

Faculty Standard Resume

GENERAL INFORMATION

Name: Vincent P. Drnevich

Birth Date: August 6, 1940

1. EDUCATION

Ph.D. in Civil Engineering, August, 1967, Univ. of Michigan, Ann Arbor, Michigan
M.S.C.E., February, 1964,
B.S.C.E., June, 1962, Univ. of Notre Dame

2. ACADEMIC APPOINTMENTS

July 2000 - Present	Professor of School Civil Engineering, Purdue University
August 2000 - December 2000	Sabbatical Leave, Carnegie Mellon University, Pittsburgh, PA
July 1998 - Present	Co-Director, Institute for Safe, Quiet Durable Highways, Purdue University
July 1991 - June 2000	Professor and Head, School of Civil Engineering, Purdue University
July 1991 - June 1995	Director, Joint Highway Research Project, Purdue University
July 1978 - June 1991	Professor of Civil Engineering, University of Kentucky
July 1989 - June 1990	Acting Dean, College of Engineering, University of Kentucky
July 1980 - June 1984	Chairman of the Civil Engineering Department, University of Kentucky
July 1973 - June 1978	Associate Professor of Civil Engineering, University of Kentucky
August 1967 - June 1973	Assistant Professor of Civil Engineering, University of Kentucky
September 1965 - August 1967	Research Assistant, University of Michigan (Soil Dynamics Research)
February 1964 - May 1965	Research Assistant, University of Michigan, (Soil Dynamics Research)
Sept. 1962 - January 1964	Research Assistant, University of Notre Dame (Soil Dynamics Research)
June 1962 - September 1962	Instructor of Field Surveying, University of Notre Dame

3. NON-ACADEMIC POSITIONS

May 1984 - August 1985	Special Assignment, U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, MS.
January 1974 - May 1974	Visiting Engineer, U.S. Department of the Interior, Bureau of Reclamation, Denver, Colorado
June 1972 - August 1972	Project Engineer, E. D'Appolonia Consulting Engineers, Inc., Pittsburgh, PA
June 1965 - August, 1965	Soils Engineer, Soils Section, Ove Arup and Partners, London, England

4. LICENSES, REGISTRATIONS, AND CERTIFICATIONS

Professional Engineer: Commonwealth of Kentucky, No. 6912; State of Indiana, No. PE60920172

5. CITATIONS

- National Science Foundation Traineeships 1965-67
- Danforth Foundation Associate (1969-1985)
- Kentucky Colonel, 1980
- Who's Who in America
- Who's Who in Science and Engineering

