Wright State University: A Model for Increasing Student Success in Engineering," Dayton Engineering Sciences Symposium, October, 2007.
53. Baudendistel, C. and Klingbeil, N.W., "Validation of a Dissipated Energy Theory for Fatigue Crack Growth Under Mixed-Mode Loading," Dayton-Cincinnati Aerospace Science Symposium, March, 2007.
54. Baudendistel, C. and Klingbeil, N.W., "Validation of a Dissipated Energy Theory for Fatigue Crack Growth Under Mixed-Mode Loading," Dayton Engineering Sciences Symposium, October, 2006.
55. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer M.L. and Reynolds, D.B., "The Wright State Model for Engineering Mathematics Education," Dayton Engineering Sciences Symposium, October, 2006.
56. Bontha, S. and Klingbeil, N.W., "Effect of Beam Width on Melt Pool Geometry and Microstructure in Laser-Based Manufacturing," Dayton Engineering Sciences Symposium, October, 2006.
57. Bontha, S. and Klingbeil, N.W., "Effects of Transient Melt Pool Behavior on Solidification Cooling Rates and Thermal Gradients in Laser-Deposited Materials," Materials Science & Technology 2006 Conference (MS&T 2006), Cincinnati, OH, September, 2006.
58. Daily, J. and Klingbeil, N.W., "Plastic Energy Dissipation at a Bimaterial Crack Under Cyclic Loading," Dayton-Cincinnati Aerospace Science Symposium, March, 2006.
59. Baudendistel, C. and Klingbeil, N.W., "Experimental Validation of a Dissipated Energy Theory for Fatigue Crack Growth Under Mixed-Mode Loading," Dayton-Cincinnati Aerospace Science Symposium, March, 2006.
60. Daily, J. and Klingbeil, N.W., "Plastic Dissipation Energy from Cyclic Loading of Bimaterial Interface Cracks," Dayton Engineering Sciences Symposium, October, 2005.
61. Bontha, S. and Klingbeil, N.W., "The Effects of Laser Power Distribution and Melt Pool Behavior on Microstructure in Laser Deposited Materials," Dayton Engineering Sciences Symposium, October, 2005.
62. Gaddam, D., Klingbeil, N.W. and Bontha, S., "Three-Dimensional Modeling of Melt Pool Geometry and Solidification Microstructure in Laser Deposited Ti-6Al-4V," Dayton Engineering Sciences Symposium, October, 2005.
63. Gaddam, D., Klingbeil, N.W. and Bontha, S., "Simulation of Melt Pool Geometry and Solidification Microstructure in Laser Deposited Ti-6Al-4V," Materials Science & Technology 2005 Conference (MS&T 2005), Pittsburgh, PA, September, 2005.
64. Bontha, S. and Klingbeil, N.W., "Analytical and Numerical Modeling to Investigate the Effects of Process Variables and Size-Scale on Solidification Microstructure in Laser-Deposited Materials," Materials Science & Technology 2005 Conference (MS&T 2005), Pittsburgh, PA, September, 2005.

65. Gaddam, D. and Klingbeil, N.W., "Three-Dimensional Modeling of Melt Pool Geometry and Solidification Microstructure in Laser Deposited Ti-6Al-4V," Dayton-Cincinnati Aerospace Science Symposium, March 2005.
66. Daily, J.S. and Klingbeil, N.W., "Measurement of Cyclic Plastic Dissipation Energy and Fatigue Crack Growth Under Sustained Mixed-Mode Loading," Dayton-Cincinnati Aerospace Science Symposium, March 2005.
67. Daily, J.S. and Klingbeil, N.W., "Plastic Dissipation in Mixed-Mode Fatigue Delamination of Ductile Bimaterial Interfaces," 2004 ASME International Mechanical Engineering Congress and Exposition, Anaheim, CA, November 2004.
68. Bontha, S. and Klingbeil, N.W., "Effects of Process Variables on Microstructure in Laser Deposited Materials," 2004 ASME International Mechanical Engineering Congress and Exposition, Anaheim, CA, November 2004.
69. Klingbeil, N.W., Bontha, S. and Gaddam, D., "Effects of Process Variables and Size-Scale on Microstructure in Laser Additive Manufacturing of Ti-6Al-4V," 2004 ASM Materials Solutions Conference, Columbus, OH, October 2004.
70. Bontha, S. Brown, C.J., Gaddam, D.R., Klingbeil, N.W., Kobryn, P.A., Fraser H.L. and Sears, J.W., "Effects of Process Variables and Size-Scale on Solidification Microstructure in Laser Deposited Ti-6Al-4V," Materials Science & Technology 2004 Conference (MS&T 2004), New Orleans, Louisiana, September, 2004.
71. Bontha, S. and Klingbeil, N.W., "Process Maps for Controlling Microstructure in Laser Deposited Ti-6Al-4V," TMS Annual Meeting, Charlotte, NC, March, 2004.
72. Bontha, S. and Klingbeil, N.W., "Thermal Process Maps for Controlling Microstructure in Laser Deposition of Aerospace Materials," Dayton-Cincinnati Aerospace Science Symposium, March 2004.
73. Daily, J.S. and Klingbeil, N.W., "Plastic Dissipation Energy in Fatigue Crack Growth Along Ductile Bimaterial Interfaces," Dayton-Cincinnati Aerospace Science Symposium, March 2004.
74. Gaddam, D. and Klingbeil, N.W., "Modeling of Solidification Microstructure in Large-Scale Laser Deposition of Ti-6Al-4V," Dayton-Cincinnati Aerospace Science Symposium, March 2004.
75. Klingbeil, N.W., Brown, C.J., Bontha, S., Kobryn, P.A. and Fraser, H.L., "Prediction of Microstructure in Laser-Based Solid Freeform Fabrication of Aerospace Materials," AIAA International Air & Space Symposium, Dayton, OH, July 2003.
76. Daily, J.S. and Klingbeil, N.W., "Plastic Dissipation in Fatigue Crack Growth Under Mixed-Mode Loading," AIAA International Air & Space Symposium, Dayton, OH, July 2003.
77. Klingbeil, N.W. and Daily, J.S., "Plastic Dissipation in Fatigue Crack Growth on Ductile Interfaces," 2003 ASME Mechanics & Materials Conference, Scottsdale, AZ, June 2003.
78. Daily, J.S. and Klingbeil, N.W., "Plastic Dissipation in Fatigue Crack Growth Under Mixed-Mode Loading," Dayton-Cincinnati Aerospace Science Symposium, March 2003.
79. Bontha, S. and Klingbeil, N.W., "Thermal Analysis for Controlling Microstructure in Laser-Deposited Materials," Dayton-Cincinnati Aerospace Science Symposium, March 2003.
80. Brown, C.J., Klingbeil, N.W. and Kobryn, P.A., "Modeling of Solidification Microstructure in Laser Deposition of Ti-6Al-4V," Dayton-Cincinnati Aerospace Science Symposium, March 2003.
81. Klingbeil, N.W., Brown, C.J., Bontha, S., Kobryn, P.A. and Fraser, H.L., "Prediction of Microstructure in Laser-Deposited Titanium Alloys," TMS Fall Meeting, Columbus, OH, October 2002.

