

**Response to Engineering Entrepreneurship Curriculum Development Grant RFP****Title: Seeking “The Innovator’s DNA” in Engineering Students****PI Information:**

Name: Joe Sinfield  
Email: [jvs@purdue.edu](mailto:jvs@purdue.edu)  
School: Civil Engineering  
College: Engineering  
Campus address: CIVL G231  
Phone number: 765-496-2742

**Co-PI Information:**

Name: Diane Beaudoin  
Email: [beaudoin@purdue.edu](mailto:beaudoin@purdue.edu)  
College: Engineering  
Campus address: MSEE 308H  
Phone number: 765-494-9246

Name: Jim Jones  
Email: [jonesjd@purdue.edu](mailto:jonesjd@purdue.edu)  
School: Mechanical Engineering  
College: Engineering  
Campus Address: ME 128  
Campus Phone: 765-494-5691

**Project description:**

This project will build on the work presented by Dyer, Gregersen, and Christensen in their recent paper “Entrepreneur behaviors, opportunity recognition, and the origins of innovative ventures”<sup>1</sup> to develop an assessment tool that will enable instructors of core engineering courses to determine the impact of their course content on student development of entrepreneurial and innovative attributes.

Dyer et al. (2008) identified five primary traits as evidence of “the Innovator’s DNA” in entrepreneurs, namely:

- Questioning: a strong bent toward inquiry in the pursuit of new ideas
- Observing: a near-ethnographic idea for examination of each new situation
- Associational thinking: an innate ability to find connections between seemingly disparate ideas
- Experimenting: a willingness to explore, often through first-hand activity
- Networking: an ability and affinity for the pursuit of information and input from others

The PIs believe that these entrepreneurial attributes are inherently linked to the skills likely required of future engineers and thus merit development and assessment. Just as the entrepreneur focuses on the needs of their existing or anticipated customers, the engineer

---

<sup>1</sup> Dyer, J. H., Gregersen, H.B., and Christensen, C. “Entrepreneur behaviors, opportunity recognition, and the origins of innovative ventures,” *Strategic Entrepreneurship Journal*, **2**, 317-338, 2008.

develops an understanding of the needs of their project and the inhabitants in the environment in which that project must be created. As the entrepreneurs strive to develop innovative products or services for their customer base, the work of the engineer is targeted toward the development of technological solutions, often incorporating the latest technologies and methods, which address emerging needs in society. Also, to succeed, entrepreneurs must develop a means to deliver their offering to their customers in a cost-effective way that generates the profits required for their nascent business to grow and flourish. In the same manner, the engineer must evaluate new technological concepts and adapt their “development and commercialization” approach to ultimately deploy “solutions” to facilitate long-term sustainability of the engineered system for the benefit of its users. Further, despite the general perception that entrepreneurs are “risk-takers” which implies a gambler-like disposition, entrepreneurs are actually active risk mitigators (Anthony et al. 2008), carefully managing resources and weighing options to extend the life of their nascent enterprise (as the consequences of insolvency, inferior product, or operational lapses are severe). In a similar manner, engineers must assess a multitude of factors in their design, planning and implementation activities, and balance a desire for conservatism with the practicality of available resources. As such, a focus on the entrepreneur facilitates a variety of complementary abilities, knowledge, and qualities for the future engineer.

### *Learning objectives*

The traits highlighted by Dyer et al. (2008) are cast in the context of business, and framed as characteristics of business executives. Effort is required to understand and define how these traits might manifest in the context of the engineer, and, perhaps even more importantly, in the environment of the engineering classroom. With this in mind, the PIs intend to closely examine research instruments employed by Dyer et al. to gather insight into executive behavior and develop an assessment tool that focuses on the existence and development of similar characteristics in engineering students. This work will require several activities:

- Interpretation of the work of Dyer et al. (2008) to draw out the fundamental aspects of “the Innovator’s DNA”
- Translation of the highlighted attributes into the context of engineering, including identification of circumstances likely to be found in an engineering course in which these attributes would be displayed
- Development of an assessment instrument to examine these attributes in engineering students

As envisioned, the assessment instrument developed through this work would be applicable in any engineering course context involving fundamental principles and/or design.

*Prior experience in using the proposed material*

The PI has had extensive experience developing and employing assessment tools in professional contexts, particularly to select personnel for innovation and growth teams in corporate settings.

*Thoughts on disseminating the proposed ideas*

The assessment tool developed through the proposed study could have broad applicability across the engineering curriculum.

*Work plan and timeline*

The work required to develop the proposed assessment tool would take place over approximately 8 weeks.

<b>Activity</b>	<b>Week</b> 1	2	3	4	5	6	7	8
Interpretation of Dyer et al. framework								
Translation of attributes to engineering context								
Development of assessment instrument								

*Description of specific deliverables to be presented at the E2020 workshop*

Upon completion of the proposed effort, the PIs would plan to present a description of a proposed assessment tool that could be employed to assess innovative/entrepreneurial attributes in engineering students in the context of engineering courses.

**Attachments:** Estimated budget and curriculum vitae of key personnel

# Coeus Proposal Development - Budget Summary

Proposal Number: 00027408

Budget Version : 1

Proposal Title: Internal Proposal

Investigator Name: SINFIELD, JOSEPH V

Period : 1 01 Jun 2010 - 31 May 2011

	Personnel Category	Start Date	End Date	EB Rate	Vac Rate	Percentage Charged/Effort	Fringe Benefits	Salaries & Wages
<b>Graduate Students</b>								
TBA, Student (8241), 1	Personnel - Grad Staff (.50 FTE)	06/01/10	06/30/10	6.70%		100.0 / 100.0	\$123.95	\$1,850.00
TBA, Student (8241), 1	Personnel - Grad Staff (.50 FTE)	07/01/10	07/31/10	6.70%		100.0 / 100.0	\$123.95	\$1,850.00
<b>Total Graduate Students</b>							\$247.90	\$3,700.00
TOTAL SALARIES & WAGES								\$3,700.00
<b>Fringe Benefits:</b> Total Fringe Benefits and Vacation Accrual:								\$247.90
TOTAL SALARIES & WAGES & FRINGE BENEFITS								\$3,947.90
<b>Total Direct Costs</b>								\$3,947.90
<b>F&amp;A (Indirect) Costs</b>								
ON-CAMPUS								\$0.00
Total F&A (Indirect) Costs								\$0.00
<b>Total Cost to Sponsor</b>								\$3,947.90
<b>Total Underrecovery Amount</b>								\$0.00
<b>Total Cost Sharing Amount</b>								\$0.00
<b>TOTAL COST OF PROJECT</b>								\$3,947.90

# Coeus Proposal Development - Budget Summary

**Proposal Number:** 00027408 **Budget Version :** 1  
**Proposal Title:** Internal Proposal  
**Investigator Name:** SINFIELD, JOSEPH V  
**Period : 1** 01 Jun 2010 - 31 May 2011

## Calculation Methodology

The full F&A (Indirect) Cost Rate is applied to the total direct costs, less the following exclusions

Total exclusions from F&A base \$0.00

The Allocated Administrative Support and Allocated Lab Expense Rates are applied to the total direct costs, less the following exclusions.

Total exclusions from Allocated Expense base \$0.00

### F&A (Indirect) Cost Rates and Base

Start Date	End Date	Campus	Rate	Rate Type	Base	Indirect Cost
01 Jun 2010	31 Jul 2010	On	0.00	TDC	\$3,947.90	\$0.00
					Total	<u>\$0.00</u>

### Employee Benefit Rates and Base

Start Date	End Date	Campus	Rate	Base	Calculated Cost
<b>Grad Staff (.50 FTE)</b>					
01 Jun 2010	31 Jul 2010	On	6.70	\$3,700.00	\$247.90
				Total	<u>\$247.90</u>

## JOSEPH V. SINFIELD

**Address:** Purdue University, School of Civil Engineering, West Lafayette, IN 47907-2051  
**Ph:**(765) 496-2742 **E-mail:** [jvs@purdue.edu](mailto:jvs@purdue.edu)

### A. Professional Preparation

Massachusetts Institute of Technology	Civil & Environmental Engineering,	Sc. D.	1997
Massachusetts Institute of Technology	Civil & Environmental Engineering,	M. Sc.	1994
Bucknell University	Civil Engineering, B. Sc. (Summa Cum Laude)		1992

### B. Academic Appointments

- Purdue University (West Lafayette, IN) May 2004 -present
- Assistant Professor, School of Civil Engineering - conduct research and teach at both graduate and undergraduate levels in two focal areas: 1) experimental methods, instrumentation, and sensor design with an emphasis on applications of optical spectroscopy in geo-environmental engineering, and 2) innovation management and entrepreneurship and intrapreneurship in technology focused sectors

- Massachusetts Institute of Technology (Cambridge, MA) Oct 1997 – Oct 1998
- Post-Doctoral Associate - investigated flow of contaminants through porous media using NMR

### C. Non-academic Appointments

- Innosight, LLC (Watertown, MA) – Consultant May 2004 – present
- McKinsey & Company (Chicago, IL/Boston, MA) – Management Consultant Dec 1998 – Jan 2004
- Germaine & Associates (Cambridge, MA) – Consulting Engineer Jan 1995 - Apr 1997
- Haley & Aldrich Company, Inc. (Cambridge, MA) – Geotechnical Engineer May 1994- Jan 1995

**D. Current funding sources** – National Science Foundation, Indiana Department of Transportation-Joint Transportation Research Program, National Oceanographic and Atmospheric Association-MIT SeaGrant

