# Stanford



# Sheri D. Sheppard

Richard W. Weiland Professor in the School of Engineering, Emeritus Mechanical Engineering

# Bio

# BIO

Sheri Sheppard teaches both undergraduate and graduate design-related classes, and conducts research on fracture mechanics and applied finite element analysis, and on how people become engineers. From 1999-2008 she served as a Senior Scholar at the Carnegie Foundation for the Advancement of Teaching, leading the Foundation's engineering study. In addition to publishing technical papers, reports, and textbooks, she has led or co-led several large, multi-institutional projects to build new educational research programs and related resources, such as the Center for the Advancement of Engineering Education (CAEE), The National Center for Engineering Pathways to Innovation (Epicenter), and a program on summer research experiences for high school teachers. Her industry experience includes engineering positions at Detroit's "Big Three" — Ford Motor Company, General Motors Corporation, and Chrysler Corporation. She earned her bachelors degree from the University of Wisconsin, and her PhD at the University of Michigan. At Stanford she has served a chair of the faculty senate, as associate vice provost for graduate education, and is the longtime faculty founder of and adviser to the graduate student group MEwomen. Her work has been recognized with numerous honors and awards, including the Walter J. Gores Award, Stanford University's highest award for excellence in teaching and the Chester F. Carlson and Ralph Coats Roe Awards of the American Society for Engineering Education in recognition of distinguished accomplishment in engineering education, and for outstanding teaching and notable contributions to the mechanical engineering profession.

# ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Mechanical Engineering
- Member, Bio-X

# HONORS AND AWARDS

- Ralph Coats Roe Award, American Society for Engineering Education (2012)
- The Walter J. Gores Award, Stanford University (2010)
- Chester F. Carlson Award, American Society for Engineering Education (2004)

# BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

• Advisory Board, Journal of Engineering Education (2014 - present)

# **PROFESSIONAL EDUCATION**

- PhD, Michigan, Mechanical Engineering (1985)
- MS, Univ. of Michigan-Dearborn , Mechanical Engineering (1980)
- BS, Univ. of Wisconsin-Madison , Engineering Mechanics (1978)

#### LINKS

- Designing Education Lab (DEL): http://del.stanford.edu
- The MEWomen's Group Website: http://stanfordmewomen.weebly.com/

# Teaching

#### COURSES

#### 2023-24

- Science and Engineering Course Design: CTL 312, ENGR 312 (Win)
- Women's Perspectives: ENGR 311A (Win)

#### 2022-23

- Discovering German Culture Through Engineered Products: OSPBER 33B (Spr)
- Intro to Solid Mechanics: ENGR 14 (Aut)
- Women's Perspectives: ENGR 311A (Win)

#### 2021-22

- Intro to Solid Mechanics: ENGR 14 (Aut)
- Women's Perspectives: ENGR 311A (Win)

#### 2020-21

- Intro to Solid Mechanics: ENGR 14 (Aut)
- Introduction to Mechanical Engineering: ME 1 (Win)
- Science and Engineering Course Design: CTL 312, ENGR 312 (Win)
- Women's Perspectives: ENGR 311A (Win)

#### STANFORD ADVISEES

Doctoral Dissertation Advisor (AC)

Aya Mouallem

Master's Program Advisor

Rio Hall-Zazueta

Doctoral Dissertation Co-Advisor (AC)

Fred Krynen

#### Doctoral (Program)

Fredrik Samdal Solberg

# **Publications**

#### PUBLICATIONS

• MANUFACTURING VULNERABILITY: HOW RESOURCE SCARCITY HINDERS TEAM COORDINATION DURING MANUFACTURING IN NIGERIAN FACTORIES

Kusimo, A. C., Sheppard, S., ASME AMER SOC MECHANICAL ENGINEERS.2020

• Connecting People and Ideas: Making Sense of a Research Lab through Creating a Shared Frame INTERNATIONAL JOURNAL OF ENGINEERING EDUCATION