6. AWARDS, RECOGNITION, AND HONORS

- ASTM Student Prize Membership Award for excellence in the field of Engineering Materials Research (1966)
- The 1973 Norman Medal of the American Society of Civil Engineers for the paper Shear Modulus and Damping in Soils: Design Equations and Curves, co-authored with Bobby O. Hardin
- The Engineer of the Year in Education, Kentucky Society of Professional Engineers, 1976 and 1991
- The R.E. Shaver Award for Excellence in Teaching Civil Engineering, University of Kentucky 1977, 1980, and 1982
- The 1979 C.A. Hogentogler Award of the American Society of Testing and Materials for the paper Modulus and Damping of Soils by the Resonant Column Method, co-authored with B.O. Hardin and D.J. Shippy
- The University of Kentucky Alumni Association Great Teacher Award for 1980
- The Outstanding Teaching Award, Civil Engineering, 1980, 1984
- The 1980 Huber Research Prize of the American Society of Civil Engineers
- Service Award of Committee D-18 on Soil and Rock, American Society for Testing and Materials for organizing symposium on Acoustic Emissions in Soil and Rock, presented in June, 1982.
- The 1985 Harold T. Larsen Award of Chi Epsilon (National Civil Engineering Honor Society).
- The 1989 James M. Robbins Award of Chi Epsilon for Excellence in Teaching (Cumberland District and National Award winner)
- President's Award for Outstanding Service, Kentucky Society of Professional Engineers, April, 1990.
- ASTM Committee on Publications Award for Editorial Excellence, June 1990
- ASTM Committee D18 on Soil and Rock, Special Service Award, 1990, 2002
- Tau Beta Pi Outstanding Teacher Award, College of Engineering, University of Kentucky, 1990.
- Chi Epsilon Chapter Honor Member, University of Kentucky Chapter, 1990
- Twenty Fourth Ardaman Lecture, University of Florida, March 17, 1992.
- Robert M. Gillim Professional Recognition Award, Kentucky Section, ASCE, 1992.
- ASTM Award of Merit and conferral of Fellow Status, June 1993
- Engineering Honor Award, University of Notre Dame, April 1994
- ASTM Technical Editor's Award, June 1995 for *Dynamic Geotechnical Testing II* (with R.J. Ebelhar and B.L. Kutter)
- First recipient of the "Viny" Award of the LeaderShape program, Purdue University, 1995.
- Woodland G. Shockley Award and Honorary Membership in ASTM Committee D-18, January 1996
- University of Michigan, Alumni Society Merit Award for the Department of Civil and Environmental Engineering, October 1998
- Executive All Star for Indiana, selected by the National Engineering Week Committee, January 1999
- Selected by the American Consulting Engineering Council for panel of judges to select outstanding projects of 2000, Landsdowne, VA, February 2-4, 2001.
- The 2000 Public Service Award, Consulting Engineers of Indiana, February 17, 2001
- The Award of Excellence for Outstanding Contributions in the field of Geotechnical Engineering and Education, Steering Committee of the Great Lakes Geotechnical and Geoenvironmental Conference, 2002.
- ASTM Award for Outstanding Article on the Practice of Geotechnical Testing for the article titled "Time Domain Reflectometry Development for Use in Geotechnical Engineering," March 2000 issue of the *Geotechnical Testing Journal*, *ASTM*, 2002.
- The 2002 George Wadlin Award for Distinguished Service, Civil Engineering Division of ASEE, June.
- Ross Judson Buck Memorial Award for outstanding counseling, School of Civil Engineering, Purdue University, May 2003.
- Richard E. Ladd Standards Development Award for ASTM Standard D 6780 for Water Content and Density of Soil by Time Domain Reflectometry, ASTM, 2004.
- 2004 Kentucky Geotechnical Engineering Society/University of Kentucky Distinguished Lecturer

Patents and Copyrights:

- Drnevich Long-Tor Resonant Column Apparatus, 1974
- A New Method for Measuring In-Place Soil Density and Moisture Content (with S. Siddiqui), Patent Nos. 5,801,537 (Sep. 1, 1998), 5,933,015 (Aug. 3, 1999), 6,215,317 (April 10, 2001)
- Algorithms and computer codes for determining reflection points in Time Domain Reflectometry (TDR) Signals (with Xiong Yu), Applied for June 21, 2001, approved on October 25, 2001
- One-Step Method for Measuring Water Content and Density of Soil (with Xiong Yu), Purdue University, May 2002, P-02034, U.S. Patent 7,040,145, issued May 9, 2006.
- Water Content, Cement Content, Water-Cement Ratio, and Compressive Strength of Concrete from Time Domain Reflectometry, (with Xiong Yu), U.S. Provisional Patent Application, July 2003.