### E. Selected Publications

#### (i) Books

- Anthony, S.D., Johnson, M.W., Sinfield, J.V., Altman, E.J., “The Innovator’s Guide to Growth – Putting Disruptive Innovation to Work”, Harvard Business Press, 2008

#### (ii) Patents

- “Time-resolved Raman Spectroscopy”, Sinfield, J.V. and Colic, O., Patent Cooperation Treaty Application US08/69978 - July 14, 2008
- United States Utility Patent Application Serial No. 12/668,844 – Jan. 12, 2010

#### (iii) Selected full articles in refereed publications

- Sinfield, J., Colic, O., Fagerman, D., Monwuba, C. **Appl. Spec.**, “A Low-cost Time-resolved Raman Spectroscopic Sensing System Enabling Fluorescence Suppression,” v 63, n2, 2010.
- Sinfield, J., Fagerman, D. and Colic, O. **Comput. Electron. Agr.**, “Evaluation of Sensing Technologies for On-the-Go Detection of Macro-Nutrients in Cultivated Soils,” v70, n1, 1-18, 2010.
- Anthony, S., Johnson, M., Sinfield, J., **Sloan Mgmt. Rev.**, “Institutionalizing Innovation,” v 49, n2, 45-50, 2008.
- Sinfield, J., Hemond, H., Germaine, J., Johnson, B., Bloch, B., **ASCE J. Environ. Eng.**, “Contaminant Detection, Identification, and Quantification Using a Microchip Laser Fluorescence Sensor,” v133, n3, 346-351, 2007.
- Dunston, P., Sinfield, J., Lee, T-Y, **ASCE J. Const. Eng. and Mgmt.**, “Technology Development Decision Economics for Real-time Rolling Resistance Monitoring of Haul Roads,” v133, n5, 393-402, 2007.
- Santagata, M., Sinfield, J., Germaine, J., **ASCE J Geotech. Geoenviron. Eng.**, “Laboratory Simulation of Field Sampling: Comparison to Ideal Sampling and Field Data,” v132, n3, 351-362, 2006.
- Culligan, P., Sinfield, J., Maas, W., Cory, D., **Water Resour. Res.**, “Use of NMR relaxation times to differentiate mobile and immobile pore fractions in wetland soil,” v37, n3, 837– 842, 2001.
- Einstein, H., Indermitte, C., Sinfield, J., Descoedres, F., Dudt, J.-P., **Transport Res. Rec.**, “Decision Aids for Tunneling,” n1656, 6-13, 1999.
- Sinfield, J., Germaine, J., Hemond, H., **ASCE J. Geotech. Geoenviron. Eng.**, “Effects of Soils on Laser Induced Fluorescence of BTX Contaminated Pore Waters,” v125, n12, 1072–1077, 1999.
- Sinfield, J. V., Einstein, H. H., **ASCE J. Const. Eng. and Mgmt.**, “Tunnel Construction Costs for Tube Transportation Systems,” v124, n1, 48-57, 1998.
- Bloch, J., Johnson, B., Newbury, N., Germaine, J., Hemond, H., Sinfield, J., **Appl. Spec.**, “Field Test of a Novel Microlaser-Based Probe for In-Situ Fluorescence Sensing of Soil Contaminants,” v 52, n10, 1299-1304, 1998.
- Sinfield, J., Einstein, H., **Tunn. Undergr. Sp. Tech.**, “Evaluation of Tunneling Technology Using the ‘Decision Aids for Tunneling’,” v11, n4, 491-504, 1996.

**(vi) Publications in popular press** – multiple contributions in **Marketing Management, Advertising Age, Forbes.com, Financial Executive, BusinessWeek On-line, Strategy & Innovation**

**Diane L. Beaudoin, Ph.D.**

Director of Assessment  
Joint appointment College of Engineering Purdue University and  
Network for Computational Nanotechnology Purdue University  
MSEE, Room 308H  
501 Northwestern Avenue  
West Lafayette, IN 47907  
Tel: (765) 494-9246  
Email: [beaudoin@purdue.edu](mailto:beaudoin@purdue.edu)

**Professional Preparation:**

B.S., The University of Texas at Austin, Chemical Engineering, May 1990.  
Ph.D., North Carolina State University, Chemical Engineering, December, 1996.  
Scholar, Institute for the Development of Excellence in Assessment Leadership, 2007.

**Appointments:**

Purdue University, Director of Assessment, Network for Computational Nanotechnology and College of Engineering, April 2008 - present.  
Purdue University, Assessment Consultant, College of Engineering, April 2007 – April 2008.  
Purdue University, Assessment Consultant, School of Chemical Engineering, March 2006 – April 2007.  
Arizona State University, Lecturer, Department of Chemical, Bio and Materials Engineering, January 1996 – May 1999.

**Publications:**

Madhavan, K. P. C., Beaudoin, D., Shivarajapura, S. and Klimeck, G., “nanoHUB.org: Cyber-Environment for Modeling and Simulation in Nanotechnology Serving Over 110,000 Users,” submitted to IEEE Nano.

Beaudoin, D. L., Davies, D., Bryers, J. D., Cunningham, A. B. and Peretti, S. W., “Mobilization of a Broad Host Range Plasmid from *Pseudomonas putida* to an Established Biofilm of *Bacillus azotoformans* Part I: Experiments”, Biotechnology and Bioengineering, Vol. 57, pp. 272-279, 1998.

Beaudoin, D. L., Bryers, J. D., Cunningham, A. B. and Peretti, S. W., “Mobilization of a Broad Host Range Plasmid from *Pseudomonas putida* to an Established Biofilm of *Bacillus azotoformans* Part I: Modeling”, Biotechnology and Bioengineering, Vol. 57,

pp. 280-286, 1998.

Beaudoin, D. L. and Ollis, D. F., "A Product and Process Engineering Laboratory for Freshmen", Journal of Engineering Education, Vol. 84, pp. 279-284, 1995.

**Invited Workshops:**

"Really Engaging Your Faculty and Industrial Advisory Boards," 3 hour workshop, ABET Symposium, Las Vegas, April 15, 2010.

"Coordinating and Planning a Multi-Program Accreditation Visit," 90 minute workshop, ABET Symposium, Las Vegas, April 16, 2010.

**Synergistic activities:**

Assessing the use and impact of nanoHUB technologies used by the Network for Computational Nanotechnology (NCN).

Student learning outcomes assessment for undergraduate engineering education.

Accreditation of undergraduate engineering programs.



## CURRICULUM VITAE

**James D. Jones**

**ACADEMIC RANK**     Associate Professor of Mechanical Engineering

### EDUCATION

B.S.M.E., Tennessee Technological University, Cookeville, TN, 1981  
M.S.M.E., Virginia Polytechnic Institute and State University, Blacksburg, VA, 1982  
Ph.D., M.E., Virginia Polytechnic Institute and State University, Blacksburg, VA, 1987

### PROFESSIONAL REGISTRATION

Engineer in Training (EIT) Exam, No. 7234, Tennessee, June 30, 1981

Board Certified Member of the Institute of Noise Control Engineering (INCE). INCE.Bd.Cert. (1992), No. 92002.

### WORK EXPERIENCE

1998-present	Associate Head, Purdue University, School of Mechanical Engineering, West Lafayette, Indiana
1991-present	Associate Professor, Purdue University, School of Mechanical Engineering, West Lafayette, Indiana
1987-1991	Assistant Professor, Purdue University, School of Mechanical Engineering, West Lafayette, Indiana
1983-1987	Instructor, Virginia Polytechnic Institute and State University, Mechanical Engineering Department, Blacksburg, Virginia
1982-1983	Research Associate, NASA Langley Research Center, Acoustics and Noise Reduction Division, Hampton, Virginia
1981-1982	Research Assistant, Virginia Polytechnic Institute and State University, Mechanical Engineering Department, Blacksburg, Virginia
1980 (summer)	Engineering Aide, Oak Ridge National Laboratory, Metals and Ceramics Division, Oak Ridge, Tennessee

### MEMBERSHIP IN PROFESSIONAL AND HONOR SOCIETIES

American Society for Engineering Education  
American Society of Mechanical Engineers  
Order of the Engineer  
Kappa Mu Epsilon, National Mathematics Honorary  
Pi Tau Sigma, National Mechanical Engineering Honorary  
Tau Beta Pi, National Engineering Honorary

### PROFESSIONAL ACTIVITIES

Big 10+ Associate Head's Meeting, May 2001-present (annual meeting).

Best Assessment Practices Symposium, Rose-Hulman Institute of Technology, February 26-29, 2006.

ABET Faculty Workshop on Assessment, Baltimore, MD, April 8, 2006.

Member of "Mechanical/Aerospace Engineering" Evaluation Panel, National Science Foundation's Graduate Research Fellowship Program, Washington, D.C., February 7-10, 2001.

Member of "Engineering D" Evaluation Panel, National Science Foundation's Graduate Research Fellowship Program, Washington, D.C., February 12-14, 1998.

Member of "Engineering" Evaluation Panel, National Research Council's Postdoctoral, Resident and Cooperative Research Associateship Program, Washington, D.C., February 27-28, 1997.

Member of "Engineering A" Evaluation Panel, National Science Foundation's Minority Graduate Fellowship Program, Washington, D.C., February 12-13, 1997.

Program Chair (1996-1998) and Chair Elect (1998-2000), Engineering Acoustics and Vibrations (EAV) Division, American Society for Engineering Education (ASEE), 1996-2000.

Co-chairman, Helen Plants Award Committee, Educational Research Methods (ERM) Division, American Society for Engineering Education (ASEE), 1996-1998.

Faculty Advisor, Purdue Student Engineering Foundation (PSEF), 1996-1997.