82. Klingbeil, N.W. and Bontha, S., "Critical Crack Lengths for Debond-Resistant Bimaterial Layers," 14th US National Congress of Theoretical and Applied Mechanics, Blacksburgh, VA, June 2002.
83. Brown, C., Klingbeil, N.W. and Kobryn, P., "Prediction of Microstructure in Laser Deposition of Ti-6Al-4V," Dayton-Cincinnati Aerospace Science Symposium, March 2002.
84. Bontha, S. and Klingbeil, N.W., "A Maximum Allowable Flaw Size for Bonded Bimaterial Layers," Dayton-Cincinnati Aerospace Science Symposium, March 2002.
85. Klingbeil, N.W., "A Dissipated Energy Theory of Fatigue Crack Growth," MMC2001, 2001 ASME Mechanics and Materials Conference, San Diego, California, June 2001.
86. Klingbeil, N.W. and Bontha, S., "Debond-Resistance of Short Interface Cracks Near Free-Edges of Bimaterial Layers Under Differential Expansion," MMC2001, 2001 Mechanics and Materials Summer Conference, San Diego, California, June 2001.
87. Klingbeil, N.W., Beuth, J.L., Chin, R.K. and Amon, C.H., "Residual Stress-Induced Warping in Solid Freeform Fabrication with Metals," Dayton-Cincinnati Aerospace Science Symposium, Dayton, OH, March 2001.
88. Klingbeil, N.W., "A Dissipated Energy Theory of Fatigue Crack Growth in Ductile Metals," Dayton-Cincinnati Aerospace Science Symposium, Dayton, OH, April 2000.
89. Klingbeil, N.W. and Beuth, J.L., "A Comparison of the Free-Edge and Interface Crack Problems in Bimaterial Design," 1999 ASME Mechanics and Materials Conference, Virginia Polytechnic Institute and State University, June 1999.
90. Klingbeil, N.W. and Beuth, J.L., "Controlled Debonding of Sprayed Deposits via Applied Curvature," 10th Annual Aeromat Conference and Exposition, Dayton, Ohio, June 1999.
91. Klingbeil, N.W. and Larsen, J.M., "An Investigation of Fatigue Crack Propagation by Elastic-Plastic Analysis of a Stationary Crack," Dayton-Cincinnati Aerospace Science Symposium, Dayton, OH, April 1999.
92. Klingbeil, N.W. and Beuth, J.L., "A Comparison of Design Criteria for Debond-Resistant Multi-Layers," 13th U.S. National Congress of Applied Mechanics, University of Florida, June 21-26, 1998.
93. Klingbeil, N.W. and Beuth, J.L., "Implications of Interface Crack Initiation and Propagation Criteria for Multi-Layer Design," ASME International Mechanical Engineering Congress and Exposition, Anaheim, Nov. 1998.
94. Klingbeil, N.W. and Beuth, J.L., "Part Warping in Layered Manufacturing Processes Due to Residual Stress," MRS Fall Meeting, Boston, Nov. 1998.
95. Klingbeil, N.W. and Beuth, J.L., "Continuous Delamination of Sprayed Metal Layers via Applied Curvature," 1996 ASME Mechanics & Materials Conference, Johns Hopkins University, June 1996.
96. Klingbeil, N.W. and Beuth, J.L., "Interfacial Fracture Testing in Shape Deposition Manufacturing," UC & IAMS Student Workshop in Manufacturing Research, Cincinnati, Ohio, April 1995.

Presentations Given at Professional Conferences and Symposia

1. Klingbeil, N., "Uncorking Curricular Bottlenecks to Diversity and Inclusion in STEM," 2018 HHMI South Peer Implementation Cluster Meeting for Inclusive Excellence, Trinity Washington University, May 2018.
2. Klingbeil, N., "Proactively Preparing Incoming Students," Academic Impressions STEM Institute for Retention, Orlando, FL, May 2018.
3. Klingbeil, N., "Addressing the Curriculum Bottleneck," Academic Impressions STEM Institute for Retention, Orlando, FL, May 2018.

4. Klingbeil, N., "Strategic Planning for STEM Recruitment and Retention," Academic Impressions STEM Institute for Retention, Orlando, FL, May 2018.
5. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," Northeast Consortium for Quantitative Reasoning, 21st Annual Meeting, Northampton, MA, March 2018.
6. Klingbeil, N., "Strategic Planning for STEM Recruitment and Retention," Academic Impressions Recruiting and Retaining Historically Underrepresented Students in STEM Conference, San Antonio, TX, October 2017.
7. Klingbeil, N., "Models for Recruiting Underrepresented Students in STEM," Academic Impressions Recruiting and Retaining Historically Underrepresented Students in STEM Conference, San Antonio, TX, October 2017.
8. Klingbeil, N., "Addressing the Curriculum Bottleneck," Academic Impressions Recruiting and Retaining Historically Underrepresented Students in STEM Conference, San Antonio, TX, October 2017.
9. Klingbeil, N., "Models for Retaining Underrepresented and Underprepared Students," Academic Impressions Recruiting and Retaining Historically Underrepresented Students in STEM Conference, San Antonio, TX, October 2017.
10. Klingbeil, N., "A National Model for Engineering Mathematics Education: Longitudinal Impact at Wright State University," 9th Annual Meeting of the National Engineering Mathematics Consortium, The Ohio State University, Columbus, OH, June 2017.
11. Klingbeil, N., "Proactively Preparing Incoming Students," Academic Impressions Comprehensive Retention Planning for STEM Programs Conference, New Orleans, LA, May 2017.
12. Klingbeil, N., "Redesigning Curriculum to Remove Bottleneck Courses," Pre-Conference Workshop, Academic Impressions Comprehensive Retention Planning for STEM Programs Conference, New Orleans, LA, May 2017.
13. Klingbeil, N., "Three Solutions for Impacting STEM Retention," Academic Impressions Webinar, February 2017.
14. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: A Case Study in Transferable Pre-College Engineering Credit," *Keynote Address*, Identifying Challenges and Barriers Associated with Introductory Engineering Mathematics Transferable Credit Offerings, Morgan State University, Baltimore, MD, November 2016.
15. Klingbeil, N., "Strategic Planning for STEM Recruitment and Retention," Academic Impressions Recruiting and Retaining Historically Underrepresented Students in STEM Conference, Golden, CO, September 2016.
16. Klingbeil, N., "Models for Recruiting Underrepresented Students in STEM," Academic Impressions Recruiting and Retaining Historically Underrepresented Students in STEM Conference, Golden, CO, September 2016.
17. Klingbeil, N., "Addressing the Curriculum Bottleneck," Academic Impressions Recruiting and Retaining Historically Underrepresented Students in STEM Conference, Golden, CO, September 2016.
18. Klingbeil, N., "Models for Retaining Underrepresented and Underprepared Students," Academic Impressions Recruiting and Retaining Historically Underrepresented Students in STEM Conference, Golden, CO, September 2016.
19. Klingbeil, N., "Budgeting and Resource Allocation," Academic Impressions Recruiting and Retaining Historically Underrepresented Students in STEM Conference, Golden, CO, September 2016.
20. Klingbeil, N., "A National Model for Engineering Mathematics Education: Longitudinal Impact at Wright State University," 8th Annual Meeting of the National Engineering Mathematics Consortium, New Orleans, LA, June 2016.