Sheppard, S. D., Bjorklund, T., Chen, H. L., Gilmartin, S. K., Atwood, S., Brubaker, E., Chew, K. J., Christov, P., Cuan, C., Danner, P., Karanian, B., Kusimo, A., Luehmann, et al

2020; 36 (2): 796–813

• Entrepreneurial intent of engineering and business undergraduate students *JOURNAL OF ENGINEERING EDUCATION* Gilmartin, S. K., Thompson, M. E., Morton, E., Jin, Q., Chen, H. L., Colby, A., Sheppard, S. D. 2019; 108 (3): 316–36

• Internships and engineering: beliefs and behaviors of academics *EDUCATION AND TRAINING* Matusovich, H., Carrico, C., Harris, A., Sheppard, S., Brunhaver, S., Streveler, R., McGlothlin Lester, M. B. 2019; 61 (6): 650–65

- Expanding Engineering Limits-A Concept for Socially Responsible Education of Engineers INTERNATIONAL JOURNAL OF ENGINEERING EDUCATION Steuer-Dankert, L., Gilmartin, S. K., Muller, C. B., Dungs, C., Sheppard, S., Leicht-Scholten, C. 2019; 35 (2): 658–73
- Integrating a Digital Textbook into a Statics Course Anagnos, T., Sheppard, S. D., Billington, S. L., IEEE IEEE.2018

 Meet the Engineering Education Pioneers - Panel & Roundtable
 Brunhaver, S., Carberry, A., London, J., Yasuhara, K., Allendoerfer, C., Atman, C., Case, J., Finelli, C., McKenna, A., Newstetter, W., Sheppard, S., Smith, K., Turns, et al IEEE.2018

- Reflective Design Practice: A Novel Assessment of the Impact of Design-based Courses on Students Royalty, A., Chen, H., Sheppard, S., IEEE IEEE.2018
- A Mixed Methods Approach to Understanding How Colleges, Universities, and Employers Prepare and Support Undergraduates in Engineering Internships

Chen, H. L., Powers, K., Prasad, K., Anderson, M., Royalty, A., Gilmartin, S. K., Sheppard, S. D., IEEE IEEE.2018

- A Closer Look at Campus-Community Partnerships in Engineering Education Brubaker, E., Trego, M., Taha, K., Sheppard, S. D., IEEE IEEE.2018
- Measuring Curricular Impact using an ABET-based Engineering Self-Efficacy Scale Schar, M., Brackin, P., Chew, K. J., Sheppard, S., IEEE IEEE.2018
- Panel: Student Self-Perceptions Regarding Their First Position After Graduation: What Are They and How Do We Help? Carrico, C., Matusovich, H., Brunhaver, S., Rhee, J., Sheppard, S., Chen, H. L., IEEE IEEE.2018
- ABET Criterion 3 as a Measure of Engineering Self-Efficacy: Comparing the New Criteria (3.1-7) to the Previous Criteria (3a-k) Schar, M., Brackin, P., Chew, K. J., Sheppard, S., IEEE IEEE.2018
- Exploring Alignment Between Engineering Students' Job Plans and Post-Graduation Outcomes Rude, L., Harris, A., Gilmartin, S., Sheppard, S., IEEE IEEE.2018
- Supporting Student Career Development of Undergraduate Engineering Rhee, J., Sheppard, S., Brunhaver, S., Carrico, C., Streveler, R., IEEE IEEE.2017
- Entrepreneurial Career Choice and Characteristics of Engineering and Business Students INTERNATIONAL JOURNAL OF ENGINEERING EDUCATION Jin, Q., Gilmartin, S. K., Chen, H. L., Johnson, S. K., Weiner, M. B., Lerner, R. M., Sheppard, S. 2016; 32 (2): 598-613