Advisor, Faculty Classroom Climate Workshop, Women in Engineering Program (WIEP), 1996-1997.

Member of "Engineering" Evaluation Panel, National Research Council's Postdoctoral, Resident and Cooperative Research Associateship Program, Washington, D.C., February 26-27, 1996.

Session Chairman, 1995 Illinois/Indiana ASEE Sectional Conference, Purdue University, West Lafayette, IN, March 16-18, 1995.

Member of "Engineering" Evaluation Panel, National Research Council's Postdoctoral, Resident and Cooperative Research Associateship Program, Washington, D.C., February 23-24, 1995.

Associate Editor for Book Reviews, *Noise Control Engineering Journal*, January 1994 -1997.

Associate Editor, *Journal of Intelligent Materials Systems and Structures*, January 1994 -1997.

Member of "Engineering" Evaluation Panel, National Research Council's Postdoctoral, Resident, and Cooperative Research Associateship Program, Washington, D.C., February 24-25, 1994.

Advisor, Purdue University Deaf and Hard of Hearing Program, Freshman Engineering (FRE), 1994 -1997.

Faculty Advisor, Purdue University Student Chapter of the American Society for Engineering Education (ASEE), 1993-Present.

Co-Chairman of National Science Foundation's Research Experiences for Undergraduates Review Panel, Balston, VA, November 16, 1993.

Member of "Engineering" Evaluation Panel, National Research Council's Postdoctoral, Resident and Cooperative Research Associateship Program, Washington, D.C., February 25-26, 1993.

Chairman of "Engineering D" Evaluation Panel, National Science Foundation's Graduate Fellowship Program, Engineering A, Washington, D.C., February 10-13, 1993.

Session Chairman, 113th ASME Winter Annual Meeting, Anaheim, CA, November 8-13, 1992.

Member of Organizing Committee, Eleventh International Compressor Engineering Conference, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, July 14-17, 1992.

Session Chairman, Eleventh International Compressor Engineering Conference, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, July 14-17, 1992.

Session Chairman, 1992 ASEE Annual Conference, University of Toledo, Toledo, OH, June 21-25, 1992.

Member of "Physical Sciences" Evaluation Panel, National Research Council's Postdoctoral, Resident and Cooperative Research Associateship Program, Washington, D.C., February 27-28, 1992.

Member of "Engineering D" Evaluation Panel, National Science Foundation's Graduate Fellowship Program, Washington, D.C., February 13-16, 1992.

Session Chairman, Conference on Recent Advances in Active Control of Sound and Vibration, Virginia Polytechnic Institute and State University, Blacksburg, VA, April 15-17, 1991.

Session Chairman, International Symposium on Active Control of Sound and Vibration, Tokyo, Japan, April 9-11, 1991.

Member of "Engineering A" Evaluation Panel, National Science Foundation's Graduate Fellowship Program, Washington, D.C., February 5-7, 1991.

Session Chairman, Tenth International Compressor Engineering Conference, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, July 17-20, 1990.

Session Chairman, Seventh International Modal Analysis Conference, Las Vegas, NV, January 30-February 2, 1989.

Member of Organizing Committee, Noise-Con 88, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, June 20-22, 1988.

Reviewer for the National Science Foundation, the *AIAA Journal*, the *Journal of Aircraft*, the *Journal of Sound and Vibration*, the *ASME Transactions Journal*, the *Journal of Vibration and Acoustics*, the *Journal of Intelligent Material Systems and Structures*, the *International Journal of Analytical and Experimental Modal Analysis*, the American Society for Engineering Education Conference, the Frontiers in Education Conference.

## **PROFESSIONAL HONORS AND AWARDS**

Fellow, Purdue University Teaching Academy, In recognition of outstanding contributions to the teaching and learning environment of Purdue University, September 27, 1999.

Murphy (Purdue University) Teaching Award, Purdue University, 1999

Solberg (Mechanical Engineering) Teaching Award, School of Mechanical Engineering, Purdue University 1998.

1997 Helen Plants Award for the most outstanding "nontraditional session" at the 1997 Frontiers in Education Conference, ASEE Educational Research and Methods Division and the IEEE Education Society, November 1998.

Frederick L. Hovde Outstanding Faculty Fellow Award, April 1998.

Selected as an Honorary Member of Phi Eta Sigma, Freshman Engineering Honorary, November 1998.

The 1997 Curriculum Innovation Award, Honorable Mention, American Society of Mechanical Engineers, November 1997.

Faculty Summer Fellow, Boeing Helicopter Division, Philadelphia, Pennsylvania, June 16-August 8, 1997.

*Who's Who in Science and Engineering*, 4th Edition, Marquis Who's Who, February 1997.

Citation for Teaching Excellence, School of Mechanical Engineering, Purdue University, April 1996.

The Ruth and Joel Spira Award for "outstanding contributions to the School of Mechanical Engineering and its students," School of Mechanical Engineering, Purdue University, 1996.

DOW Outstanding New Faculty Award, American Society for Engineering Education (ASEE), IL/IN Section, 1995.

Dean Marion B. Scott Exemplary Character Award for Providing Inspiration and Exemplary Guidance to Students in Engineering, Tau Beta Pi, Indiana Alpha Chapter, Purdue University, 1995.

Class of 1941 Teaching Innovation Grant, Purdue University, May 1994.

Best Paper Award for the 1990 Publication Year, *The International Journal of Analytical and Experimental Modal Analysis*, Unanimous Selection by the Honors Committee of the Society of Experimental Mechanics, February 1992.

*American Men and Women of Science*, Eighteenth Edition, American Men and Women of Science, January 1992.

*Community Leaders of America*, Fourteenth Edition, The American Biographical Institute Inc., 1990.

Outstanding Young Alumnus Award, Tennessee Technological University, 1989.

Presidential Young Investigator (NSF-PYI) Award, National Science Foundation, 1989.

*The International Directory of Distinguished Leadership*, Second Edition, The American Biographical Institute Inc., 1989.

*International Who's Who of Intellectuals*, Eighth Edition, International Biographical Centre, 1988.

Certificate of Teaching Excellence (one of only four in the College of Engineering), Virginia Polytechnic Institute and State University, 1986.

Top Ten Percent in Teaching Effectiveness, Virginia Polytechnic Institute and State University, 1985 and 1986.

Awarded Noise Control Scholarship for Contributions in the Area of Noise Control, North Carolina Regional Chapter of the Acoustical Society of America, 1986.

Selected as Outstanding Young Man of America for Professional Achievements, Outstanding Young Men of America, 1986.

## **ACADEMIC ACTIVITIES**

### **A. Teaching Experience**

*Purdue University (1987-present)*

ME 263 Introduction to Design (Lecture & Lab)

ME 270 Basic Mechanics I

ME 274 Basic Mechanics II

ME 283, 383, 483 Engineering Projects in Community Service (EPICS)  
 ME 385 Modeling and Instrumentation of Physical Systems (Lab)  
 ME 413 Noise Control  
 ME 463 Engineering Design  
 ME 464 Vibration Measurement and Control  
 ME 513 Engineering Acoustics

*Virginia Polytechnic Institute and State University (1983-1987)*

ME 3031 Thermodynamics  
 ME 3110 Engineering Thermodynamics  
 ME 3120 Elements of Thermodynamics  
 ME 3130 Fundamentals of Thermodynamics

**B. Research Interests**

Educational Research Methods, Cooperative Learning  
 Acoustics, Noise Control, Vibrations  
 Active Noise, Vibration, and Motion Control  
 Smart Materials, Intelligent Structures  
 Machinery Noise, Shell Dynamics, Structural/Acoustic Interactions

**C. Departmental Service**

Curriculum Committee, 1995-present (Chairman, 1998 – present).

Communications Committee, 1994-1998, (Chairman, 1995-1998).

Awards Committee, 1998 – present (Chairman, 1998 – present)

Graduate Committee, 1990-1993.

Mathematics Subcommittee, 1990-91.

Graduate Fellowship Subcommittee, 1991-93 (Chairman, 1992-93).

Chairman, Midwest Mechanics Seminar Series, 1990-1992.

Member, ME Task Force on "Secretarial Services," June 1989.

Member, ME Ad Hoc Committee on "Instructor and Course Evaluations," 1989.

Chairman, Mechanics Area Seminar Series, 1987-1989.

**D. University Service**

Engineer of 2020 Committee, 2004 – present (Co-Chair, 2004 – 2005, Chair 2005-2008).

Engineering Education Committee, 1997 - present.

Freshman Engineering Curriculum Committee, 1998 – present (Chair 2002-present)..

GE CAPS Committee, 1999 - 2002.

Grade Appeals Committee, Schools of Engineering, 1994-1997 (Chairman, 1994-95).

**RESEARCH GRANT AND CONTRACT AWARDS**

National Science Foundation – Instrumentation and Laboratory Improvement (ILI) Program, J.D. Jones, L.H. Jamieson, P. Davies, E.J. Coyle, “Modern Manufacturing Capability for the Engineering Projects in Community Service (EPICS) Program, 8/1/98 – 7/31/99, \$55,000.

Learn and Serve America: Higher Education – Innovative Campus-Based Programs, L.H. Jamieson, E.J. Coyle, P. Davies, V.W. Goldschmidt, J.D. Jones, D.D. Knudsen, “EPICS: Engineering Projects in Community Service,” 9/1/98 – 8/31/99, \$148,762.

Learn and Serve America: Higher Education – Innovative Campus-Based Programs, L.H. Jamieson, E.J. Coyle, P. Davies, J.D. Jones, D.D. Knudsen, J.W. Asher, “EPICS: Engineering Projects in Community Service,” 9/1/97 – 8/31/98, \$119,661.