7. MEMBERSHIP IN PROFESSIONAL AND SCHOLARLY SOCIETIES

- American Association of University Professors, 1985-1991
- American Society of Civil Engineers, (Fellow, Life Member 2005), 1962-present
 - Kentucky Section and Bluegrass Branch, 1967-1991
 - Kentucky Geotechnical Engineering Group, Chairman, 1972-73, Officer, 1971-1976
 - Indiana Section and Central Branch, 1991-present
 - J. of Professional Issues in Engineering Education and Practice, Editorial Board Member, 2002-present
- American Society for Engineering Education, 1972-present
 - Civil Engineering Division, Secretary-Treasurer 1995-1998, Board Member 1999-present, Membership Secretary 2001-2002, Vice Chair and Program Chair 2002-2003, Division Chair 2003-2004.
- American Society for Testing and Materials, 1967-present, Fellow, 1993
 - Member of D-18 Executive Committee, 1976-1982, 1984-1990
 - Geotechnical Testing Journal, Past Editor (1984-89) and Member of the Editorial Board since 1983
 - Journal of ASTM International, Member of the Editorial Board, 2003-present
- Earthquake Engineering Research Institute, 1985-2000
- Environmental and Engineering Geophysical Society, 1993-1995
- Indiana Society of Professional Engineers, 1991-present
 - A.A. Potter Chapter, President 1995-present
 - State Society Vice President, 2006-2007
- International Society for Soil Mechanics and Geotechnical Engineering, 1969-present
- Kentucky Society of Professional Engineers, 1969-1992
- National Society of Professional Engineers, 1969-present
- Transportation Research Board, 1983-present.
- United States Universities' Consortium for Geotechnical Education and Research, Charter Member, 1985-present.

A. TEACHING

Teaching for me is a labor of love to which I devote significant time for preparation and study. During my tenure as School Head, I taught the professionalism and ethics portions of our junior course, CE 394 and taught or co-taught undergraduate and graduate courses in geotechnical engineering. Through my reading and work in ASCE and ASEE, I try to keep abreast of new teaching technologies, such as cooperative learning, and share those with colleagues. In the Spring of 1995, my teaching in CE 394 was extended to include the civil engineering history portion of the course as well. In the Spring of 1996, a Web Page for the course was created and use of e-mail communication with the students was begun. Use of the WebCT course package began in the fall of 1998. In Spring 2000, the entire CE 394 course, including the final exam, was done using WebCT. The Purdue MIDC made use of this course as an example in how to effectively use WebCT. Starting in the Spring 2001, I was assigned primary responsibility for CE 498, the capstone design course for seniors. It too is almost totally web-based using WebCT. The course is team-taught with considerable team planning and involvement in the course. In the Fall 2001, I taught two courses: CE383 the undergraduate introduction to soil mechanics and CE696 a graduate course on insitu testing and field measurements. Both courses had labs associated with them and I made extensive use of WebCT for the courses. In the graduate course, I had to develop and teach all of the labs, a number of which were done at field sites. For CE383, I mentored Mr. Bryan Scott, a doctoral student who taught the other division of the course. In this course, I introduced computer simulation for the triaxial test as means of enhancing the understanding of undrained shear strength behavior. In the Fall 2002, I again taught two courses: CE383 and CE587 Soil Dynamics. The Soil Dynamics course was completely done using WebCT, including the introduction of MathCAD, SHAKE, and Resonant Column software. Several extensive case studies were introduced and the students completed term projects. In 2005, I began collaboration with John Norris of the Krannert School to develop a systematic method of team selection for Senior Design (CE 698). Papers on the Capstone Design Course at Purdue were presented at the 2005 Annual Conference of ASEE and at the 4th Global Colloquium on Engineering Education in Sydney Australia. In the fall of 2005, I began early partial voluntary retirement where I teach only in the spring semesters and reduce to twenty percent effort in the fall semesters to continue research and advise graduate students. In preparation for senior design in spring 2007, I worked with the U.S. Green Building Council and Purdue Physical Facilities personnel to introduce "Green Design" into senior design. I arranged for the student teams to become registered with the USGBC at no cost to Purdue or the students. Work with John Norris and Linden Petrin of the Purdue Office of Career Counseling continued on refining the team selection process and a paper for the 2007 Conference of ASEE was submitted. Also in spring 2007, at the request of graduate students, I introduced a new course on TDR for Soil Properties which is based on my research.