21. Klingbeil, N., "Proactively Preparing Incoming Students," Academic Impressions Comprehensive Retention Planning for STEM Programs Conference, Denver, CO, May 2016.
22. Klingbeil, N., "Redesigning Curriculum to Remove Bottleneck Courses," Pre-Conference Workshop, Academic Impressions Comprehensive Retention Planning for STEM Programs Conference, Denver, CO, May 2016.
23. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: A Case Study in Transferable Pre-College Engineering Credit," *Keynote Address*, Measuring and Credentialing Design Competencies as a Pathway to Higher Education and STEM Careers, University of Maryland College Park, April, 2016.
24. Klingbeil, N., "Access, Affordability and Preeminence: Uncorking the Workforce Bottlenecks in Engineering and Computer Science Education," *Keynote Address*, Silicon Valley Chamber of Commerce Workforce Education Summit, San Jose, CA, April 2016.
25. Klingbeil, N., "Strategic Planning for STEM Retention," Academic Impressions STEM Retention for Deans Conference, Philadelphia, PA, November 2015.
26. Klingbeil, N., "Addressing the Curriculum Bottleneck," Academic Impressions STEM Retention for Deans Conference, Philadelphia, PA, November 2015.
27. Klingbeil, N., "Retaining Underprepared Students," Academic Impressions STEM Retention for Deans Conference, Philadelphia, PA, November 2015.
28. Klingbeil, N., "Budgeting and Resource Allocation," Academic Impressions STEM Retention for Deans Conference, Philadelphia, PA, November 2015.
29. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education," MAA MathFest 2015 Panel Presentation, Washington, DC, August 2015.
30. Klingbeil, N. and Bourne, T., 2015, "The Wright State Model for Engineering Mathematics Education: A Longitudinal Study of Student Perception Data," NSF Grantees Poster Session, 2015 ASEE Annual Conference and Exposition, Seattle, WA, June 2015.
31. Klingbeil, N. and Bourne, T., "A National Model for Engineering Mathematics Education: Longitudinal Impact at Wright State University," 7th Annual Meeting of the National Engineering Mathematics Consortium, Seattle, WA, June 2015.
32. Klingbeil, N., "Proactively Preparing Incoming Students," Academic Impressions Comprehensive Retention Planning for STEM Programs Conference, San Diego, CA, May 2015.
33. Klingbeil, N., "Redesigning Curriculum to Remove Bottleneck Courses," Pre-Conference Workshop, Academic Impressions Comprehensive Retention Planning for STEM Programs Conference, San Diego, CA, May 2015.
34. Klingbeil, N., "Redefining Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," 2014 STEMtech Conference, Denver, CO, November 2014.
35. Klingbeil, N., "Design Strategies for Low Retention Curriculum," Academic Impressions Aligning STEM Programming and Support Conference, New Orleans, LA, October 2014.
36. Klingbeil, N., "Aligning Curriculum for Successful Degree Pathways," Academic Impressions Aligning STEM Programming and Support Conference, New Orleans, LA, October 2014.
37. Klingbeil, N., "A National Model for Engineering Mathematics Education: Uncorking the Bottleneck to URM Student Success," Advancing Science at Minority Serving Institutions (MSIs) Workshop, Washington, DC, October 2014.
38. Klingbeil, N. and Thompson, J., "Effect of Process Variables on Solidification Microstructure in Beam-Based Additive Manufacturing of Inconel 718," MS&T 2014, Pittsburgh, PA, October 2014.

39. Klingbeil, N. and Thompson, J., "Extending Process Mapping of Solidification Microstructure in Beam-Based Manufacturing with Metals: From Ti-6Al-4V to Inconel 718," Solid Freeform Fabrication Symposium, Austin, TX, August 2014.
40. Klingbeil, N., "Access, Affordability and Preeminence: STEM Education Innovations in an Era of Affordability," *Keynote Address*, 2014 Wright Dialogue with Industry, Dayton Area Defense Contractors Association, Dayton, OH, July 2014.
41. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," *Keynote Address*, AAC&U TIDES Institute, Washington, DC, July 2014.
42. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," NSF ECP Summer Workshop, Howard University, Washington, DC, July 2014.
43. Klingbeil, N. and Bourne, T., "A National Model for Engineering Mathematics Education: Longitudinal Impact at Wright State University," 6th Annual Meeting of the National Engineering Mathematics Consortium, Indianapolis, IN, June 2014.
44. Klingbeil, N. and Bourne, T., 2014, "The Wright State Model for Engineering Mathematics Education: A Longitudinal Study of Student Perception Data," NSF Grantees Poster Session, 2014 ASEE Annual Conference and Exposition, Indianapolis, IN, June 2014.
45. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," Complete College America Massachusetts GPS to STEM Careers Institute, Cape Cod Community College, Cape Cod, MA, May 2014.
46. Klingbeil, N., "A National Model for Engineering Mathematics Education," Complete College America GPS to STEM Careers Completion Academy, Boston, MA, March 2014.
47. Klingbeil, N., "Questioning the Equation," *TEDx Dayton*, Dayton, OH, November 2013.
48. Klingbeil, N., "A National Model for Engineering Mathematics Education: Uncorking the Bottleneck to URM Student Success," 2013 NACME National Symposium, Washington, DC, October 2013.
49. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," Ohio Board of Regents Trustees Conference, Columbus, OH, October 2013.
50. Klingbeil, N., "A National model for Engineering Mathematics Education," Michigan State University Workshop on First-Year Integrated Programs," Lansing, MI, July 2013.
51. Klingbeil, N., "A National Model for Engineering Mathematics Education: Longitudinal Impact at Wright State University," 5th Annual Meeting of the National Engineering Mathematics Consortium, Atlanta, GA, June 2013.
52. Klingbeil, N. and Bourne, T., 2013, "A National Model for Engineering Mathematics Education: Longitudinal Impact at Wright State University," NSF Grantees Poster Session, 2013 ASEE Annual Conference and Exposition, Atlanta, GA, June 2013.
53. Klingbeil, N. and Grinshpan, A., "Increasing Student Success in STEM through Application-Based Math Instruction," PI Led Breakout Session, 2013 NSF STEP Grantees Meeting, Washington, DC, March 2013.
54. Klingbeil, N., "Uncorking the First-Year Bottleneck in Engineering Mathematics Education: Longitudinal Impact at Wright State University," 32nd Annual Conference on the First-Year Experience, Orlando, FA, February 2013.
55. Klingbeil, N., "A National Model for Engineering Mathematics Education," *Plenary Panel* on Advances in Undergraduate STEM Education, 2013 NSF TUES/CCLI PIs Conference, Washington, DC, January 2013.

56. Klingbeil, N. and Bourne, T., "The Wright State Model for Engineering Mathematics Education: A Longitudinal Study of Program Impacts," 4th First Year Engineering Experience (FYEE) Conference, Pittsburgh, PA, August 2012.
57. Klingbeil, N. and Doak, H., "Effect of Process Variables on Sub-Melt Thermal Behavior and Solid-State Phase Transformations in Beam-Based Fabrication of Ti-6Al-4V," Solid Freeform Fabrication Symposium, Austin, TX, August 2012.
58. Klingbeil, N., High, K., Keller, M., White, I, Brummel, B., Daily, S., Cheville, A. and Wolk, J., "The Wright State Model for Engineering Mathematics Education: Highlights from a CCLI Phase 3 Initiative, Volume 3," NSF Grantees Poster Session, 2012 ASEE Annual Conference & Exposition, San Antonio, TX, June 2012.
59. Klingbeil, N., "A National Model for Engineering Mathematics Education: Longitudinal Impact at Wright State University," 4th Annual Meeting, National Engineering Mathematics Consortium, San Antonio, TX, June 2012.
60. Klingbeil, N.W., "A National Model for Engineering Mathematics Education: Uncorking the Bottleneck at Your Institution," PI Led Workshop, NSF STEP Grantees Conference, March 2012.
61. Klingbeil, N.W., "A National Model for Engineering Mathematics Education," **Track Keynote Panel Presentation**, 2011 STEMtech Conference, Indianapolis, IN, October 2011.
62. Klingbeil, N.W., Rattan, K.S., Raymer M.L., Reynolds, D.B. and Mercer, R.E., "A National Model for Engineering Mathematics Education," 3rd Annual Meeting, National Engineering Mathematics Consortium, Vancouver, BC, June 2011.
63. Klingbeil, N., Molitor, S., Randolph, B., Brown, S., Olsen, R. and Cassady, R., "The Wright State Model for Engineering Mathematics Education: Highlights from a CCLI Phase 3 Initiative, Volume 2," NSF Grantees Poster Session, 2011 ASEE Annual Conference & Exposition, Vancouver, BC, June 2011.
64. Klingbeil, N.W. and Petrescu, C., "Increasing Student Success Through Curricular Innovation in STEM Education," Higher Learning Commission Annual Meeting, Chicago, IL, April, 2011.
65. Klingbeil, N.W., Rattan, K.S., Raymer M.L., Reynolds, D.B. and Mercer, R.E., "A National Model for Engineering Mathematics Education," CCLI/TUES PIs Conference, Washington, DC, January 2011.
66. Klingbeil, N.W., Rattan, K.S., Raymer M.L., Reynolds, D.B. and Mercer, R.E., "A National Model for Engineering Mathematics Education," NSF Atrium Pre-Conference Poster Session, CCLI/TUES PIs Conference, Washington, DC, January 2011.
67. Klingbeil, N.W. and Stein, L. A., "Key Challenges: Growing Your Project for National Impact," PI Led Workshop, CCLI/TUES PIs Conference, Washington, DC, January 2011.
68. Davis, J., Klingbeil, N. and Bontha, S., "Effect of Free-Edges on Melt Pool Geometry and Solidification Microstructure in Beam-Based Fabrication of Bulky 3-D Structures," Solid Freeform Fabrication Symposium, Austin, TX, August, 2010.
69. Klingbeil, N., Newberry, B. , Donaldson, A. and Ozdogan, J., "The Wright State Model for Engineering Mathematics Education: Highlights from a CCLI Phase 3 Initiative," NSF Grantees Poster Session, 2010 ASEE Annual Conference & Exposition, Louisville, KY, June 2010.
70. Klingbeil, N.W., Rattan, K.S., Raymer M.L., Reynolds, D.B. and Mercer, R.E., "A National Model for Engineering Mathematics Education," 2nd Annual Meeting, National Engineering Mathematics Consortium, Louisville, KY, June 2010.