Lennox Industries, Inc., V.W. Goldschmidt. and J.D. Jones, "Noise Control on a Gas Pulse Furnace," 1/1/97 - 12/31/97, \$40,000.

Lennox Industries, Inc., V.W. Goldschmidt. and J.D. Jones, "Noise Control on a Gas Pulse Furnace," 1/1/96 - 12/31/96, \$38,000.

Lennox Industries, Inc., V.W. Goldschmidt. and J.D. Jones, "Noise Control on a Gas Pulse Furnace," 1/1/95 - 12/31/95, \$34,362.

Sloan Foundation, J.Z. Daniels, E.M. Wadsworth, J.K. Reklaitis, M.O. Chiscon and J.D. Jones, "Increasing the Proportion of Women Engineering and Science Graduates," \$279,977, 11/1/94 - 10/31/97.

National Science Foundation - Presidential Young Investigator Award (5th Year Matching Funds), J.D. Jones, "Active Noise, Vibration and Motion Control," \$37,500, 10/1/94 - 9/30/95.

G.E. Foundation , J.D. Jones, Kent Hamaker, Bill Oakes, Ed Berger, Linda Blevins, Yoshimi Takeuchi and Ali Shahin, " The Purdue Student Chapter of ASEE: A Model Program for Development of ASEE Student Chapters," \$20,000, 8/1/94 - 7/31/95.

United Technologies Carrier, V.W. Goldschmidt and J.D. Jones, "Performance of HVAC Systems Unique to the European Market," \$67,387, 6/1/94 - 5/31/95.

Class of 1941 Teaching Innovation Grant, J.D. Jones, "Adapting Cooperative Learning Methods in Large Lecture-Style Basic Mechanics Courses," \$11,915, 6/1/94 - 5/30/95.

Lennox Industries, Inc., V.W. Goldschmidt and J.D. Jones, "Noise Control on a Pulse Furnace," \$28,000, 1/1/94 - 12/31/94.

National Science Foundation - Presidential Young Investigator Award (5th Year Base Award, 4th Year Matching Funds), J.D. Jones, "Active Noise, Vibration and Motion Control," \$62,500, 10/1/93 - 9/30/94.

Purdue Research Foundation, J.D. Jones, "Active Vibration Control of Large Flexible Structures Using Shape Memory Alloy Actuators," \$19,800, 6/1/93 - 5/31/95.

National Science Foundation - Research Experiences for Undergraduates, J.D. Jones, "Undergraduate Research Project in Active Structural Control of a Building Model," \$7,900, 5/1/93 - 8/31/93.

American Association for the Advancement of Science, J.D. Jones, "Real-Time Speech-to-Text Translation Technology: A New Communication Tool for Hearing Impaired Students," \$5,000, 6/1/93 - 12/31/93.

United Technologies Carrier, V.W. Goldschmidt and J.D. Jones, "Performance of HVAC Systems Unique to the European Market," \$79,673, 6/1/93 - 5/30/94.

National Science Foundation, C.M. Krousgrill, A.K. Bajaj and J.D. Jones, "A Creative Approach to Teaching Undergraduate Mechanics Emphasizing Development of Instructional Tools to Enhance Spatial Visualization and Inductive Learning," 5/1/93 - 4/31/94, \$79,999.

General Electric Foundation, C.M. Krousgrill, J.D. Jones and A.K. Bajaj, "A Creative Approach to Teaching Undergraduate Mechanics Emphasizing Development of Instructional Tools to Enhance Spatial Visualization and Inductive Learning," 1/1/93 - 12/31/93, \$40,000.

National Science Foundation - Presidential Young Investigator Award (4th Year Base Award, 3rd Year Matching Funds), J.D. Jones, "Active Noise, Vibration, and Motion Control," 10/1/92 - 9/30/93, \$62,500.

National Science Foundation - Facilitation Award for Handicapped Scientists and Engineers, J.D. Jones and M. Hood, "Real-Time Speech-To-Text Transcription System," 8/1/92 - 1/31/93, \$7900.

National Science Foundation, J.D. Jones, "Research Experiences for Undergraduate Students in Vibrations and Acoustics," 5/1/92 - 8/31/92, \$11,500.

Lennox Industries, Inc., V.W. Goldschmidt and J.D. Jones, "Noise Control on a Pulse Gas Furnace," 1/1/92 - 6/30/92, \$28,993.

United Technologies Carrier, V.W. Goldschmidt and J.D. Jones, "Performance of HVAC Systems Unique to the European Market," Amendment No. 1 to Original Contract, 1/1/92 - 5/31/93, \$28,840.

AT&T Foundation, J.D. Jones, "Development of an Undergraduate Engineering Mechanics Laboratory," 11/1/91 - 10/31/92, \$20,000.

National Science Foundation - Presidential Young Investigator Award (3rd Year Base Award, 2nd Year Matching Funds), J.D. Jones, "Active Noise, Vibration, and Motion Control," 10/1/91 - 9/30/92, \$62,500.

National Science Foundation, R.J. Bernhard, A.K. Bajaj, J.S. Bolton, P. Davies and J.D. Jones, "Transportation Vehicle Noise and Vibration Instrumentation," 8/1/91 - 1/31/93, \$130,243.

Harrison Radiator Division, General Motors Corporation, J.D. Jones, "Noise Source Identification of Automotive Scroll Air Conditioning Compressors," 8/1/91 - 12/15/91, \$5,000.

United Technologies Carrier, V.W. Goldschmidt and J.D. Jones, "Performance of HVAC Systems Unique to the European Market," 5/15/91 - 5/14/93, \$128,024.

Lennox Industries, Inc., J.D. Jones and V.W. Goldschmidt, "Noise Control on a Pulse Gas Furnace," 10/1/90 - 12/31/91, \$70,504.

National Science Foundation - Presidential Young Investigator Award (2nd Year Base Award, 1st Year Matching Funds), J.D. Jones, "Active Noise, Vibration, and Motion Control," 10/1/90 - 9/30/91, \$62,000.

Showalter Trust, P.H. Meckl and J.D. Jones, "Fundamental Feasibility Study of a Novel Hand Prosthesis Design with Sensory Feedback," 9/1/90 - 8/31/91, \$40,000.

United Technologies Carrier, W. Soedel and J.D. Jones, "Measurements of Rotor Chatter in Helical Screw Compressors and Development of Fundamental Analytical Models of Chatter Considering Manufacturing Tolerances and Other Parameters," 8/1/90 - 12/31/92, \$226,563.

ASPERA, J.D. Jones, "Noise Source Identification and Evaluation for Small Rotary, Rolling Piston Compressors," 3/1/90 - 8/31/91, \$91,671.

Department of Education - Innovation Grant, J.D. Jones and P.H. Meckl, "A Fundamental Feasibility Study of a Novel Hand Prosthesis Design," 1/1/90 - 12/31/90, \$49,986.

National Science Foundation - Presidential Young Investigator Award (1st Year Base Award), J.D. Jones, "Active Noise, Vibration, and Motion Control," 10/1/89 - 9/30/90, \$25,000.

Lennox Industries, Inc., J.D. Jones and V.W. Goldschmidt, "Noise Control on a Pulse Gas Furnace: Addressing in Particular Active Noise Control," 1/1/89 - 9/30/90, \$137,477.

United Technologies Sikorsky, J.D. Jones, "Fundamental Studies on Acoustic Noise Reduction by Active Control of Structural Vibrations," 1/1/89 - 12/31/89, \$50,000.

National Science Foundation - Research Initiation Grant, J.D. Jones, "A Study of the Optimal Number and Location of Control Forces for Active Vibration Control of Contained Acoustic Fields," 9/1/88 - 2/28/91, \$69,019.

Purdue Research Foundation - David Ross Grant, J.D. Jones, "Development of a Systematic Procedure for Identifying Optimal Number and Location of Control Forces for Active Vibration Control of Contained Acoustic Fields," 9/1/88 - 8/31/90, \$15,000.

United Technologies Carrier, W. Soedel and J.D. Jones, "Sound and Vibration Identification Studies on Helical Screw Compressors with Special Attention to Gas Pulsations," 8/1/88 - 7/31/90, \$166,559.

Exxon - New Faculty Assistance Grant, J.D. Jones, "Research Initiation in Advanced Materials for Active Noise, Vibration and Motion Control," 7/1/88 - 6/30/89, \$10,000.

ASPERA/Whirlpool, J.F. Hamilton and J.D. Jones, "Evaluation and Comparison of Noise Generation Mechanisms and Transmission Paths for Reciprocating Piston and Rotary, Rolling Piston Compressors," 9/1/88 - 2/28/90, \$97,997.

## **GRADUATE STUDENT SUPERVISION**

### **A. Theses Directed**

S. Hommema, M.S.M.E., (with V.W.Goldschmidt), "Thermal and Acoustic Analysis of a Gas Pulse Furnace," December 1997.

K. Temple, Ph.D. (with V.W. Goldschmidt), "Thermal and Internal Acoustic Model of a Helmholtz Type Pulse Combustion Furnace," August 1996.

F.M. Pan, Ph.D., "A Study of Piezoelectric Transducers in Application to Active Control of Reciprocating Compressor Noise," December 1995.

A.R. Shahin, Ph.D. (with P.H. Meckl), "Modeling and Control of Shape Memory Alloy Actuators to Reduce Vibration in a Building Model," December 1995.

E. Navarro de Andrade, M.S.M.E. (with V.W. Goldschmidt), "Investigation of Rotary Compressor Oil Carry-Over," December 1995.