1. COURSES TAUGHT

Courses Taught

Year	Semester	Course No.	Course Title	Credit Hours	No. of Students	Percent Responsibility
1991	Fall	CE 294	Case Studies in Civil Engineering, 3 Hrs. Lect., Portion on Professionalism & Ethics	3	90?	15
1992	Spring	CE 294	Case Studies in Civil Engineering, 3 Hrs. Lect., Portion on Professionalism & Ethics	3	90?	15
1992	Summer	CE 383	Geotechnical Engineering, 2 Hrs. Lect., 3Hrs. Lab.	3	25	15
1992	Fall	CE 394	Civil Engineering History, Ethics, Engineering Economic Analysis, and Case Studies, 3 Hrs. Lect., Portion on Professionalism & Ethics	3	90?	15
1992	Fall	CE 696	Insitu Testing in Geotechnical Engineering, 2 Hrs. Lect., 3 Hrs. Lab.	3	17	100
1993	Spring	CE 394	Civil Engineering History, Ethics, Engineering Economic Analysis, and Case Studies, 3 Hrs. Lect., Portion on Professionalism & Ethics	3	90	15

Year	Semester	Course No.	Course Title	Credit Hours	No. of Students	Percent Responsibility
1993	Fall	CE 394	Civil Engineering History, Ethics, Engineering Economic Analysis, and Case Studies, 3 Hrs. Lect., Portion on Professionalism & Ethics	3	90	15
1993	Fall	CE 587	Soil Dynamics, 3 Hrs. Lect.	3	14	20
1994	Spring	CE 394	Civil Engineering History, Ethics, Engineering Economic Analysis, and Case Studies, 3 Hrs. Lect., Portion on Professionalism & Ethics	3	105	15
1994	Fall	CE 394	Civil Engineering History, Ethics, Engineering Economic Analysis, and Case Studies, 3 Hrs. Lect., Portion on Professionalism & Ethics	3	136	15
1995	Spring	CE 394	Civil Engineering History, Ethics, Engineering Economic Analysis, and Case Studies, 3 Hrs. Lect., Portion on Professionalism & Ethics and History	3	141	35
1995	Fall	CE 394	Civil Engineering History, Ethics, Engineering Economic Analysis, and Case Studies, 3 Hrs. Lect., Portion on Professionalism & Ethics	3	126	15
1996	Spring	CE 394	Civil Engineering History, Ethics, Engineering Economic Analysis, and Case Studies, 3 Hrs. Lect., Portion on Professionalism & Ethics and History	3	126	50
1996	Fall	CE 394	Civil Engineering History, Ethics, Engineering Economic Analysis, and Case Studies, 3 Hrs. Lect., Portion on Professionalism & Ethics	3		35
1997	Spring	CE 394	Civil Engineering History, Ethics, Engineering Economic Analysis, and Case Studies, 3 Hrs. Lect., Portion on Professionalism & Ethics and History	3	132	50
1997	Fall	CE 394	Civil Engineering History, Ethics, Engineering Economic Analysis, and Case Studies, 3 Hrs. Lect., Portion on Professionalism & Ethics	3	86	35
1998	Spring	CE 394	Civil Engineering History, Ethics, Engineering Economic Analysis, and Case Studies, 3 Hrs. Lect., Portion on Professionalism & Ethics and History	3	102	50
1998	Fall	CE 394	Civil Engineering History, Ethics, Engineering Economic Analysis, and Case Studies, 3 Hrs. Lect., Portion on Professionalism & Ethics	3	95	35
1999	Spring	CE 394	Civil Engineering History, Ethics, Engineering Economic Analysis, and Case Studies, 3 Hrs. Lect., Portion on Professionalism & Ethics and History	3	107	50
1999	Fall	CE 394	Civil Engineering History, Ethics, Engineering Economic Analysis, and Case Studies, 3 Hrs. Lect., Portion on Professionalism & Ethics and History	3	77	50