- Investigating Entrepreneurship Program Models in Undergraduate Engineering Education INTERNATIONAL JOURNAL OF ENGINEERING EDUCATION Gilmartin, S. K., Shartrand, A., Chen, H. L., Estrada, C., Sheppard, S. 2016; 32 (5): 2048-2065
- (Mis)Interpretations of Organizational Socialization: The Expectations and Experiences of Newcomers and Managers HUMAN RESOURCE DEVELOPMENT QUARTERLY

Korte, R., Brunhaver, S., Sheppard, S. 2015; 26 (2): 185-208

• Feedback from In-class Worksheets and Discussion Improves Performance on the Statics Concept Inventory INTERNATIONAL JOURNAL OF ENGINEERING EDUCATION

Steele, K. M., Brunhaver, S. R., Sheppard, S. D. 2014; 30 (4): 992-999

• What Does It Take to Become a Good Engineer? Identifying Cross-National Engineering Student Profiles According to Perceived Importance of Skills International Journal of Engineering Education Hasse, S., Chen, H., L., Sheppard, S., Kolmos, A., Meljgaard, N.

2013; 29 (3): 698–713

• What Does It Take to Become a Good Engineer? Identifying Cross-National Engineering Student Profiles According to Perceived Importance of Skills INTERNATIONAL JOURNAL OF ENGINEERING EDUCATION

Haase, S., Chen, H. L., Sheppard, S., Kolmos, A., Mejlgaard, N. 2013; 29 (3): 698-713

- From freshmen engineering students to practicing professionals: Changes in beliefs about important skills over time. Winters, K., E., Matusovich, H., M., Brunhaver, S., Chen, H., L., Yasuhara, K., Sheppard, S. 2013
- Research-Informed Practices for Inclusive Science, Technology, Engineering, and Math (STEM) Classrooms: Strategies for Educators to Close the Gender Gap

Scutt, H. I., Gilmartin, S. K., Sheppard, S., Brunhaver, S. 2013

- Not all the same: A look at early career engineers employed in different sub-occupations. Brunhaver, S., Gilmartin, S., K., Chen, H., L., Grau, M., M., Warner, M., Sheppard, S. 2013
- Bending Moments to Business Models: Integrating an Entrepreneurship Case Study as Part of Core Mechanical Engineering Curriculum. Schar, M., F., Sheppard, S., Brunhaver, S., Cuson, M., Grau, M., M. 2013
- Fostering an Enterprising Learning Ecology for Engineers INTERNATIONAL JOURNAL OF ENGINEERING EDUCATION Brunhaver, S. R., Lande, M., Sheppard, S. D., Carryer, J. E. 2012; 28 (2): 355-363
- The Center for the Advancement of Engineering Education: A Review of Results and Resources INTERNATIONAL JOURNAL OF ENGINEERING EDUCATION

Atman, C. J., Sheppard, S. D., Turns, J., Adams, R. S., Yasuhara, K., Lund, D. 2012; 28 (5): 1095-1108

- Educating Engineering Entrepreneurs: A Multi-Institution Analysis INTERNATIONAL JOURNAL OF ENGINEERING EDUCATION Yasuhara, K., Lande, M., Chen, H. L., Sheppard, S. D., Atman, C. J. 2012; 28 (2): 436-447
- Work in Progress Engineering Pathways Study: The College-Career Transition 41st Annual Frontiers in Education Conference (FIE) Sheppard, S., Matusovich, H. M., Atman, C., Streveler, R. A., Miller, R. L. IEEE.2011
- Outcomes of a Longitudinal Administration of the Persistence in Engineering Survey JOURNAL OF ENGINEERING EDUCATION Eris, O., Chachra, D., Chen, H. L., Sheppard, S., Ludlow, L., Rosca, C., Bailey, T., Toye, G.

2010; 99 (4): 371-395

• Comparing the Undergraduate Experience of Engineers to All Other Majors: Significant Differences are Programmatic JOURNAL OF ENGINEERING EDUCATION

Lichtenstein, G., McCormick, A. C., Sheppard, S. D., Puma, J. 2010; 99 (4): 305-317

• Exploring the Engineering Student Experience: Findings from the Academic Pathways of People Learning Engineering Survey (APPLES) (CAEE-TR-10-01). Seattle, WA: Center for the Advancement for Engineering Education. Sheppard, S., Gilmartin, S., Chen, H., L., Donaldson, K., Lichtenstein, G., Eri#, Ö.