J. Tarplee, M.S.M.E. (with V.W. Goldschmidt), "Study of Refrigerant Charge Effects in a Prototype Multiplex Heat Pump," August 1994.

V.R. Sonti, Ph.D., "Analysis of Flat and Curved Piezo-Actuator for Vibration Control of Cylindrical Shells," May 1994.

J.D. St. Onge, M.S.M.E. (with V.W. Goldschmidt), "Evaluation, Prototyping and Modeling of Multiplex Heat Pump Systems," August 1993.

A.R. Masters, M.S.M.E., "Design Guidelines for Embedded Piezo-Actuators in a Layered Composite Structure," May 1993.

S.J. Kim, Ph.D., "A Study of Piezoelectric Actuators for Active Noise and Vibration Control," December 1992.



J.E. Huff, Jr., M.S.E., "Development of a Measurement Technique to Evaluate Rotor Chatter in Twin-Screw Compressors," December 1992.

W.M. Holliday, M.S.M.E. (with V.W. Goldschmidt), "Active Noise Control in Gas Pulse Furnaces," Started: May 1992.

M.A. Thrasher, M.S.M.E. (with P.H. Meckl), "A Fundamental Characterization of Shape Memory Alloys for Use in Hand Prostheses," September 1991.

J.M. Frabotta, M.S.M.E., "Investigation of Noise Generation Mechanisms and Transmission Paths of Fractional Horsepower Reciprocating Piston and Rolling Piston Compressors," August 1991.

M.A. Zen Ruffinen, M.S.M.E. (with V.W. Goldschmidt), "Noise Source Identification on a Pulse Furnace with Potential Methods of Noise Control," May 1991.

R.W. Andrews, M.S.M.E., "Noise Source Identification in Twin-Screw Compressors," August 1990.

J.N. Dubrouillet, M.S.M.E. (with V.W. Goldschmidt), "Noise Control on a Pulse Furnace," May 1990.

D.S. Mandic, M.S.M.E., "Adaptive Active Control of Enclosed Sound Fields in Elastic Cylinders Via Vibrational Inputs," October 1989.

## **POSTDOCTORAL SUPERVISION**

H.R. Hall (with R.J. Bernhard), "Active Noise and Vibration Control," November 1988 - May 1990.

## **CONTINUING EDUCATION**

Lecturer, Conversations on Creating a Different Classroom Climate Workshop, 1997 Frontiers in Education Conference, Pittsburgh, PA, November 5-8, 1997. (Selected to receive the Helen Plants Award for the most outstanding "nontraditional session" at the 1997 Frontiers in Education Conference, November 1998).

Short Course Co-Organizer, "Compressor Design I," Thirteenth International Compressor Engineering Conference, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN July 21-22, 1996

Lecturer, Cooperative Learning Workshop, "Cooperative Learning in Large Enrollment Classes: Pipe Dream or Possibility?," Teachers on Teaching Seminar Series, Center for Instructional Services (CIS), Purdue University, March 21, 1996.

Lecturer, (with J.S. Bolton and P. Davies), Two-Day Short Course on "Compressor Noise Control," Twelfth International Compressor Engineering Conference, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, July 17-18, 1994.

Lecturer (with R.J. Bernhard and R. Shoureshi), Four-Day Short Course on "Active Noise and Vibration Control," Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, May 20-23, 1991.

Lecturer (with R.J. Bernhard and R. Shoureshi), Four-Day Short Course on "Active Noise and Vibration Control," Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, May 7-10, 1990.

Lecturer (with S.J. Bolton), Three-Day Short Course on "Basic Acoustics and Noise Control," Tenneco Automotive Training and Development Center, Ann Arbor, MI, November 6-8, 1989.

Lecturer (with S.J. Bolton), Three-Day Short Course on "Basic Acoustics and Noise Control," U.S. Army Belvoir Research, Development and Education Center, Fort Belvoir, VA, October 2-4, 1989.

Lecturer (with R.J. Bernhard and R. Shoureshi), Three-Day Short Course on "Active Noise and Vibration Control," Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, July 31-August 2, 1989.

Assistant Lecturer (with W. Soedel), Three-Day Short Course on "Shock and Vibration Behavior of Shells and Related Structures," Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, July 10-12, 1989.

## CONSULTING

Mann Law Firm, Technical Consultant for "Al Harper and Harold Carie vs. PSI Energy, Inc.," 1997-1998.

Blakely Corporation, "Noise Assessment of a Carpet Shredder," December 1993.

United Technologies Research Center, "Analysis and Control of Compressor Noise Radiation," December 1993.

GE Motors, "Vibration Testing of a 5 hp DeVilbiss Air Compressor," July 1993.

Active Noise and Vibration Technologies, "On-Going Consulting on Active Noise and Vibration Control," February 1992-June 1994.

Tippecanoe Manufacturing Company (TMC), "Vibration Mount Testing," January 1992.

First United Methodist Church of Decatur-Indiana, "Acoustical Evaluation of the Church Sanctuary," Decatur, IN, October 1991.

Johnson Controls, "Noise and Vibration on Automotive Seating Systems," Plymouth, MI, July 1991.

Shuttleworth Inc., "Vibration Testing on Shuttleworth Conveyors," Huntington, IN, November 1990.

Artesian Industries, "Evaluation of Noise Control Strategies on an Artesian Mac-Pac 3000 Outdoor Module," Lafayette, IN, February-June 1990.

Artesian Industries, "Noise Source Identification and Control on an Artesian Mac-Pac 3000 Outdoor Module," Lafayette, IN, January 1990.

Elgin Sweeper Company, "Noise Source Identification and Control Strategies for the Elgin Crosswind Street Sweeper," Elgin, IL, July 1989.

Artesian Industries, "Noise Identification and Control on an Artesian Mac-Pac 3000 Display Unit," Lafayette, IN, December 1988.

Douglas Aircraft Company, McDonnell Douglas Corporation, "Experiments on Reduction of Aircraft Cabin Noise by Active Control of Fuselage Vibration," Long Beach, CA, May 1988.

## PUBLICATIONS

### A. Refereed Journal Articles

Oakes, W.C., McComb, S.A., Mulkay, E.L., Berger, E.J., Blevins, L., Stamber, K., and Jones, J.D., "Equipping Undergraduates for the Graduate School Process," *Journal of Engineering Education*, Vol. 88, No. 3, pp. 353-360, July 1999.

Pan, F., and Jones, J.D., "Gas Path Sound Transmission in Spherically-Shaped Reciprocating Compressors: Theory and Experiment," *Journal of Vibration and Acoustics*, Vol. 121, No. 1, pp. 8-17, January 1999.

Berger, E.J., Diefes, H.A., K.H. Hamaker, Jones, J.D., McComb, S.A., Mulkay, E.L., and Oakes, W.C., "ASEE Student Chapters: Perspectives on and Preparation for Higher Education," *Journal of Engineering Education*, Vol. 87, No. 3, pp. 231-234, July 1998.

Hood, M.S., Wood, T.L., and Jones, J.D., "Classroom Captioning for Deaf and Hard of Hearing Students," *Journal of Engineering Education*, Vol. 86, No. 3, pp. 273-278, July 1997.

Shahin, A.R., Meckl, P.H., and Jones, J.D., "Modeling of SMA Tendons for Active Control of Structures," *Journal of Intelligent Material Systems and Structures*, Vol. 8, No. 1, pp. 51-70, January 1997.

Kim, S.J., and Jones, J.D., "Effects of Piezo-Actuator Delamination on the Performance of Active Noise and Vibration Control Systems," *Journal of Intelligent Material Systems and Structures*, Vol. 7, No. 6, pp. 668-676, November 1996.

Sonti, V.R., and Jones, J.D., "Curved Piezoactuator Model for Active Vibration Control of Cylindrical Shells", *AIAA Journal* , Vol. 34, No. 5, May 1996.

Sonti, V.R., and Jones, J.D., "Dynamic Effects of Piezo-actuators on the Cylindrical Shell Response", *AIAA Journal*, Vol. 34, No. 4, April 1996.

Sonti, V.R., Kim, S.J., and Jones, J.D., "Equivalent Forces and Wavenumber Spectra of Shaped Piezoelectric Actuators," *Journal of Sound and Vibration*, Vol. 187, No. 1, pp 111-131, October 1995.

Ball, J.B., and Jones, J.D., "A Comparison of Shaped Piezoelectric Actuators for Divergence Control," *Journal of Intelligent Material Systems and Structures*, Vol. 6, No. 5, pp. 598-609, September 1995.

Kim, S.J., and Jones, J.D., "Quasi-Static Control of Natural Frequencies of Composite Beams Using Embedded Piezoelectric Actuators," *Smart Materials and Structures Journal*, Vol. 4, pp. 106-112, 1995.

Kim, S.J., and Jones, J.D., "Influence of Piezo-Actuator Thickness on the Active Vibration Control of a Cantilever Beam," *Journal of Intelligent Material Systems and Structures*, Vol. 6, No. 5, pp. 610-623, September 1995.

Thrasher, M.A., Shahin, A.R., Meckl, P.H., and Jones, J.D., "Thermal Cycling of Shape Memory Alloy Wires Using Semiconductor Heat Pump Modules," *Smart Materials and Structures Journal*, Vol. 3, pp. 226-234, 1994.

Shahin, A.R., Thrasher, M.A., Meckl, P.H., and Jones, J.D., "Enhanced Cooling of Shape Memory Alloy Wires Using Semiconductor Heat Pump Modules," *Journal of Intelligent Material Systems and Structures*, Vol. 5, No. 1, pp. 95-104, January 1994.