Year	Semester	Course No.	Course Title	Credit Hours	No. of Students	Percent Responsibility
2000	Spring	CE 394	Civil Engineering History, Ethics, Engineering Economic Analysis, and Case Studies, 3 Hrs. Lect., Portion on Professionalism & Ethics and History	3	91	50
2001	Spring	CE498A	Civil Engineering Design Project (High Performance Large-Scale Lab)	3	51	Lead Instructor
	Fall	CE383	Geotechnical Engineering I (with lab)	3	33	100
	Fall	CE696	Insitu Testing and Field Measurements (with lab)	3	16	100
2002	Spring	CE 498A	Civil Engineering Design Project (New Airport Terminal Facility for Purdue)	3	35	Lead Instructor
	Fall	CE383	Geotechnical Engineering I (with lab)	3	33	100
	Fall	CE 587	Soil Dynamics	3	8	100
2003	Spring	CE498	Civil Engineering Design Project (Bowen Civil Engineering Laboratory)	3	59	Lead Instructor
	Fall	CE383	Geotechnical Engineering I (with lab)	3	61	100
	Fall	CE696	Insitu Testing and Field Measurements (with lab)	3	6	100
2004	Spring	CE498	Civil Engineering Design Project (US 231 Extension)	3	77	Lead Instructor
	Fall	CE383	Geotechnical Engineering I (with lab)	3	90	100
2005	Spring	CE 498	Civil Engineering Design Project (New Menards big box store)	3	97	Lead Instructor
	Fall		On Early Voluntary Partial Retirement	3		
2006	Spring	CE 498	Civil Engineering Design Project (Pedestrian Bridge over River Road at State Street in West Lafayette)	3	78	Lead Instructor
		CE 587	Soil Dynamics	3	12	100

In addition to the above listed courses, from the fall of 1991 through spring of 2000, I presented lectures in ENG100 (four 50-minute sessions each fall and one 50-minute session each spring. I also presented lectures in CE 290, two each fall and one each spring. In EGR 100 enrollments are greater than 300 students in each lecture session. In CE 290, they are enrollments are on the order of 90 in each division. I also met with the CE 498 capstone design course at least once every semester.

In Fall 2001, I was invited by both the School of Nuclear Engineering and the School of Industrial Engineering to provide lectures to their undergraduate students on "Ethics and Professionalism in Engineering Practice". Every semester since the course inception, I have covered the topic of Professionalism and Ethics in the new course, CE399.

2. COURSES WITH ADMINISTRATIVE RESPONSIBILITY

From 1991 through Spring 2000, I shared the administrative responsibility for CE 394 with whoever was co-teaching the course. In the spring semesters from 2001 to the present, I had the administrative responsibility for CE 498, the capstone design course in our program. For CE383, I mentored Mr. Bryan Scott, a doctoral student who taught the other division of the course.

3. CONTRIBUTIONS IN COURSE AND CURRICULUM DEVELOPMENT

- Soil Dynamics short course, University of Michigan, Ann Arbor, Michigan, June, 1968
- Prediction and Measurement of Stresses and Deformations in Soils, one-week short course, Massachusetts Institute of Technology, Cambridge, Massachusetts, August, 1969.
- The Teaching-Learning Process, one-week program sponsored by the Danforth Foundation to Improve Teaching in Higher Education, August, 1970.
- Fundamentals and Instruction of the PDP-8 Minicomputer One week short course sponsored by Digital