71. Klingbeil, N.W., Rattan, K.S., Raymer M.L., Reynolds, D.B. and Mercer, R.E., "A National Model for Engineering Mathematics Education: Increasing Student Success in Engineering," Higher Learning Commission Annual Meeting, Chicago, IL, April, 2010.
72. Davis A., Klingbeil, N.W. and Bonsangue, M., "Student Success in Foundational Courses in Mathematics," Breakout Session Panel, NSF STEP Grantees Conference, March 2010.
73. Klingbeil, N.W., Koenig K. and Edwards, M., "Gateway into First-Year STEM Curricula: A Community College-University Collaboration Promoting Retention and Articulation," NSF STEP Grantees Conference Poster Session, March 2010.
74. Klingbeil, N.W., Rattan, K.S., Raymer M.L., Reynolds, D.B. and Mercer, R.E., "A National Model for Engineering Mathematics Education: Increasing First-Year Student Success in Engineering," 29th Annual Conference on the First Year Experience, Denver, CO, February 2010.
75. Kendrick, K., Klingbeil, N., Koenig, K., Wheatly, M., "Transformative Pedagogy: Engaging and Retaining Students in STEM," 2009 Higher Learning Commission Annual Meeting, Chicago, IL, April, 2009.
76. Klingbeil, N.W., Rattan, K.S., Raymer M.L., Reynolds, D.B. and Mercer, R.E., "A National Model for Engineering Mathematics Education," 1st Annual Meeting, National Engineering Mathematics Consortium, Austin, TX, June 2009.
77. Klingbeil, N.W., Rattan, K.S., Raymer M.L., Reynolds, D.B. and Mercer, R.E., "The Wright State Model for Engineering Mathematics Education: A Nationwide Adoption, Assessment and Evaluation," NSF Grantees Poster Session, 2009 ASEE Annual Conference and Exposition, Austin, TX, June 2009.
78. Klingbeil, N.W., Rattan, K.S., Raymer M.L., Reynolds, D.B. and Mercer, R.E., "The Wright State Model for Engineering Mathematics Education: Increasing First-Year Student Retention, Motivation and Success in Engineering," International Conference on the First-Year Experience, Montreal, Canada, July 2009.
79. Davis, J., Klingbeil, N. and Bontha, S., "Effect of Free-Edges on Melt Pool Geometry and Solidification Microstructure in Beam-Based Fabrication of Thin-Wall Structures," Solid Freeform Fabrication Symposium, Austin, TX, August, 2009.
80. Davis, J. and Klingbeil, N., "Effect of Free-Edges on Melt Pool Geometry and Solidification Microstructure in Beam-Based Fabrication of Thin-Wall Structures," ASME Dayton Engineering Sciences Symposium, October, 2009.
81. Baudendistel, C.M. and Klingbeil, N.W., "Effect of a Graded Layer on the Plastic Dissipation During Mixed-Mode Fatigue Crack Growth on a General Bimaterial Interface," ASME Dayton Engineering Sciences Symposium, October, 2009.
82. Klingbeil, N.W., Rattan, K.S., Raymer M.L., Reynolds, D.B. and Mercer, R.E., "A National Model for Engineering Mathematics Education," ASEE Midwest Section Conference, Tulsa, OK, September, 2008.
83. Klingbeil, N.W., Bontha, S., Kuchi, S. and Davis, J., "Effects of Finite Geometry and Free-Edges on Solidification Microstructure in Beam-Based Solid Freeform Fabrication," Solid Freeform Fabrication Symposium, Austin, TX, August 2008.
84. Klingbeil, N.W., Rattan, K.S., Raymer M.L., Reynolds, D.B. and Mercer, R.E., "A National Model for Engineering Mathematics Education," NSF CCLI PI Conference Poster Session, Washington, DC, August, 2008.
85. Klingbeil, N., Rattan, K., Raymer, M., Reynolds, D., Mercer, R., Kukreti, A. and Randolph, B., "The WSU Model for Engineering Mathematics Education: A Multiyear Assessment and Expansion to Collaborating Institutions," NSF Grantees Poster Session, 2008 ASEE Annual Conference & Exposition, Pittsburgh, PA, June, 2008.

86. Klingbeil, N.W., "Engineering Mathematics Education at Wright State University: Increasing Student Success in Engineering," Student Success Summit, Ohio Board of Regents, June 2008.
87. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer M.L. and Reynolds, D.B., "Engineering Mathematics Education at Wright State University: Increasing Student Success in Engineering," ASEE North Central Section Conference, Dayton, OH, April 2008.
88. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer M.L. and Reynolds, D.B., "Redefining First-Year Engineering Mathematics Education at Wright State University: A Model for Increased Student Success in Engineering," 27th Annual Conference on the First-Year Experience, National Resource Center for the First-Year Experience & Students in Transition, San Francisco, CA, February 2008.
89. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer M.L. and Reynolds, D.B., "Engineering Mathematics Education at Wright State University: A Model for Increasing Student Success in Engineering," Dayton Engineering Sciences Symposium, October, 2007.
90. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer M.L. and Reynolds, D.B., "The Wright State Model for Engineering Mathematics Education: Uncorking the First-Year Bottleneck," A Dialogue on Engineering Education II: The Role of the First Year, ASEE First Year Engineering Workshop, Notre Dame, IN, July 2007.
91. Klingbeil, N.W., "The Wright State Model for Engineering Mathematics Education," Student Success Summit, Ohio Board of Regents, June 2007.
92. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer M.L. and Reynolds, D.B., "A National Model for Engineering Mathematics Education," ASEE Southeastern Section Conference, Louisville, KY, April 2007.
93. Wheatly, M., Klingbeil, N., Jang, B., Sehi, G. and Jones, R., "Gateway into First-Year STEM Curricula: A Community College/University Collaboration Promoting Retention and Articulation," ASEE Southeastern Section Conference, Louisville, KY, April 2007.
94. Klingbeil, N.W., "The WSU Model for Engineering Mathematics Education: Increasing Student Retention, Motivation and Success in Engineering," *Keynote Address*, Texas Engineering and Technical Consortium Best Practices Conference, University of Texas at Austin, March 2007.
95. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer M.L. and Reynolds, D.B., "Engineering Mathematics Education at Wright State University: Uncorking the First-Year Bottleneck," 26th Annual Conference on the First-Year Experience, National Resource Center for the First-Year Experience & Students in Transition, Addison, TX, February 2007.
96. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer M.L. and Reynolds, D.B., "The Wright State Model for Engineering Mathematics Education," Dayton Engineering Sciences Symposium, October, 2006.
97. Bontha, S. and Klingbeil, N.W., "Effect of Beam Width on Melt Pool Geometry and Microstructure in Laser-Based Manufacturing," Dayton Engineering Sciences Symposium, October, 2006.
98. Bontha, S. and Klingbeil, N.W., "Effect of a Distributed Heat Source on Melt Pool Geometry and Microstructure in Beam-Based Solid Freeform Fabrication," Solid Freeform Fabrication Symposium, Austin, TX, August 2006.
99. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer M.L. and Reynolds, D.B., "Redefining Engineering Mathematics Education at Wright State University," A Dialogue on Engineering Education: The Role of the First Year, ASEE First Year Engineering Workshop, Notre Dame, IN, July 2006.
100. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer M.L. and Reynolds, D.B., "Redefining Engineering Mathematics Education at Wright State University," 2006 ASEE Annual Conference & Exposition, Chicago, IL, June 2006.

101. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer, M.L. and Reynolds, D.B., "The WSU Model for Engineering Mathematics Education: Student Performance, Perception and Retention in Year One," 2006 ASEE Illinois-Indiana and North Central Conference, Fort Wayne, IN, April 2006.
102. Gaddam, D., Klingbeil, N.W. and Bontha, S., "Three-Dimensional Modeling of Melt Pool Geometry and Solidification Microstructure in Laser Deposited Ti-6Al-4V," Dayton Engineering Sciences Symposium, October, 2005.
103. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer M.L. and Reynolds, D.B., "Redefining Engineering Mathematics Education at Wright State University," Ohio Council of Teachers of Mathematics Conference, Dayton, OH, October 2005.
104. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer, M.L. and Reynolds, D.B., "Work-in-Progress: The WSU Model for Engineering Mathematics Education," 2005 Frontiers in Education Conference, Indianapolis, IN, October, 2005.
105. Gaddam, D., Klingbeil, N.W. and Bontha, S., "Simulation of Melt Pool Geometry and Solidification Microstructure in Laser Deposited Ti-6Al-4V," Materials Science & Technology 2005 Conference (MS&T 2005), Pittsburgh, PA, September, 2005.
106. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer, M.L. and Reynolds, D.B., "The WSU Model for Engineering Mathematics Education," 2005 ASEE Annual Conference & Exposition, Portland, Oregon, June, 2005.
107. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer M.L. and Reynolds, D.B., 2005, "Redefining Engineering Mathematics Education at Wright State University," 2005 ASEE North Central Conference, Ada, Ohio, April 2005.
108. Daily, J.S. and Klingbeil, N.W., "Plastic Dissipation in Mixed-Mode Fatigue Delamination of Ductile Bimaterial Interfaces," 2004 ASME International Mechanical Engineering Congress and Exposition, Anaheim, CA, November 2004.
109. Bontha, S. and Klingbeil, N.W., "Effects of Process Variables on Microstructure in Laser Deposited Materials," 2004 ASME International Mechanical Engineering Congress and Exposition, Anaheim, CA, November 2004.
110. Klingbeil, N.W., Bontha, S. and Gaddam, D., "Effects of Process Variables and Size-Scale on Microstructure in Laser Additive Manufacturing of Ti-6Al-4V," 2004 ASM Materials Solutions Conference, Columbus, OH, October 2004.
111. Klingbeil, N., Mercer, R., Rattan, K., Raymer, M. and Reynolds, D., "Rethinking Engineering Mathematics Education: A Model for Increased Retention, Motivation and Success in Engineering," 2004 ASEE Annual Conference & Exposition, Salt Lake City, Utah, June 2004.
112. Klingbeil, N.W., "Prediction and Control of Microstructure in Laser-Based Solid Freeform Fabrication of Aerospace Materials," 2004 Joint AFRL/DAGSI Research Symposium, Dayton, OH, March 2004.
113. Bontha, S. and Klingbeil, N.W., "Thermal Process Maps for Controlling Microstructure in Laser-Based Solid Freeform Fabrication," Solid Freeform Fabrication Symposium, Austin, TX, August 2003.
114. Klingbeil, N.W. and Bontha, S., "Thermal Process Maps for Controlling Microstructure in Laser-Deposited Materials," ASME Summer Heat Transfer Conference, Las Vegas, NV, July 2003.
115. Klingbeil, N.W. and Daily, J.S., "Plastic Dissipation in Fatigue Crack Growth on Ductile Interfaces," ASME Mechanics & Materials Conference, Scottsdale, AZ, June 2003.

116. Klingbeil, N.W., Brown, C.J., Bontha, S., Kobryn, P.A. and Fraser, H.L., "Prediction of Microstructure in Laser-Deposited Titanium Alloys," TMS Fall Meeting, Columbus, OH, October 2002.
117. Klingbeil, N.W. and Bontha, S., "Critical Crack Lengths for Debond-Resistant Bimaterial Layers," 14th US National Congress of Theoretical and Applied Mechanics, Blacksburgh, VA, June 2002.
118. Klingbeil, N.W., "Prediction and Control of Microstructure in Laser-Based Solid Freeform Fabrication of Aerospace Materials," 2002 Joint AFRL/DAGSI Research Symposium, Dayton, OH, April 2002.
119. Klingbeil, N.W., "A Dissipated Energy Theory of Fatigue Crack Growth," MMC2001, 2001 ASME Mechanics and Materials Conference, San Diego, California, June 2001.
120. Klingbeil, N.W. and Bontha, S., "Debond-Resistance of Short Interface Cracks Near Free-Edges of Bimaterial Layers Under Differential Expansion," MMC2001, 2001 Mechanics and Materials Summer Conference, San Diego, California, June 2001.
121. Klingbeil, N.W., Beuth, J.L., Chin, R.K. and Amon, C.H., "Residual Stress-Induced Warping in Solid Freeform Fabrication with Metals," Dayton-Cincinnati Aerospace Science Symposium, Dayton, OH, March 2001.
122. Klingbeil, N.W., "A Dissipated Energy Theory of Fatigue Crack Growth in Ductile Metals," Dayton-Cincinnati Aerospace Science Symposium, Dayton, OH, April 2000.
123. Klingbeil, N.W. and Beuth, J.L., "A Comparison of the Free-Edge and Interface Crack Problems in Bimaterial Design," 1999 ASME Mechanics and Materials Conference, Virginia Polytechnic Institute and State University, June 1999.
124. Klingbeil, N.W. and Beuth, J.L., "Controlled Debonding of Sprayed Deposits via Applied Curvature," 10th Annual Aeromat Conference and Exposition, Dayton, Ohio, June 1999.
125. Klingbeil, N.W. and Larsen, J.M., "An Investigation of Fatigue Crack Propagation by Elastic-Plastic Analysis of a Stationary Crack," Dayton-Cincinnati Aerospace Science Symposium, Dayton, OH, April 1999.
126. Klingbeil, N.W. and Beuth, J.L., "Continuous Delamination of Sprayed Metal Layers via Applied Curvature," 1996 ASME Mechanics & Materials Conference, Johns Hopkins University, June 1996.
127. Klingbeil, N.W. and Beuth, J.L., "Interfacial Fracture Testing in Shape Deposition Manufacturing," UC & IAMS Student Workshop in Manufacturing Research, Cincinnati, Ohio, April 1995.

Other Invited Talks and Technical Presentations

1. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," Smith College, Northampton, MA, March, 2018.
2. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," Florida Atlantic University, Boca Raton, FA, December, 2016.
3. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," University of Colorado, Boulder, CO, August, 2016.
4. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," New Jersey Institute of Technology, Newark, NJ, October 2015.
5. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," Washington State University, Pullman, WA, September 2015.
6. Klingbeil, N., "Just Do It. The Power of Experiential Learning," Convocation Address, The Miami Valley School, September 2015.