Kim, S.J., and Jones, J.D., "Optimal Design of Piezo-Actuators for Active Noise and Vibration Control," *AIAA Journal*, Vol. 29, No. 12, pp. 2047-2053, December 1991. (Also, presented as AIAA Paper 90-3925 at the AIAA 13th Aeroacoustics Conference, Tallahassee, FL, October 22-24, 1990.)

Mandic, D.S., and Jones, J.D., "Adaptive Active Control of Sound Fields in Elastic Cylinders via Vibrational Inputs," *AIAA Journal*, Vol. 29, No. 10, pp. 1552-1561, October 1991. (Also presented as AIAA Paper 89-1075 at the 12th AIAA Aeroacoustics Conference, San Antonio, TX, April 10-12, 1989.)

Simpson, M.A., Luong, T.M., Fuller, C.R., and Jones, J.D., "Full-Scale Demonstration of Cabin Noise Reduction Using Active Vibration Control," *Journal of Aircraft*, Vol. 28, No. 3, pp. 208-215, March 1991. (Also presented as AIAA Paper 89-1074 at the 12th AIAA Aeroacoustics Conference, San Antonio, TX, April 10-12, 1989.)

Jones, J.D., and Fuller, C.R., "Active Control of Structurally-Coupled Sound Fields in Elastic Cylinders," *International Journal of Analytical and Experimental Modal Analysis*, Vol. 5, No. 3, pp. 123-140, July 1990. (Also presented as an invited paper at the 7th International Modal Analysis Conference, Las Vegas, NV, January 30-February 2, 1989).

Jones, J.D., and Fuller, C.R., "Reduction of Sound Fields in Flexible Cylinders by Active Vibration Control," *International Journal of Analytical and Experimental Modal Analysis*, Vol. 4, No. 2, pp. 45-50, April 1989. (Also presented as an invited paper at the 6th International Modal Analysis Conference, Orlando, FL, February 1-4, 1988.)

Jones, J.D., and Fuller, C.R., "Active Control of Sound Fields in Elastic Cylinders by Multi-Control Forces," *AIAA Journal*, Vol. 27, No. 7, pp. 845-852, July 1989. (Also presented as AIAA Paper 87-2707, AIAA 11th Aeroacoustics Conference, Palo Alto, CA, October 17-21, 1987.)

Jones, J.D., and Fuller, C.R., "Effects of an Internal Floor on Low-Frequency Sound Transmission into Aircraft Cabins-- An Experimental Investigation," *Journal of Aircraft*, Vol. 25, No. 10, pp. 882-889, October 1989. (Also presented as AIAA Paper 86-1939, AIAA 10th Aeroacoustics Conference, Seattle, WA, July 9-11, 1986.)

Fuller, C.R., and Jones, J.D., "Experiments on Reduction of Propeller Induced Interior Noise by Active Control of Cylinder Vibration," *Journal of Sound and Vibration*, Vol. 112, No. 2, pp. 389-395, 1987 (Letter to the Editor). (Also presented as Paper No. QQ7, 110th Meeting of the Acoustical Society of America, Nashville, TN, November 4-8, 1985.)

Jones, J.D., and Fuller, C.R., "Noise Control Characteristics of Synchrophasing, Part 2: Experimental Investigations," *AIAA Journal*, Vol. 24, No. 8, pp. 1271-1276, August 1986. (Also presented as AIAA Paper 84-2370, AIAA/NASA 9th Aeroacoustics Conference, Williamsburg, VA, October 15-17, 1984.)

Mahan, J.R., and Jones, J.D., "Recovery of Burner Acoustic Source Structure from Far-Field Sound Spectra," *AIAA Journal*, Vol. 22, No. 5, pp. 631-637, May 1984. (Also presented as AIAA Paper 83-0763, AIAA 8th Aeroacoustics Conference, Atlanta, GA, April 11-13, 1983.)

Mahan, J.R., Cline, J.G., and Jones, J.D., "A Temperature Correlation for the Radiation Resistance of a Thick-Walled Circular Duct Exhausting a Hot Gas," *Journal of the Acoustical Society of America*, Vol. 75, No. 1, pp. 63-71, January 1984. (Also presented as Paper No. M4, 106th Meeting of the Acoustical Society of America, San Diego, CA, November 8-11, 1983.)

Mahan, J.R., Jones, J.D., Blevins, L.R., and Cline, J.G., "Mesure Indirecte du Spectre de Rendement Thermo-Acoustique d'un Brûleur Turbulent Long," (in French) *La Recherche A'erospatiale*, No. 4, pp. 311-321, July-August 1983.

## B. Invited Papers

Kim, S.J., and Jones, J.D., "Design of Optimal Piezo-Actuators for Active Noise and Vibration Control," *Proceedings of the International Symposium on Active Control of Sound and Vibration*, pp. 125-136, Tokyo, Japan, April 9-11, 1991.

Sonti, V.R., Chang, P.S., Mandic, D.S., and Jones, J.D., "Active Control of Localized Power Flow into Flexible Structures Using Point Vibrational Inputs," *Proceedings of the International Congress on Recent Developments in Air & Structure Borne Sound and Vibration*, Vol. I, pp. 243-252, Auburn University, Auburn, AL, March 6-8, 1990.

Fuller, C.R., and Jones, J.D., "Influence of Sensor and Actuator Location on the Performance of Active Control Systems," ASME Paper No. 87-WA/NCA-9, presented at the ASME Winter Annual Meeting, Boston, MA, December 13-18, 1987.

Jones, J.D., and Fuller, C.R., "Active Control of Sound Fields by Vibrational Inputs," *Proceedings of Noise-Con 87*, pp. 413-418, Pennsylvania State University, State College, PA, June 8-10, 1987.

### C. Conference Papers

Jones, J.D., "Concept Maps: A Guide to Understanding the Global Curriculum," *30<sup>th</sup> ASEE/IEEE Frontiers in Education Conference Proceedings*, Session T2F-10, Paper 1424, Kansas City, Missouri., October 18-21, 2000.

Mulkay, E., McComb, S., Oakes, W., Jones, J.D., "Lessons Learned from Five Years of ASEE Student Chapters," 1998 ASEE National Conference Proceedings, Seattle, WA Session O555, Paper 1, June 21-25, 1998.

Temple, K.A., Hommema, S., Jones, J.D., and Goldschmidt, V.W., "Noise Source Identification in Thermal Systems Using Transient Spectral Analysis," SAE Paper 97NV214, to be presented at the 1997 SAE Noise and Vibration Conference, Traverse City, MI, May 20-22, 1997.

Oakes, W., Blevins, L., and Jones, J.D., "Equipping Undergraduates for the Graduate School Process," *1996 American Society for Engineering Education Conference Proceedings*, Session 1634, Paper No. 1, Washington, D.C., June 23-26, 1996.

Jones, J.D., and Brickner, D., "Implementation of Cooperative Learning in a Large-Enrollment Basic Mechanics Course," *1996 American Society for Engineering Education Conference Proceedings*, Session 2230, Paper No. 2, Washington, D.C., June 23-26, 1996.

Sonti, V.R., and Jones J.D., "Influence of Curved Piezo-Actuator Parameters on Lower-Order Shell Mode Coupling," *Proceedings of the The International Society for Optical Engineering*, SPIE Vol. 2192 (Mathematics and Control in Smart Structures), pp. 298-310, 1994 Smart Structures and Materials Conference, Orlando, FL, February 14-16, 1994.

Hamaker, K., Brazel, C., Banerjee, B., Bunker, B., Kaya, A., Takeuchi, Y., Oakes, B., Shahin, A., Wahl, T., and Jones, J.D., "ASEE Student Chapters: An Engineering Pipeline for Higher Education," *1993 Frontiers in Education Conference Proceedings*, p. 825, Washington, D.C., November 1993.

Huff, J.E. Jr., and Jones, J.D., "Development of a Measurement Technique to Evaluate Rotor Chatter in Twin-Screw Compressors," *Proceedings of Noise-Con 93*, pp. 565-570, Williamsburg, VA, May 1993.

Kim, S.J., Sonti, V.R., and Jones, J.D., "Equivalent Forces and Wavenumber Spectra of Shaped Piezoelectric Actuators," *Proceedings of the Second Conference on Recent Advances in Active Control of Sound and Vibration*, pp. 216-225, Virginia Polytechnic Institute and State University, Blacksburg, VA, April 1993.

Masters, A.R., and Jones, J.D., "Basic Design Guidelines for Embedded Piezo-Actuators in a Layered Composite Structure," *Proceedings of the SPIE Smart Structures and Intelligent Systems Conference*, pp. 329-340, Albuquerque, NM, February 1993.

Masters, A.R., Kim, S.J., and Jones, J.D., "Experimental Investigation into Active Control of Compressor Noise Radiation Using Piezoelectric Actuators," *Proceedings of Inter-Noise 92*, Vol. I, pp. 395-400, Toronto, Ontario, Canada, July 20-22, 1992.

Bernhard, R.J., Hall, H.R., and Jones, J.D., "Adaptive Passive Noise Control," *Proceedings of Inter-Noise 92*, Vol. I, pp. 427-430, Toronto, Ontario, Canada, July 20-22, 1992.

Masters, A.R., Kim, S.J., and Jones, J.D., "Active Control of Compressor Noise Radiation Using Piezoelectric Actuators," *Proceedings of the Eleventh International Compressor Engineering Conference*, Vol. I, pp. 325-330, Purdue University, West Lafayette, IN, July 15-17, 1992

Thrasher, M.A., Shahin, A.R., Meckl, P.H., Jones, J.D., "Thermal Cycling of Shape Memory Alloy Wires Using Semiconductor Heat Pump Modules," *Proceedings of the First European Conference on Smart Structures & Materials*, pp. 197-200, Glasgow, Scotland, May 12-14, 1992.