- Equipment Corp., Blue Bell, Pennsylvania, August, 1974.
- Structural Dynamics, three day short course at University of Louisville, May, 1984.
- Spectral Analysis of Vibrations, three-day short course by Hewlett Packard on use of HP 5423A Structural Dynamics Analyzer, September, 1984.
- Computational Methods in Engineering, University of Kentucky course, Fall 1984.
- Pavement Design, University of Kentucky course, Fall 1984.
- Computer Graphics Augmented Design and Manufacturing System, two day short course by IBM on use of CADAM, May 1986.
- ASCE Workshop on Civil Engineering Laboratories, Fort Collins, Colorado, August 1986.
- Earthquake Protective Designs Course, Emergency Management Institute, National Emergency Training Center, one week short course, July 1987.
- Strong Ground Motion; Seismic Analysis, Design, and Code Issues, A two day course from the EERI at the Ill. Inst. of Tech., May 1988.
- Introduction to C Programming, ASEE Annual Mtg., Toronto, 1990
- Attended Accreditation Forum at ASCE Annual Meeting and the Midwest Department Heads meeting each year since 1991 and prepared reports to the Undergraduate Committee on recent developments in accreditation criteria so that these may be accounted for in the CE curriculum. Met with this committee on many occasions.
- Midwest Department Heads Meetings, Notre Dame 1992, Minnesota 1993, Northwestern 1994, Hosted at Purdue, 1995, Marquette University 1996, University of Missouri-Kansas City 1997, Lawrence Tech-Wayne State, 1998, Ohio University 1999, Iowa State University 2000.
- Participated in a weeklong workshop on "Teaching Introductory Engineering Courses" sponsored by the National Science Foundation, Colorado State University, Colorado, July 1993.
- ASCE National Committee on Practitioner-Educator Interchange, Secretary 1994-1995, Vice Chair 1996-present.
- Short Course on "INTERNETWORKING," Purdue University, November 20-23, 1994.
- Session Organizer, ASEE IL/IN Section Annual Meeting, Purdue University, March 1995.
- Participated in Middle Atlantic and Pacific Coast Department Heads Meetings in 1998 in conjunction with role as chair of the Department Heads Council Executive Committee, ASCE.
- Lead Department Heads Forum at annual conferences of ASCE, 1996, 1997, 1998, 1999, and 2000.
- Revamped CE 498 to focus on process rather than product and changed to a Design-Build scenario from a Design-Bid-Build process that had been the previous approach, 2001 and 2002.
- Participated in Colloquium on "Civil Engineering in the New Millennium" at MIT, March, 2001
- ASCE Education Forum Session Chair, ASCE Annual Meeting, Houston, TX, October 2001
- Civil Engineering Division, ASEE Annual Meeting Session Chair, Montreal, Canada, June 2002
- ASCE Excellence in Civil Engineering Education (ExCEED) Teaching Seminar, Washington, D.C., Nov. 2002.

4. EVIDENCE OF TEACHING EXCELLENCE

See Section 6. Awards, Recognition, Honors, above.

- Sponsored and invited the faculty of the Schools of Engineering to participate in a one day workshop in September 1993 on *Cooperative Learning* by Prof. Karl Smith, Dept. of Civil Engineering, University of Minnesota. Approximately 40 faculty participated.
- Obtained \$4,000 in funding from Fluor-Daniel Foundation for Faculty Development, 1997, 1999
- Obtained \$100,000 endowment from Roy and Myrna Wansik for Undergraduate Teaching Award and for Faculty Research Award, 1999.
- **"A Case Study of Using the Web to Teach Civil Engineering Ethics, Professionalism and History,"** Presented and published in the Proceedings of 2001 ASEE Annual Meeting, Albuquerque, NM, June 2001.
- **"Some Thoughts on Assessment,"** Presented at the 2001 ASEE Annual Meeting, Albuquerque, NM, June 2001.
- **"Getting Rewarded for Teaching – Some Tricks of the Trade"** presented at and included in the Proceedings of the ASCE Education Congress in Houston, TX, October 2001.
- **"Evolution of the CE Capstone Design Course at Purdue,"** presented at and included in the Proceedings of the ASCE Education Congress in Houston, TX, October 2001.
- **"Teaching Civil Engineering History with the Web,"** presented at and included in the Proceedings of the

ASCE History and Heritage Congress in Houston, TX, October 2001.

- **“The Senior Design Process at Purdue University,”** presented at and included in the Proceedings of the 2005 ASEE Annual Meeting, Portland OR, June 2005 and at the 4th Global Colloquium on Engineering Education, Sydney, Australia, September 2005.
- Introduced “Green Building Design” into senior design in cooperation with the U.S. Green Building Council, January 2007.
- **“Assigning Civil Engineering Students to Capstone Course Teams,”** paper submitted with John Norris (Krannert doctoral student) to the 2007 ASEE Annual Meeting, Honolulu, Hawaii, June 2007

The quantitative data in the table below is structured such that the evaluation results for each course are grouped together, and presented chronologically. The five core questions are: 1) My instructor displays a clear understanding of course topics; 2) My instructor has an effective style of presentation; 3) My instructor displays enthusiasm when teaching; 4) Overall, this course is among the best I have ever taken; and 5) Overall, this instructor is among the best teachers I have known.