2010

- Cost of an Engineering Major JEE Selects in Prism Lichtenstein, G., McCormick, A., Sheppard, S. 2010: 47
- Students Improving: Identifying Factors That Seem to Matter. Otto, E., Chen, Helen, L., Sheppard, Sheri, D. 2010
- Students Improving: Identifying Factors That Seem to Matter. Otto, E., Chen, Helen, L., Sheppard, Sheri, D. 2010
- Enabling Engineering Student Success: The Final Report for the Center for the Advancement of Engineering Education. Atman, C., Sheppard, et al., S. San Rafael CA: Morgan & Claypool Publishers.2010
- ENABLING ENGINEERING STUDENT SUCCESS: The Final Report for the Center for the Advancement of Engineering Education CAEE-TR-10-02 Atman, Cynthia, J., Sheppard, Sheri, D., Turns, J., Adams, Robin, S., Fleming, Lorraine, N., Stevens, R. 2010
- An Overview of the Academic Pathways Study: Research Processes and Procedures Technical Report #CAEE-TR-09-03 Summer 2003 Fall 2008 Sheppard, S., Atman, C., Fleming, L., Miller, R., Smith, K., Stevens, R. 2010
- An Engineering Major Does Not (Necessarily) an Engineer Make: Career Decision Making Among Undergraduate Engineering Majors JOURNAL OF ENGINEERING EDUCATION
   Lichtenstein, G., Loshbaugh, H. G., Claar, B., Chen, H. L., Jackson, K., Sheppard, S. D.
   2009; 98 (3): 227-234
- A General Methodology to Predict Fatigue Life in Lead-Free Solder Alloy Interconnects *JOURNAL OF ELECTRONIC PACKAGING* Pierce, D. M., Sheppard, S. D., Vianco, P. T. 2009; 131 (1)
- Does Major Matter? A Look at what Motivates Engineering Students in Different Majors. Parikh, S., Chen, H., Donaldson, K., Sheppard, S. 2009
- Educating Engineers: Designing for the Future of the Field Sheppard, S., Macatangay, K., Colby, A., Sullivan, W. Jossey-Bass.2009
- More to Say: Analyzing Open-ended Student Responses to the Academic Pathways of People Learning Engineering Survey. Lande, M., Parikh, S., Sheppard, S., Toye, G., Chen, H., Donaldson, K. 2009
- Persistence, Engagement, and Migration in Engineering Programs *JOURNAL OF ENGINEERING EDUCATION* Ohland, M. W., Sheppard, S. D., Lichtenstein, G., Eris, O., Chachra, D., Layton, R. A. 2008; 97 (3): 259-278

- On Becoming a 21st Century Engineer Foreword JOURNAL OF ENGINEERING EDUCATION Sheppard, S. D., Pellegrino, J. W., Olds, B. M. 2008; 97 (3): 231-234
- Development of the damage state variable for a unified creep plasticity damage constitutive model of the 95.5Sn-3.9Ag-0-6Cu lead-free solder *JOURNAL* OF ELECTRONIC PACKAGING

Pierce, D. M., Sheppard, S. D., Fossurn, A. F., Vianco, P. T., Neilsen, M. K. 2008; 130 (1)