Kim, S.J., and Jones, J.D., "Semi-Active Control of a Composite Beam Using Embedded Piezoelectric Actuators," Proceedings of the 112th ASME Winter Annual Meeting, *Smart Structures and Materials*, Aerospace Division-Vol. 24, Applied Mechanics Division-Vol. 123, pp. 131-138, Atlanta, GA, December 1-6, 1991.

Kim, S.J., and Jones, J.D., "Vibration Characteristics of a Composite Beam with Semi-Active Piezo-Actuators," Proceedings of the ADPA/AIAA/ASME/SPIE Conference on Active Materials & Adaptive Structures, pp. 713-718, Alexandria, VA, November 4-8, 1991.

Sonti, V.R., and Jones, J.D., "A Study of the Modal Response Characteristics of Piezo-Actuator Driven Shells for Active Noise and Vibration Control," *Proceedings of Noise-Con 91*, pp. 275-282, Tarrytown, NY, July 14-16, 1991.

Kim, S.J., and Jones, J.D., "A Study of Actuators for Active Control of Distributed Elastic Systems," *Proceedings of Noise-Con 91*, pp. 283-290, Tarrytown, NY, July 14-16, 1991.

Sonti, V.R., and Jones, J. D., "Modal Coupling Behavior of Piezo-Actuators for Active Noise and Vibration Control," *Proceedings of the International Symposium on Active Control of Sound and Vibration*, pp. 333-338, Tokyo, Japan, April 9-11, 1991.

Kim, S.J., and Jones, J.D., "Optimization of Piezo-Actuator/Substructure Coupling for Active Noise and Vibration Control," *Proceedings of the Conference on Recent Advances in Active Control of Sound and Vibration*, pp. 78-91, Virginia Polytechnic Institute and State University, Blacksburg, VA, April 15-17, 1991.

Sonti, V.R., and Jones, J.D., "Active Vibration Control of Thin Cylindrical Shells Using Piezo-Electric Actuators," *Proceedings of the Conference on Recent Advances in Active Control of Sound and Vibration*, pp. 27-38, Virginia Polytechnic Institute and State University, Blacksburg, VA, April 15-17, 1991.

Sonti, V.R., Chang, P.S., and Jones, J.D., "Active Control of Structurally-Coupled Sound Fields by Localized Force Inputs," *Proceedings of Inter-Noise 90*, pp. 1259-1262, Gothenburg, Sweden, August 13-15, 1990.

Andrews, R.W., and Jones, J.D., "Noise Source Identification in Semi-Hermetic Twin-Screw Compressors," *Proceedings of Inter-Noise 90*, pp. 1049-1052, Gothenburg, Sweden, August 13-15, 1990.

Andrews, R.W., and Jones, J.D., "Noise Source Identification in Semi-Hermetic Twin-Screw Compressors," *Proceedings of the 1990 International Compressor Engineering Conference*, Vol. II, pp. 825-834, Purdue University, West Lafayette, IN, July 17-20, 1990.

Frabotta, J.M., Huang, D.T., and Jones, J.D., "Noise Diagnostic Strategies in a Fractional Horsepower Reciprocating Piston Compressor," *Proceedings of the 1990 International Compressor Engineering Conference*, Vol. II, pp. 818-824, Purdue University, West Lafayette, IN, July 17-20, 1990.

Andrews, R.W., Jones, J.D., Koai, K.L., Soedel, W., Wood, J.L., Peacock, F.E., and Baer, J.H., "Development of an Operator-Controlled Compressor Load Stand for Liquid-Chiller Systems," *Proceedings of the 1990 International Compressor Engineering Conference*, Vol. I, pp. 457-463, Purdue University, West Lafayette, IN, July 17-20, 1990.

Hall, H.R., and Jones, J.D., "Mechanisms of Noise Reduction in Enclosed Cylindrical Sound Fields by Active Vibration Control," *Proceedings of Inter-Noise 89*, Vol. I, pp. 559-562, Newport Beach, CA, December 4-6, 1989.

Mandic, D.S., and Jones, J.D., "Active Noise Control in Damped Elastic Cylinders Using Vibrational Force Inputs," *Proceedings of Inter-Noise 89*, Vol. I, pp. 441-446, Newport Beach, CA, December 4-6, 1989.

Andrews, R.W., and Jones, J.D., "Mechanisms of Sound Generation in Helical Twin-Screw Compressors," *Proceedings of Inter-Noise 89*, Vol. I, pp. 167-172, Newport Beach, CA, December 4-6, 1989.

Mahan, J.R., and Jones, J.D., "The Influence of Combustion Liner Holes on Noise Production by Ducted Burners," AIAA Paper 84-2322, presented at the AIAA/NASA 9th Aeroacoustics Conference, Williamsburg, VA, October 15-17, 1984.

#### D. **Invited Conference Presentations** (based on Abstract only)

Jones, J.D., "Adapting Cooperative Learning Methods to Large Lecture-Style Basic Mechanics Courses," presented at the 1994 ASEE Annual Conference, Edmonton, Alberta, Canada, June 26-30, 1994.

Jones, J.D., "ASEE Student Chapters: An Engineering Pipeline for Higher Education," presented at the 1993 ASEE Annual Conference, University of Illinois, Urbana-Champaign, IL, June 19-23, 1993.

Jones, J.D., "Development of an Engineering Mechanics Laboratory," presented at the 1993 ASEE Annual Conference, University of Illinois, Urbana-Champaign, IL, June 19-23, 1993.

Jones, J.D., "Real-Time Speech-To-Text Transcription Technology: A Communication Tool for Hearing Impaired Students," presented at the 1993 ASEE Annual Conference, University of Illinois, Urbana-Champaign, IL, June 19-23, 1993.

Jones, J.D., "Adaptive Materials for Active Noise and Vibration Control," American Society for Engineering Education Annual Conference, Toledo, OH, June 21-25, 1992.

Jones, J.D., "The Fundamental Principles of Active Noise and Vibration Control," American Loudspeaker Manufacturers Association Summer Display/Symposium, Chicago, IL, May 29, 1992.

Jones, J.D., and Andrews, R.W., "Mechanisms of Noise Generation in Semi-Hermetic, Twin-Screw Compressors," 121st Meeting of the Acoustical Society of America, Baltimore, MD, April 29 - May 3, 1991.

Sonti, V.R., Kim, S.J., and Jones, J.D., "Effective Forces and Wavenumber Domain Analysis of Piezo-Actuators," 122nd Meeting of the Acoustical Society of America, Houston, TX, November 4-8, 1991.

#### E. **Reports**

Wadsworth, E.M, Daniels, J.Z., Reklaitis, J.K., Chiscon, M.O., and Jones, J.D., "Improving the Climate for Women and Institutionalizing Women's Programs in the Schools of Engineering and Science: 1996 Annual Report," Women in Engineering Programs, Purdue University, West Lafayette, IN, October 1996.

Temple, K.A., Goldschmidt, V.W., and Jones, J.D., "Thermal and Internal Acoustic Model of a Helmholtz Type Pulse Combustion Furnace," HL 96-7, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, August 1996.

Wadsworth, E.M, Daniels, J.Z., Reklaitis, J.K., Chiscon, M.O., and Jones, J.D., "Improving the Climate for Women and Institutionalizing Women's Programs in the Schools of Engineering and Science: 1995 Annual Report," Women in Engineering Programs, Purdue University, West Lafayette, IN, September 1995.

Temple, K.A., Goldschmidt, V.G., and Jones, J.D., "Thermal and Acoustic Model of a Helmholtz Type Pulse Combustion Furnace: Interim Report," HL 95-18, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, December 1995.

Shahin, A.R., Meckl, P.H., and Jones, J.D., "Modeling and Control of Shape Memory Alloy Actuators to Reduce Vibration in a Building," HL 95-17, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, December 1995.

Pan, F.M., and Jones, J.D., "A Study of Piezoelectric Transducers in Application to Active Control of Reciprocating Compressor Noise," HL 95-14, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, December 1995.

Navarro de Andrade, E., Goldschmidt, V.W., and Jones, J.D., "A Competitive Analysis of a Toshiba Multiplex Heat Pump," HL 94-26P, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, December 1994.

Temple, K.A., Goldschmidt, V.W., and Jones, J.D., "Thermal and Acoustic Model of a Helmholtz Type Pulse Combustion Furnace: Literature Review, Model Description and Preliminary Results," HL 94-20, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, September 1994.

Tarplee, J.L., Goldschmidt, V.W., and Jones, J.D., "Study of Refrigerant Charge Effects in a Prototype Multiplex Heat Pump," HL 94-12P, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, August 1994.

Tarplee, J.L., Goldschmidt, V.W., and Jones, J.D., "Testing of Refrigerant Charge Effects in a Prototype Multiplex Heat Pump," HL 94-7P, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, April 1994.

Sonti, V.R., and Jones, J.D., "Analysis of Flat and Curved Piezo-Actuators for Vibration Control of Cylindrical Shells," HL 94-5, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, May 1994.

Tarplee, J.L., Goldschmidt, V.W., and Jones, J.D., "Continued Testing of a Prototype Ductless Multiplex Heat Pump With Simultaneous Heating and Cooling," HL 93-13P, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, September 1993.

St. Onge, J.D., Goldschmidt, V.W., and Jones, J.D., "Evaluation, Prototyping, and Modeling of Multiplex Heat Pump Systems," HL 93-10P, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, August, 1993.