Summary of Quantitative Student Evaluation Data

5 = strongly agree; 4 = agree; 3 = undecided; 2 = disagree; 1 = strongly disagree						
Term	Number Respond.	Ques. 1	Ques. 2	Ques. 3	Ques. 4	Ques. 5
CE 394: Civil Engineering History, Ethics, Engineering Economic Analysis, and Case Studies, Portion on Professionalism & Ethics						
Spring 98	89	4.5	4.4	4.8	3.1	4.0
Fall 98	61	4.2	4.1	4.5	3.1	3.3
Spring 99	89	4.3	4.1	4.5	3.2	3.7
Fall 99	60	4.3	4.1	4.5	3.3	3.7
Spring 00	72	4.3	4.0	4.4	3.0	3.5
CE 498: Civil Engineering Design Project						
Spring 01	47	4.0	3.9	4.3	3.9	4.0
Spring 02	32	4.1	4.0	4.2	3.8	4.0
Spring 03	59	3.9	3.7	4.2	3.6	3.6
Spring 04	69	3.9	3.8	4.2	3.7	3.8
Spring 05	89	3.8	3.7	4.1	3.2	3.6
Spring 06	72	N/A	N/A	N/A	3.5	3.5
CE 383: Geotechnical Engineering I						
Fall 01	25	4.8	4.1	4.8	3.9	4.5
Fall 02	27	4.8	3.1	4.8	3.6	4.0
Fall 03	47	4.8	4.0	4.8	4.0	4.4
Fall 04	82	4.7	4.1	4.7	3.9	4.2
CE 587: Soil Dynamics						
Fall 02	6	4.4	4.4	4.8	4.8	4.6
Spring 06	11	4.6	4.6	4.9	4.7	4.8

CE 597V: TDR for Soil Properties						
Spring 07	9					
CE 696: Insitu Testing and Field Measurements						
Fall 01	15	4.4	3.9	4.4	3.7	3.9
Fall 03	6	4.9	4.5	5.0	4.3	4.9

B. RESEARCH AND SCHOLARSHIP

Research interests include: static and dynamic properties of soils and structures as measured by laboratory and field tests, including non-destructive testing procedures such as wave propagation and time domain reflectometry; earthquake engineering and effects of earthquakes on natural and engineered facilities. External support for research has been almost continuous since entering academic service. Recent efforts have focused on developing a new technology, Time Domain Reflectometry (TDR), for measurement of soil properties. TDR had been used for measuring volumetric water content, but with only marginal accuracy. Research over the past 12 years at Purdue by Professor Drnevich and his students has developed a fundamental understanding of electromagnetic wave propagation in soil to the point where water content can be measured much more accurately and the technology was extended to measure density as well. Working with frequency domain signals, recent work developed techniques to totally remove apparatus effects from the signals. We also developed dielectric mixing models that have increased accuracy in generating TDR curves. A first effort was completed in solving the inverse problem where a TDR signature is used to describe soil properties and identify soil types. Work in 2006 provided a breakthrough with the thesis work of Carlos Zambrano who developed a calibration-free method to identify soil types. Four U.S. Patents have been received for the work done on this technology, one more has been assigned provisional status. The work done at Purdue is receiving great recognition and an ASTM Standard for this technology was approved in January 2002 and updated in 2005. A Beta Testing Program involving up to ten external agencies/firms/universities was completed. A proposal to the National Science Foundation with Prof. Robert Nowack of Earth and Atmospheric Sciences as Co-PI was funded in July 2003 for continuation of this research, especially for developing robust inversion techniques for TDR signatures. *(This is a totally new use of TDR technology and Purdue University under the leadership of Prof. Drnevich is acknowledged as the developer of this technology. It makes significant use of advanced electromagnetic wave propagation theories common in electrical engineering. Graduate students Wei Feng, Chih-Ping Lin, and Xiong Yu received M.S. degrees in electrical engineering while studying for the Ph.D. degree in civil engineering. This technology has the potential to become the technology of choice for all engineered earthworks worldwide because it is a safe and accurate alternative to nuclear methods which are hampered by permitting and safety issues. The technology has been licensed by Purdue University to Durham Geo Enterprises and as of summer 2005 is commercially available. In September 2006, Purdue University hosted TDR 2006: 3rd International Symposium and Workshop on Time Domain Reflectometry for Innovative Soils Applications. Prof. Drnevich chaired the Organizing Committee of this three-day event. Support for TDR 2006 was obtained from the National Science Foundation, the Infrastructure Institute of Northwestern University, ASTM International, and the JTRP. Over 70 people attended from 12 countries. The proceedings of TDR 2006 are available on the web at: <https://engineering.purdue.edu/TDR>)*