7. Klingbeil, N., "Access, Affordability and Preeminence: Building the Workforce Pipeline for our Technology-Based Economy," Dayton Chamber of Commerce, June 2015.
8. Klingbeil, N., "Access, Affordability and Preeminence: Building a Better Future for the Dayton Region," Distinguished Speaker Series, The Engineer's Club of Dayton, September 2014.
9. Klingbeil, N., "Access, Affordability and Preeminence: Building the Workforce Pipeline for our Technology-Based Economy," Greene County Business Roundtable, July, 2014.
10. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," *Keynote Address*, Affiliate Societies Council Outstanding Engineers and Scientists Awards Banquet, Dayton, OH, April 2014.
11. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," Temple University, Philadelphia, PA, April 2014.
12. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," Belmont College, St. Clairsville, OH, March 2014.
13. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," The Ohio State University, Columbus, OH, February 2014.
14. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," Howard University, Washington, DC, December 2013.
15. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," Morgan State University, Baltimore, MD, November 2013.
16. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," SUNY Oswego, Oswego, NY, October 2013.
17. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," Binghamton University, Binghamton, NY, September 2013.
18. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," Boise State University, Boise, ID, April 2013.
19. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," University of New Mexico, Albuquerque, NM, April 2013.
20. Klingbeil, N., "Growing a Vision for Engineering Student Success," Business and Fiscal Affairs Senior Staff Meeting, Wright State University, February, 2013.
21. Klingbeil, N., "Growing a Vision for Engineering Student Success," Campaign Cabinet Meeting, Wright State University, November, 2012.
22. Klingbeil, N., "A National Model for Engineering Mathematics Education: Uncorking the Bottleneck to Student Success," Montgomery College, Rockville, MD, August 2012.
23. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education," DoD Engineering Mathematics Workshop, STEM Development Office, Office of the Assistant Secretary of Defense for Research and Engineering, Arlington, VA, December 2011.
24. Klingbeil, N., "Engineering Our Students' Success," Enrollment Management Planning Retreat, Wright State University, Dayton, OH, August 2011.
25. Klingbeil, N., "Engineering Our Students' Success," Diggs-Ponitz Luncheon, Sinclair Community College, Dayton, OH, May 2011.

26. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education," Indiana-Purdue University Fort Wayne, Fort Wayne, IN, March 2011.
27. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education," Itasca Community College, Grand Rapids, MN, June 2010.
28. Klingbeil, N., "Engineering Mathematics Education at Wright State University: A Model for Increased Student Success in Engineering," Thomas Jefferson School, Concepcion, Chile, August 2009.
29. Klingbeil, N., "Engineering Mathematics Education at Wright State University: A Model for Increased Student Success in Engineering," University of Bio-Bio, Concepcion, Chile, August 2009.
30. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Increasing Student Success in Engineering," University of Arkansas, August 2009.
31. Klingbeil, N., "The Wright State Model for Engineering Mathematics Education: Introducing Engineering Through Application-Based Math Instruction," Friendship High School Academy, Washington, DC, March, 2009.
32. Klingbeil, N.W., "The Wright State Model for Engineering Mathematics Education: Increasing Student Retention, Motivation and Success in Engineering," University of San Diego, November, 2008.
33. Klingbeil, N.W., "The Wright State Model for Engineering Mathematics Education: Increasing Student Retention, Motivation and Success in Engineering," California State University - Long Beach, November, 2008.
34. Klingbeil, N.W. and Ponder, A., "Dayton Regional Summer STEM Academy," Presentation to Ohio Board of Regents, Columbus, OH, November, 2008.
35. Klingbeil, N.W., "The Wright State Model for Engineering Mathematics Education: Increasing Student Success in Engineering," Foundations of Excellence Task Force Reunion, Wright State University, October, 2008.
36. Klingbeil, N.W., "Engineering Mathematics Education at Wright State University: Increasing Student Success in Engineering," Special Presentation to Chancellor Fingerhut, Wright State University, September, 2008.
37. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer M.L. and Reynolds, D.B., "A National Model for Engineering Mathematics Education," NSF CCLI Pre-Conference Poster Session, National Science Foundation, August, 2008.
38. Klingbeil, N.W., "Engineering Mathematics Education at Wright State University: Increasing Student Retention, Motivation and Success in Engineering," Investing in Undergraduate STEM Student Success: a COSM-Sponsored Retreat, Wright State University, August, 2008.
39. Klingbeil, N.W., "Engineering Mathematics Education at Wright State University: Increasing Student Retention, Motivation and Success in Engineering," York University, Toronto, Ontario, May, 2008.
40. Klingbeil, N.W., "Effect of Process Variables and Size-Scale on Solidification Microstructure in Additive Manufacturing of Ti-6Al-4V," Oklahoma State University, January, 2008.
41. Klingbeil, N.W., "The Wright State Model for Engineering Mathematics Education: Increasing Student Success in Engineering," CECS External Advisory Board, December, 2007.
42. Klingbeil, N.W., "Effect of Process Variables and Size-Scale on Solidification Microstructure in Additive Manufacturing of Ti-6Al-4V," University of Texas at San Antonio, December, 2007.

43. Klingbeil, N.W., "The Wright State Model for Engineering Mathematics Education: Increasing Student Retention, Motivation and Success in Engineering," Invited Presentation and Workshop, Texas A&M University-Kingsville, November, 2007.
44. Klingbeil, N.W., "The Wright State Model for Engineering Mathematics Education: Increasing Student Retention, Motivation and Success in Engineering," Invited Presentation and Workshop, University of Texas at San Antonio, November, 2007.
45. Klingbeil, N.W., "The Wright State Model for Engineering Mathematics Education: Increasing Student Success in Engineering," UTEP Engineering Education Workshop, University of Texas at El Paso, August 2007.
46. Klingbeil, N.W., "The WSU Model for Engineering Mathematics Education: Increasing Student Retention, Motivation and Success in Engineering," Invited Presentation and Workshop, Prairie View A&M University, April 2007.
47. Klingbeil, N.W., "The WSU Model for Engineering Mathematics Education," University of Toledo, December 2006.
48. Klingbeil, N.W., "The WSU Model for Engineering Mathematics Education," University of Cincinnati, December 2006.
49. Klingbeil, N.W., "The WSU Model for Engineering Mathematics Education," Johns Hopkins University, December 2006.
50. Klingbeil, N.W., "The WSU Model for Engineering Mathematics Education," University of Michigan-Dearborn, November 2006.
51. Wheatly, M., Klingbeil N., and Kenyon, L., "Federally Funded STEM Initiatives at Wright State University," Ohio Board of Regents, Program Effectiveness, Research and Technology (PERT) Committee, Miami University, October 2006.
52. Klingbeil, N.W., "The WSU Model for Engineering Mathematics Education," Western Michigan University, October, 2006.
53. Wheatly, M., Klingbeil N., and Kenyon, L., "Federally Funded STEM Initiatives at Wright State University," WSU Board of Trustees Meeting, September 2006.
54. Klingbeil, N.W., "A National Model for Engineering Mathematics Education," Wright State University Academic Affairs Committee, September 2006.
55. Klingbeil, N.W., Bontha, S., Brown, C., Gaddam, D., "Effect of Process Variables on Solidification Microstructure in Additive Manufacturing of Ti-6Al-4V," Metals Additive Manufacturing Modeling Meeting, Wright State University, June 2006.
56. Klingbeil, N.W., "Transforming the Learning Experience at Wright State University," WSU Parents Weekend Presentation, February 2006.
57. Klingbeil, N.W., "Redefining Engineering Mathematics Education at Wright State University," High 12 Club of Dayton, January 2006.
58. Klingbeil, N.W., "The WSU Model for Engineering Mathematics Education," CECS External Advisory Board Meeting, December 2005.
59. Klingbeil, N.W., "The WSU Model for Engineering Mathematics Education," ABET Accreditation Team Site Visit, November 2005.