Masters, A.R., and Jones, J.D., "Design Guidelines for Embedded Piezo-Actuators in a Layered Composite Structure," HL 93-5, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, May 1993.

Huff, J.E., Jr., and Jones, J.D., "Development of a Measurement Technique to Evaluate Rotor Chatter in Twin Screw Compressors," HL 92-35P, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, December 1992.

Kim, S.J., and Jones, J.D., "A Study of Piezoelectric Actuators for Active Noise and Vibration Control," HL 92-32, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, December 1992.

Holliday, W.M., Jones, J.D., and Goldschmidt, V.W., "Active Noise Control in Gas Pulse Furnaces," HL 92-4P, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, May 1992.

St. Onge, J.D., Goldschmidt, V.W., and Jones, J.D., "A Competitive Analysis of a Daikin Multiplex Ductless-Split Heat Pump," HL 91-26P, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, December 1991.

Thrasher, M.A., Meckl, P.H., and Jones, J.D., "A Fundamental Characterization of Shape Memory Alloy Actuators for Use in a Novel Hand Prosthesis Design," HL 91-17, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, September 1991.

Frabotta, J.M., and Jones, J.D., "Investigation of Noise Generation Mechanisms and Transmission Paths of Fractional Horsepower Reciprocating Piston and Rolling Piston Compressors," HL 91-9P, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, August 1991.



Zen Ruffinen, M.A., Goldschmidt, V.W., and Jones, J.D., "Noise Source Identification on a Pulse Furnace with Potential Methods of Noise Control," HL 91-8P, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, August 1991.

Chang, P., Sonti, V.S., Mandic, D.S., and Jones, J.D., "Active Control of Structurally-Coupled Sound Fields in Elastic Cylinders," HL 91-6, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, June 1991.

Andrews, R.W., and Jones, J.D., "Noise Source Identification in Twin-Screw Compressors," HL 90-18P, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, August 1990.

Dubrouillet, J.N., Zen Ruffinen, M.A., Jones, J.D., and Goldschmidt, V.W., "Noise Diagnostics and Active Noise Control Feasibility Study for the Pulse Furnace," HL 90-5P, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, April 1990.

Huang, D.T., Frabotta, J.M., and Jones, J.D., "Noise Sensitivity Testing of a Fractional Horsepower Reciprocating Refrigerator Compressor," HL 89-34P, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, November 1989.

Mandic, D.S., and Jones, J.D., "Adaptive Active Control of Enclosed Sound Fields in Elastic Cylinders Via Vibrational Inputs," HL 89-31, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, October 1989.

Andrews, R.W., and Jones, J.D., "A Study of the Sound and Vibration Characteristics in a Helical Twin-Screw Compressor," HL 89-29P, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, September 1989.

Huang, D.T., Jones, J.D., and Hamilton, J.F., "Development of a Controlled Experiment on a Reciprocating Compressor -- Noise Directivity and Repeatability Studies," HL 89-17P, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University, West Lafayette, IN, April 1989.

Jones, J.D., and Fuller, C.R., "An Experimental Investigation of the Interior Noise Control Effects of Propeller Synchronizing," NASA CR-178185, October 1986.

Jones, J.D., "An Operation Manual for the Active Noise Control Project in the Langley Aircraft Noise Reduction Laboratory," submitted to NASA Langley Research Center as a portion of the final report on contract NAG1-156, December 1983.

Mahan, J.R., and Jones, J.D., "Experimental Study of the Thermal-Acoustic Efficiency in a Long Turbulent Diffusion-Flame Burner," NASA CR-3725, August 1983.

Stelzman, W.J., Canonico, D.A., and Jones, J.D., "Pressure Vessels and Piping Materials," submitted to Oak Ridge National Laboratories as contribution to Chapter 4, Materials Technology, of The Fossil Energy Program Quarterly Progress Report, September 1980.

## F. Theses

Jones, J.D., "A Study of Active Control Techniques for Noise Reduction in an Aircraft Fuselage Model," Doctoral Dissertation, Virginia Polytechnic Institute and State University, August 1987.

Jones, J.D., "An Experimental and Analytical Study of Noise Production and Propagation in Burners," Masters Thesis, Virginia Polytechnic Institute and State University, July 1982.

## OTHER INVITED TALKS AND LECTURES

Oakes, W.C., Meyer, D., Jones, J.D., "Learning How to Learn," President's Council Back to the Classroom Program, October 30, 1998.

Jones, J.D., "An Introduction to Graduate Study in Engineering," Women in Engineering Mentor and Mentee (M&M) Program, Dr. Emily Wadsworth, Faculty Advisor, April 14, 1998.

Jones, J.D., "An Introduction to Graduate Study in Engineering," Women in Engineering Mentor and Mentee (M&M) Program, Dr. Emily Wadsworth, Faculty Advisor, April 15, 1998.

Jones, J.D., "Postdoctoral Study in Engineering and Science: Why Consider It and What is the Application Process?," Purdue University Student Chapter of the American Society for Engineering Education (ASEE), October 23, 1996.

Jones, J.D., "Strategies for Applying to National Fellowship Programs," Presentation to the Profiles in Excellence (P.I.E.) Students, Dr. Carolyn Perruchi, Associate Dean of the Graduate School, Faculty Advisor, February, 1995 - 1999.

Jones, J.D., "An Introduction to Graduate Study in Engineering," Women in Engineering Mentor and Mentee (M&M) Program, Dr. Emily Wadsworth, Faculty Advisor, February 15, 1995.

Jones, J.D., "An Introduction to Graduate Study in Engineering," Women in Engineering Mentor and Mentee (M&M) Program, Dr. Emily Wadsworth, Faculty Advisor, October 15, 1994.

Jones, J.D., "An Introduction to Graduate Study in Engineering," Women in Engineering Mentor and Mentee (M&M) Program, Dr. Emily Wadsworth, Faculty Advisor, November 17, 1993.

Blevins, L., Diefes, H., and Jones, J.D., "Graduate Study in Engineering: To Go or Not to Go, That is the Question," 1994 Heartland Regional Conference, Society of Women Engineers, University of Wisconsin-Madison, Madison, WI, October 7-9, 1994.

Jones, J.D., Organized a Four-Part "Graduate Study in Engineering Seminar Series," 3rd and 4th weeks of class, Fall and Spring, 1993-present.

Jones, J.D., "Development of an Engineering Mechanics Laboratory," presented at the ASEE Annual Conference, Session 2534, University of Illinois, Champaign, IL June 20-23, 1993.

Jones, J.D., "ASEE Student Chapters: An Engineering Pipeline to Higher Education," presented at the ASEE Annual Conference, Session 1290, University of Illinois, Champaign, IL June 20-23, 1993.

Hood, M.S., Wood, T., and Jones, J.D., "Real-Time Speech-to-Text Transcription Technology: A New Communication Tool for Hearing-Impaired Students," presented at the ASEE Annual Conference, Session 1616, University of Illinois, Champaign, IL June 20-23, 1993.

Jones, J.D., "Getting Started in the Research Process: A Young Faculty Perspective," Purdue University Student Chapter of the American Society for Engineering Education (ASEE), Spring 1993.

Kim, S.J., and Jones, J.D., "Effects of Piezo-Actuator Thickness on the Active Vibration Control of a Beam," presented at the 31st IEEE Conference on Decision and Control, Tucson, AZ, December 16-18, 1992.

Jones, J.D., "Adaptive Materials for Active Noise and Vibration Control," presented at the ASEE Annual Conference, Toledo, OH, June 21-25, 1992.

Sonti, V.R., Kim, S.J., and Jones, J.D., "Effective Forces and Wavenumber Domain Analysis of Piezoactuators," presented at the 122nd Meeting of the Acoustical Society of America, Houston TX, November 4-8, 1991. (Abstract is published in the *Journal of the Acoustical Society of America*, Vol.90, No.4, Pt 2, Abstract 3SA4, October 1991).

Jones, J.D., "Graduate School: To Go or Not to Go That is the Question," Presentation to Tau Beta Pi, September 3, 1991. Presentation to Pi Tau Sigma, September 19, 1991. Presentation to ME Students, October 16, 1991 and January 9, 1992.

Jones, J.D., "Young Faculty's Experience in Using the Research Process," Fall Research Orientation for New Faculty, Research Manual: A Guide to the Grants Process at Purdue University, Division of Sponsored Programs, September 27, 1990.

Jones, J.D., "Young Faculty's Experience in Using the Research Process," Orientation for Faculty to the Research Community and Administration Processes at Purdue University, Division of Sponsored Programs, September 10, 1991.

Jones, J.D., "A Radical New Design Concept for a Functional Hand Prosthesis Using Advanced Adaptive Materials," Fall Meeting of the West Central District of the Indiana Occupational Therapy Association, Lafayette, IN, September 28, 1989.

Jones, J.D., "A Review of Active Noise Control Strategies for Reduction of Rotorcraft Interior Noise," 2nd Army Research Office-American Helicopter Society-Rensselaer Polytechnic Institute Workshop on Composite Materials and Structures for Rotorcraft, Rensselaer Polytechnic Institute, Troy, NY, September 14-15, 1989.

Jones, J.D., "Influence of a Cabin Floor on Sound Transmission into Aircraft Cabins," Fall Annual Meeting of the North Carolina Regional Chapter of the Acoustical Society of America, Winston-Salem, NC, October 10-11, 1986.

Jones, J.D., "Reduction of Aircraft Cabin Noise by Active Vibration Control," Spring Annual Meeting of the North Carolina Regional Chapter of the Acoustical Society of America, Charlotte, NC, April 17-18, 1986.