- Validation of a general fatigue life prediction methodology for sn-ag-cu lead-free solder alloy interconnects *JOURNAL OF ELECTRONIC PACKAGING* Pierce, D. M., Sheppard, S. D., Vianco, P. T., Regent, J. A., Grazier, J. M. 2008; 130 (1)
- Panel Session Improving Learning and Retention in Introductory Statics IEEE Frontiers in Education Conference 2008 Valle, C., Newstetter, W. C., Anderson, E. E., Litzinger, T. A., Sheppard, S. D. IEEE.2008: 897–898
- Moving From Pipeline Thinking to Understanding Pathways: Findings from the Academic Pathways Study of Engineering Undergraduates. Atman, C., Sheppard et al., S.
   2008
- Graduate School or Not: Engineering Students Consider Continuing Their Education in Co-terminal Programs. Jackson, K., Bailey, T., Sheppard, S., Chen, H.
   2008
- Socioeconomic Status and the Undergraduate Experience: Preliminary Findings from Four American Universities. Donaldson, K., Lichtenstein, G., Sheppard, Sheri, D.
   2008
- From PIE to APPLES: The Evolution of a Survey Instrument to Explore Engineering Student Pathways. Sheppard, S., Chen, H., L, Donaldson, et al., Krista 2008
- From PIE to APPLES: The Evolution of a Survey Instrument to Explore Engineering Student Pathways. Chen, H., Donaldson, K., Eri#, O., Chachra, D., Lichtenstein, G., Sheppard, Sheri, D. 2008
- Being and Becoming: Gender and Identity Formation of Engineering Students. Sheppard, S., Chachra, D., Kilgore, D., Loshbaugh, H., McCain, J., Chen, H. 2008
- Analyzing Large, Free-response Qualitative Data Sets: A Novel Quantitative-qualitative Hybrid Approach. Sheppard, S., Light, J., Yasuhara, K.
   2008
- Academic Pathways Study: Processes and Realities. Clark, M., Sheppard et al., Sheri, D. 2008
- Academic Pathways Study: Processes and Realities.
  Clark, M., Sheppard, Sheri, D., Atman, Cynthia, J., Fleming, L., Miller, R., Stevens, R.
  2008
- Conceptualizing Engagement: Contributions of Faculty to Student Engagement in Engineering. *Journal of Engineering Education*. Sheppard, Sheri, D., Chen et al., Helen, L. 2008
- Scaling Up: Taking the Academic Pathways of People Learning Engineering Survey (APPLES) National *IEEE Frontiers in Education Conference 2008* Donaldson, K. M., Chen, H. L., Toye, G., Clark, M., Sheppard, S. D. IEEE.2008: 1078–1083

• Special Session - Linking Research Findings on Engineering Student Learning and Engineering Teaching: Implications for Engineering Education IEEE Frontiers in Education Conference 2008

Atman, C., Fleming, L., Kilgore, D., Miller, R., Sheppard, S., Smith, K., Stevens, R., Streveler, R., Turns, J. IEEE.2008: 784–785

• When understanding follows 'experiencing': A report from research in the field 6th Mudd Design Workshop

Hariharan, B., Shariq, S., Sheppard, S. TEMPUS PUBLICATIONS.2008: 434–42

• Targeting undergraduate students for surveys: Lessons from the Academic Pathways of People Learning Engineering Survey (APPLES) 37th Annual Frontiers in Education Conference Donaldson, K. M., Chen, H. L., Toye, G., Sheppard, S. D.

IEEE.2007: 1116–1122

 Correlates of Persistence in Engineering Education: Preliminary Results from the Academic Pathways Study.

Chachra, D., Eri#, O., Donaldson, K., Sheppard, S., Rosca, C., Ludlow, L. 2007

- Targeting Undergraduate Students for Surveys: Lessons from the Academic Pathways of People Learning Engineering Survey (APPLES). Donaldson, K., Chen, Helen, L., Toye, G., Sheppard, Sheri, D. 2007
- Portraying the Academic Experiences of Students in Engineering: Students' Perceptions of Their Educational Experiences and Career Aspirations in Engineering.