60. Klingbeil, N.W., “The WSU Model for Engineering Mathematics Education,” CECS High School Advisory Board Meeting, February 2005.
61. Klingbeil, N.W., “The WSU Model for Engineering Mathematics Education,” CECS External Advisory Board Meeting, December 2004.
62. Klingbeil, N.W., “A Dissipated Energy Theory of Fatigue Crack Growth in Ductile Solids,” Air Force Research Laboratory, Air Vehicles Directorate (AFRL/VASM), WPAFB, OH, January 2002.
63. Klingbeil, N.W., “A Total Dissipated Energy Theory of Fatigue Crack Growth,” Air Force Research Laboratory, Materials and Manufacturing Directorate (AFRL/MLLN), WPAFB, OH, August 1999.
64. Klingbeil, N.W., “Closure-Free Modeling of Fatigue Crack Propagation by Elastic-Plastic Analysis of a Stationary Crack,” Air Force Research Laboratory, Materials and Manufacturing Directorate (AFRL/MLLN), WPAFB, OH, December 1998.
65. Klingbeil, N.W. and Beuth, J.L., “On the Design of Debond-Resistant Bimaterials and Multilayers: Free-Edge and Interface Crack Singularity Approaches,” Air Force Research Laboratory, Materials and Manufacturing Directorate (AFRL/MLLN), WPAFB, OH, April 1998.
66. Klingbeil, N.W. and Beuth, J.L., “Free-Edge Debonding in Shape Deposition Manufacturing,” University of Dayton, Department of Mechanical Engineering, Dayton, OH, October 1997.
67. Klingbeil, N.W. and Beuth, J.L., “Delamination of Sprayed Deposits via Applied Curvature,” Alcoa Technical Center, Alcoa Center, PA, August 1995.

External Funding

1. Klingbeil, N. and Loughnane, G., “Real-Time Geometric Analysis of Additive Manufacturing,” NASA STTR Phase I, Prime Contract Number NNX15CM64P, MLPC, Inc., 06/17/15-06/16/16: \$42,203.
2. Klingbeil, N. and Loughnane, G., “In-Process Monitoring of Additive Manufacturing,” NASA STTR Phase II, Prime Contract Number NNX15CL28C, MLPC, Inc., 07/16/15- 07/15/17: \$43,778. Total WSU project funding in collaboration with M. Fendley, J. Gockel and G. Perrim (AFIT): \$349,763.
3. Klingbeil, N., Cao, C., Rattan, K., Slater, J. and Watkins, K., “The CECS Student Success Scholarship Program: Leveraging Curricular Innovation in Engineering and Computer Science Education,” National Science Foundation, Division of Undergraduate Education (S-STEM), Grant Number DUE-1356518, 06/01/14-05/31/19: \$614,096.
4. Klingbeil, N.W., “Rapid Qualification Methods for Powder Bed Direct Metal Additive Manufacturing Processes,” subcontract from Case Western Reserve University, America Makes (NAMII) Project Number 4009, 03/01/14-05/31/16: \$105,846.
5. Klingbeil, N.W., “Thermal Imaging for Process Monitoring and Control of Additive Manufacturing,” subcontract from Penn State University (ARL), America Makes (NAMII) Project Number 4008, 03/01/14-08/06/15: \$102,196.
6. Klingbeil, N.W., “Laser Powder Bed Additive Manufacturing Process Development,” subcontract from Carnegie Mellon University, National Institute of Standards and Technology (NIST) Cooperative Agreement Number 70NANB12H263, 10/01/13-09/30/15: \$59,843.
7. Klingbeil, N.W., “GOALI/Collaborative Research: Process Development across Alloy Systems for Powder Bed Additive Manufacturing,” National Science Foundation, Division of Civil, Mechanical and Manufacturing Innovation, Grant Number CMMI-1335196, 09/01/13-08/31/16: \$60,000. In collaboration with J.L. Beuth, Carnegie Mellon University, Grant Number CMMI-1335298 and O. Harrysson, North Carolina State University, Grant Number CMMI-1333077.

8. Klingbeil, N.W., “GOALI/Collaborative Research: Integrated Microstructure and Melt Pool Dimension Control for Electron Beam Additive Manufacturing,” National Science Foundation, Division of Civil, Mechanical and Manufacturing Innovation, Grant Number CMMI-1131266, 09/01/11-08/31/16: \$242,830. In collaboration with J.L. Beuth, Carnegie Mellon University, Grant Number CMMI-1131579.
9. Klingbeil, N., Rattan, K., Raymer, M., Reynolds, D. and Mercer, R., “A National Model for Engineering Mathematics Education,” National Science Foundation, Division of Undergraduate Education (CCLI Phase 3), Grant Number DUE-0817332, 08/01/08-07/31/16: \$2,400,000.
10. Baudendistel, C. and Klingbeil, N.W., “Effect of a Graded Layer on the Plastic Dissipation During Mixed-Mode Fatigue Crack Growth on Bimaterial Interfaces,” AFRL/DAGSI Ohio Student-Faculty Research Fellowship Program, Project Number RZ8-WSU-08-3, 07/01/08-12/31/11: \$209,820.
11. Klingbeil, N.W., “GOALI/Collaborative Research: A Modeling Base for Process Development of Electron Beam Manufacturing,” National Science Foundation, Division of Civil, Mechanical and Manufacturing Innovation, Grant Number CMMI-0700509, 09/01/07-08/31/11: \$208,200 (\$100,000 NSF plus \$108,200 DAGSI cost-share). In collaboration with J.L. Beuth, Carnegie Mellon University, Grant Number CMMI-0700538:
12. Wheatly, M., Klingbeil, N., Jang, B., Sehi, G. and Jones, R., “STEP: Gateway into First-Year STEM Curricula: A Community College/University Collaboration Promoting Retention and Articulation,” National Science Foundation, Division of Undergraduate Education (STEP Type I), Grant Number DUE-0622466, 10/01/06-09/30/13: \$1,997,620
13. Klingbeil, N., Rattan, K., Raymer, M., Reynolds, D. and Mercer, R., “A National Model for Engineering Mathematics Education,” National Science Foundation, Division of Undergraduate Education (CCLI Phase 2), Grant Number DUE-0618571, 08/15/06-07/31/09: \$500,000
14. Baudendistel, C. and Klingbeil, N.W., “Validation of a Dissipated Energy Theory for Fatigue Crack Growth Under Mixed-Mode Loading,” AFRL/DAGSI Ohio Student-Faculty Research Fellowship Program, Project Number PR6-WSU-06-1, 06/15/06-08/31/07: \$55,618
15. Srinivasan, R. and Klingbeil, N.W., “Software for the Design and Certification of Unitized Airframe Components,” subcontract from Ohio University, AFOSR STTR Phase I Award, 09/06/05-12/31/05: \$9,078
16. Fraser, H., Wilkins, J., Williams, J., Klingbeil, N.W. and Vasudevan, V., “Center for the Accelerated Maturation of Materials: An Enterprise for Visualization, Imaging, Simulation and Modeling,” Ohio Board of Regents - Hayes Investment Fund, Grant Number 2003-HIF-30, 10/01/03-09/30/06: \$2,000,000 (WSU Portion: \$100,000)
17. Klingbeil, N.W., Mercer, R., Rattan, K., Raymer, M. and Reynolds, D., “A National Model for Engineering Mathematics Education,” National Science Foundation, Division of Engineering Education and Centers, Grant Number EEC-0343214, 09/15/03-08/31/05: \$100,000.
18. Klingbeil, N.W., “Collaborative Research: GOALI: Laser Additive Manufacturing of Aerospace Components,” National Science Foundation, Division of Design, Manufacture and Industrial Innovation, Grant Number DMI-0224517, 08/01/02-07/31/06: \$150,000. In collaboration with J.L. Beuth, Carnegie Mellon University, Grant Number DMI-0200270, and H.L. Fraser, The Ohio State University, Project Consultant.
19. Klingbeil, N.W., Fraser, H.L. and Kobryn, P.A., “Prediction and Control of Microstructure in Laser-Based Solid Freeform Fabrication of Aerospace Materials,” AFRL/DAGSI Joint Research Program, Grant Number ML-WSU-01-11, 07/01/01-09/30/03: \$209,976 (WSU Portion: \$104,988)