Sheppard, S., Korte, R., Smith, K. 2007

- Exploring the Not-So-Talked-About Undergraduate Pathway: Migrating Into Engineering. Donaldson, K., Sheppard, Sheri, D. 2007
- A Preliminary Analysis of Correlates of Engineering Persistence: Results from a Longitudinal Study. Eri#, Ö., Chachra, D., Chen, H., Rosca, C., Ludlow, L., Sheppard, Sheri, D. 2007
- Special session Academic Pathways Study: Special interactive session on findings and implications for engineering education and practice 37th Annual Frontiers in Education Conference

Atman, C., Kilgore, D., Eris, O., Fleming, L., Miller, R. L., Sheppard, S. D., Smith, K., Stevens, R., Streveler, R., Amos, D. M., Bailey, T., Chachra, D., Chen, et al IEEE.2007: 933–935

• The National Engineering Education Research Colloquies JOURNAL OF ENGINEERING EDUCATION

Adams, R., Aldridge, D., Atman, C., Barker, L., Besterfield-Sacre, M., Bjorklund, S., Bransford, J., Breslow, L., Brophy, S., Burrows, V., Busch-Vishniac, I., Carlson, M., Carlson, et al

2006; 95 (4): 257-258

- Customer value chain analysis *RESEARCH IN ENGINEERING DESIGN* Donaldson, K. M., Ishii, K., Sheppard, S. D. 2006; 16 (4): 174-183
- What is engineering practice? *5th Mudd Design Workshop* Sheppard, S., Colby, A., Macatangay, K., Sullivan, W. TEMPUS PUBLICATIONS.2006: 429–38
- Work in progress: Is engineering for me? A qualitative case study of first-year students *36th Annual Frontiers in Education (FIE 2006)* Bailey, T. L., Sheppard, S. D. IEEE.2006: 1537–1538
- Pedagogies of engagement: Classroom-based practices JOURNAL OF ENGINEERING EDUCATION Smith, K. A., Sheppard, S. D., Johnson, D. W., Johnson, R. T. 2005; 94 (1): 87-101

- Development of the Persistence in Engineering (PIE) Survey Instrument. Sheppard, S., Eri#, Ö., Chen, H., Bailey, T., Engerman, K., Loshbaugh, H. 2005
- A new Journal for a field in transition *JOURNAL OF ENGINEERING EDUCATION* Felder, R. M., Sheppard, S. D., Smith, K. A. 2005; 94 (1): 7-10
- Relationships between engineering student and faculty demographics and stakeholders working to affect change *Frontiers in Education Conference* Johnson, M. J., Sheppard, S. D. AMER SOC ENGINEERING EDUCATION.2004: 139–51
- On designing engineering education: Lessons learned at Mudd Design Workshop IV 4th Mudd Design Workshop Dym, C. L., Rossmann, J. S., Sheppard, S. D. TEMPUS PUBLICATIONS.2004: 470–74
- Studying the Engineering Experience: Design of a Longitudinal Study. Sheppard, S., Atman, Cynthia, J., Stevens, R., Fleming, L., Streveler, R., Adams, Robin, S. 2004
- Taking stock: An analysis of the publishing record as represented by the Journal of Engineering Education *JOURNAL OF ENGINEERING EDUCATION* Whitin, K., Sheppard, S. 2004; 93 (1): 5-12
- Stress intensity factors in spot welds *ENGINEERING FRACTURE MECHANICS* Pan, N., Sheppard, S. D. 2003; 70 (5): 671-684
- E-pals to enhance mechanics learning INTERNATIONAL JOURNAL OF ENGINEERING EDUCATION Donaldson, K., Sheppard, S. 2003; 19 (6): 836-846
- Spot welds fatigue life prediction with cyclic strain range INTERNATIONAL JOURNAL OF FATIGUE Pan, N., Sheppard, S. 2002; 24 (5): 519-528
- Towards a science of engineering design teams 13th International Conference on Engineering Design (ICED 01) Mabogunje, A., Carrizosa, K., Sheppard, S., Leifer, L. PROFESSIONAL ENGINEERING PUBLISHING LTD.2001: 465–472
- The compatibility (or incompatibility) of how we teach engineering design and analysis Mudd Design Workshop II, Designing Design Education for the 21st Century Sheppard, S. D.

TEMPUS PUBLICATIONS.2001: 440–45

 Modification of a methodological design tool for the developing country scenario - A case study in product definition 13th International Conference on Engineering Design (ICED 01)
 Donaldson, K. M., Sheppard, S. D.

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• Design education for the 21st century - Introduction and overview INTERNATIONAL JOURNAL OF ENGINEERING EDUCATION

Dym, C. L., Sheppard, S. D. 2001; 17 (4-5): 322-323

- Design as cornerstone and capstone *MECHANICAL ENGINEERING* Sheppard, S. D. 1999: 44-47
- Fatigue life prediction of resistance spot welds under variable amplitude loads 29th National Symposium on Fatigue and Fracture Mechanics Pan, N., Sheppard, S. D., Widmann, J. M.

AMER SOCIETY TESTING AND MATERIALS.1999: 802-814

• Motor workshop: The role of interactivity in promoting learning 28th Annual Frontiers in Education Conference on Moving from Teacher-Centered to Learner-Centered Education

Reamon, D., Sheppard, S. IEEE.1998: 672–675

• Assessment of technology-assisted learning in higher education: It requires new thinking by universities & colleges 28th Annual Frontiers in Education Conference on Moving from Teacher-Centered to Learner-Centered Education

Sheppard, S. D., Reamon, D., Friedlander, L., KERNS, C., Leifer, L., Marincovich, M., Toye, G. IEEE.1998: 141–145

• Reality brings excitement to engineering education Symposium on Computing Futures in Engineering Design Leifer, L., Sheppard, S. CAMBRIDGE UNIV PRESS.1998: 83–86

• Examples of Freshman Design Education INTERNATIONAL JOURNAL OF ENGINEERING EDUCATION Sheppard, S., Jenison, R. 1997; 13 (4): 248-261

• A model for peer and student involvement in course assessment 27th Annual Conference on Frontiers in Education - Teaching and Learning in an Era of Change (FIE 97)

Sheppard, S., Johnson, M., Leifer, L. I E E E.1997: 193–200

• Thoughts on freshman engineering design experiences 26th Annual conference on Frontiers in Education - Technology-Based Re-Engineering Engineering Education (FIE 96)

Sheppard, S. D., Jenison, R. IEEE.1996: 909–913

- Analytic problem solving methodology 26th Annual conference on Frontiers in Education Technology-Based Re-Engineering Engineering Education (FIE 96) Reamon, D., Sheppard, S. IEEE.1996: 484–488
- The explicit approximation method for design optimization problems with implicit constraints *ENGINEERING OPTIMIZATION* Hsu, Y. L., Sheppard, S. D., WILDE, D. J. 1996; 27 (1): 21-42
- FATIGUE AND FRACTURE ESTIMATION FOR METALLIC COMPONENTS SOME CURRENT METHODS AND FUTURE-DEVELOPMENTS JOURNAL OF MECHANICAL DESIGN

Nelson, D. V., Sheppard, S. D. 1995; 117: 121-127

• THE CURVATURE FUNCTION-METHOD FOR 2-DIMENSIONAL SHAPE OPTIMIZATION UNDER STRESS CONSTRAINTS COMPUTERS & STRUCTURES

Hsu, Y. L., Sheppard, S. D., WILDE, D. J. 1995; 55 (4): 647-657

• DETERMINING THE CONSTITUTIVE PROPERTIES OF THE HEAT-AFFECTED ZONE IN A RESISTANCE SPOT WELD MODELLING AND SIMULATION IN MATERIALS SCIENCE AND ENGINEERING

Zuniga, S. M., Sheppard, S. D. 1995; 3 (3): 391-416

• Students connecting engineering fundamentals and hardware design: Observations and implications for the design of curriculum and assessment methods 25th Annual Conference on Frontiers in Education - Engineering Education for the 21st-Century Brereton, M., Sheppard, S., Leifer, L.