Total External Funding: \$7,106,116

Internal Funding

1. Klingbeil, N.W., Mercer, R.E., Rattan, K.S., Raymer, M.L. and Reynolds, D.B., 2005, "The WSU Model for Engineering Mathematics Education: Continued Development, Assessment and Dissemination," Teaching Enhancement Fund, Wright State University, 07/01/06-06/30-07. Total Funding: \$20,000
2. Klingbeil, N.W., "Prediction and Control of Microstructure in Laser-Based Solid Freeform Fabrication of Aerospace Materials," Research Challenge - DAGSI Project Contingency Funding, Ohio Board of Regents, 12/01/01-06/30/03. Total Funding: \$24,855.
3. Klingbeil, N.W., "Development of Simulation-Based Crack Growth Models Toward Virtual Life Prediction of Aerospace Materials," Research Challenge Early Start/Augmentation Grant, Ohio Board of Regents, 01/01/01-01/31/02. Total Funding: \$12,192.
4. Klingbeil, N.W., "The Behavior of Short Interface Cracks Near the Free-Edge of Bonded Bimaterial Layers," Research Incentive Program Research Initiation Grant, Wright State University Research Council, 4/15/00-5/31/01. Total Funding: \$8,000.
5. Klingbeil, N.W., "An Investigation of the K_{PR} Approach to Fatigue Crack Growth and Life Prediction under Aircraft Spectrum Loading," Research Challenge New Investigator Grant, Ohio Board of Regents, 12/01/99-01/31/01. Total Funding: \$25,000.

Total Internal Funding: \$90,047

Total Research Funding (Internal and External): \$7,196,163

SERVICE

Committee Memberships

University Committees:

1. Academic Services Committee, Spring 2013
2. HLC Assessment Steering Committee, Summer 2012-Spring 2013
3. HLC Assessment Technology Subcommittee (Chair), Fall 2012-Spring 2013
4. Service Learning Advisory Council, Winter 08-Spring 2013.
5. University Semester Transition Team, Fall 2009-Spring 2012
6. MAP-Works Oversight Committee, Spring 2009-Spring 2011
7. Exploratory Committee on the Transition from Quarters to Semesters, Fall 2008
8. Semesters Calendar Subcommittee, Fall 2008
9. VSA Study Group, Winter 08-Spring 08
10. First-Year Coordinating and Advisory Council (FYCAC), Fall 07-Fall 2010
11. Graduate Council, Fall 06-Spring 08
12. Undergraduate Curriculum and Academic Policies Committee (UCAPC), Fall 04-Fall 09
13. Center for Teaching and Learning Advisory Council, Fall 03-Spring 05, Winter 10-Spring 11
14. Graduate Student Affairs Committee, Fall 01-Spring 05 (Chair, Winter 02-Spring 05)
15. Parking Advisory & Appeals Committee, Fall 00-Spring 02.

College Committees:

1. College Strategic Planning Committee, Summer 2006-Fall 09
2. ME Chair Search Committee, Fall 05-Spring 06
3. Curriculum Committee, Fall 2004-Fall 2009 (Chair)
4. Ph.D. Program Student Affairs Committee, Fall 2004-Spring 2009.
5. Ad-hoc Math Solutions Committee (Co-Chair), Winter 03-Spring 04
6. Excellence in Teaching Awards Committee, Fall 02-Spring 05, Fall 07-Spring 10, Fall 11-Present
7. Ad-hoc Engineering Math Committee (Chair), Winter 01-Fall 02
8. Academic Advantage Program Committee, Spring 2000-Present
9. Graduate Studies Committee, Fall 01-Spring 05

Department Committees:

1. Design Faculty Search Committee, Fall 10-Spring 11
2. Alternative Energy/Design Search Committee, Fall 07-Spring 09
3. Undergraduate Curriculum Committee, Fall 06-Fall 09
4. Design and Mechanics Committee, Fall 06-Present
5. ABET Program Objectives Committee, Winter 04-Fall 05
6. Petitions and Admissions Committee, Fall 03-Spring 06
7. Honors and Awards Committee, Fall 03-Spring 06
8. Design Committee, Fall 99-Spring 06
9. Materials Search Committee, Winter 01-Spring 03
10. Mechanical Search Committee, Winter 01-Spring 02

Reviewer for Professional Journals

1. International Journal of Fatigue
2. ASME Journal of Manufacturing Science and Engineering
3. Metallurgical and Materials Transactions
4. Engineering Fracture Mechanics
5. Journal of Materials Processing Technology
6. Materials and Manufacturing Processes
7. Composites Science and Technology
8. Shock and Vibration
9. Rapid Prototyping Journal
10. Advances in Engineering Education

Other Professional Service

1. Content Expert, University System of Georgia Momentum Summit, February 2018.
2. Virginia Tech NSF Project Advisory Board, A National Consortium for Synergistic Undergraduate Mathematics via Multi-institutional Interdisciplinary Teaching Partnerships (SUMMIT-P), 2017-Present.
3. Board of Trustees, Engineering and Science Hall of Fame, 2016-Present.
4. Board of Trustees, Engineering and Science Foundation of Dayton, 2015-Present.
5. Chair, Ohio Engineering Dean's Council, 2017-18
6. Secretary, Ohio Engineering Dean's Council, 2015-16.
7. Boise State University NSF WIDER PERSIST Advisory Board, 2014-17.
8. Governing Board, Dayton Regional STEM School, 2010-Present.
9. Engineering University Transfer Program Advisory Committee, Sinclair Community College, 2010-2018.
10. Proposal Reviewer/Panelist, National Science Foundation, Division of Undergraduate Education (DUE), Division of Materials Research (DMR), and Division of Civil, Mechanical and Manufacturing Innovation (CMMI).
11. Chair, FAME Awards Committee, 23rd International Solid Freeform Fabrication Symposium, August 2012.
12. Session Chair, 23rd International Solid Freeform Fabrication Symposium, Austin, TX, August 2012.
13. FAME Awards Committee, 22nd International Solid Freeform Fabrication Symposium, August 2011.
14. Session Chair, 22nd International Solid Freeform Fabrication Symposium, Austin, TX, August 2011.
15. Session Chair, 21st International Solid Freeform Fabrication Symposium, Austin, TX, August 2010.
16. Organizing Committee and Conference Host, ASME District B Student Professional Development Conference, Wright State University, April 2009.
17. Venue Coordinator, Dayton Engineering Sciences Symposium, 2007-2010.
18. Director of the engineering component of the WSU Summer STEM Academy, 2007-2010.
19. Awards Committee, Affiliate Societies Council of Dayton, Fall 2006-Spring 2009.
20. General Chair, 2nd Annual Dayton Engineering Sciences Symposium, October 2006.
21. Faculty Advisor, ASME Student Section, Wright State University, Fall 2003-Spring 2009.
22. Member, Fracture Mechanics and Failure Committee, ASME Applied Mechanics Division, 2004-2009.
23. Session Chair, ASME International Mechanical Engineering Congress & Exposition (IMECE), Anaheim, CA, Nov. 2004.
24. Session Chair, MMC2003 ASME Mechanics & Materials Conference, Scottsdale, AZ, June 2003.
25. Session Chair, Dayton-Cincinnati Aerospace Science Symposium, 2003-2007, 2009

26. Instructor, Mathematics and Applied Problem Solving, Academic Advantage Program, College of Engineering and Computer Science, 2000-2017.
27. Instructor, Engineering Technologies Academy, Civil Air Patrol, 2006-2008.
28. Volunteer, Wright State University Trebuchet Competition, 2007-2013.
29. Director of EGR 101 Dual-Enrollment Program at Bellbrook High School, 2008-2013.
30. Judge, St. Luke School Science Fair, 2008-Present.