I E E E.1995: 950–956

• A KNOWLEDGE-BASED APPROACH TO MODEL IDEALIZATION IN FEM 10th Conference on Artificial Intelligence for Applications Prabhakar, V., Sheppard, S. D.

I E E E, COMPUTER SOC PRESS.1994: 488–490

• ELECTRICAL CONTACT RESISTANCE UNDER HIGH LOADS AND ELEVATED-TEMPERATURES WELDING JOURNAL

Vogler, M., Sheppard, S. 1993; 72 (6): S231-S238

• FATIGUE CRACK-GROWTH IN NOTCHED AND PLAIN SHAFTS SUBJECTED TO TORSION AND AXIAL LOADING ENGINEERING FRACTURE MECHANICS

Thompson, K. D., Sheppard, S. D. 1992; 43 (1): 55-71

• GROWTH OF SHEAR LIPS IN SURFACE CRACKED SHAFTS SUBJECTED TO FATIGUE LOADING ENGINEERING FRACTURE MECHANICS Thompson, K. D., Sheppard, S. D.

1992; 43 (1): 73-82

- STRESS INTENSITY FACTORS IN SHAFTS SUBJECTED TO TORSION AND AXIAL LOADING ENGINEERING FRACTURE MECHANICS Thompson, K. D., Sheppard, S. D. 1992; 42 (6): 1019-1034
- FATIGUE LIFE ESTIMATION IN RESISTANCE SPOT WELDS INITIATION AND EARLY GROWTH-PHASE FATIGUE & FRACTURE OF ENGINEERING MATERIALS & STRUCTURES Sheppard, S. D., Strange, M. 1992; 15 (6): 531-549
- VERIFICATION OF FRACTURE PARAMETER FOR UNCOUPLED THERMOINELASTICITY ENGINEERING FRACTURE MECHANICS Wagner, D. A., Sendeckyj, G. P., Sheppard, S. D. 1992; 42 (3): 461-478
- FIELD EFFECTS IN FATIGUE CRACK INITIATION LONG LIFE FATIGUE-STRENGTH JOURNAL OF MECHANICAL DESIGN Sheppard, S. D.

1991; 113 (2): 188-194

- RESIDUAL-STRESSES IN RESISTANCE SPOT WELDS CONF ON DESIGN AND MANUFACTURING SYSTEMS Sheppard, S., Strange, M., Vogler, M., Wood, J., SCHOEPFEL, A., Murphy, T. SOC MANUFACTURING ENGINEERS.1990: 599–606
- THE INFLUENCE OF CRACK FACE FRICTION AND TRAPPED FLUID ON SURFACE INITIATED ROLLING-CONTACT FATIGUE CRACKS JOURNAL OF TRIBOLOGY-TRANSACTIONS OF THE ASME Tallian, T. E., Farris, T. N., Sheppard, S. D. 1989; 111 (2): 396-399
- SUBSURFACE CRACKS UNDER CONDITIONS OF SLIP, STICK, AND SEPARATION CAUSED BY A MOVING COMPRESSIVE LOAD JOURNAL OF APPLIED MECHANICS-TRANSACTIONS OF THE ASME Sheppard, S. D., Barber, J. R., COMNINOU, M. 1987; 54 (2): 393-398
- AN ANALYSIS OF FRETTING CRACKS .2. UNLOADING AND RELOADING PHASES INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES Sheppard, S. D., Hills, D. A., Barber, J. R. 1986; 22 (4): 387-396
- SHORT SUBSURFACE CRACKS UNDER CONDITIONS OF SLIP AND STICK CAUSED BY A MOVING COMPRESSIVE LOAD JOURNAL OF APPLIED MECHANICS-TRANSACTIONS OF THE ASME Sheppard, S., Barber, J. R., COMNINOU, M.

1985; 52 (4): 811-817

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Chang, F. K., COMNINOU, M., Sheppard, S., Barber, J. R. 1984; 51 (2): 311-316