Professor Drnevich also is working with Professors Bobet and Santagata on an NSF sponsored exploratory study on *Soil Treatment with Thixotropic Fluids: An Autoadaptive Design for Liquefaction Prevention* that is studying the introduction of small amounts of high activity clays to reduce the liquefaction susceptibility of sandy soils. The research is investigating both the effects of small amounts of clay along with the innovative technologies for temporarily suppressing their affinity for bonding of particles for efficient introduction into the pore space of loose sands. Electrical conductivity measured by TDR methods is proving to be an accurate indicator of clay content in sandy soils.

In the past three years Time Domain Reflectometry principles were developed for estimating the water-cement ratio of concrete and the compressive strength of concrete. Two papers on this work were presented at the *International Conference on Advances in Concrete through Science and Engineering* held in March 2004. Patents have been applied for on this technology and a joint proposal Case Western Reserve University has been submitted to NSF for continuation of this research. Testing of concrete being placed in the *Neil Armstrong Hall of Engineering* is taking place to evaluate the method for estimating concrete strength gain with time under cold weather conditions. Prof. Drnevich is working with Adam Rudy, a doctoral student in Civil Engineering Materials to refine this approach.

1. PUBLISHED WORK

a. Books

b. Book Editorships

1. Drnevich, V.P., and Gray, R.E., Editors (1981) *Acoustic Emissions in Biotechnical Engineering Practice*, ASTM Special Technical Publication 750, American Society for Testing and Materials, Philadelphia, PA., 209p.
2. Ebelhar, R.J., Drnevich, V.P., and Kutter, B.L., Editors (1994) *Dynamic Geotechnical Testing II*, ASTM Special Technical Publication 1213, American Society for Testing and Materials, Philadelphia, PA., 427p.

c. Book Chapters and Invited Contributions to Books

d. Articles in Refereed Archival Journals

1. Drnevich*, V.P., and Hall, J.R. Jr., "Transient Loading Tests On a Circular Footing," *Journal of the Soil Mechanics and Foundations Division*, ASCE, Vol. 92, No. SM6, November, 1966, pp. 153-167.
2. Drnevich*, V.P., and Richart, F.E. Jr., "Dynamic Prestraining of Dry Sand," *Journal of the Soil Mechanics and Foundations Division*, ASCE, Vol. 96, No. SM2, March, 1970, pp. 435-469.
3. Hardin*, Bobby O., and Drnevich*, V.P., "Shear Modulus and Damping in Soils - I. Measurement and Parameter Effects," *Journal of the Soil Mechanics and Foundations Division*, ASCE, Vol. 98, No. SM6, June, 1972, pp. 603-624.
4. Hardin*, Bobby O. and Drnevich*, V.P., "Shear Modulus and Damping in Soils -II. Design Equations and Curves," *Journal of the Soil Mechanics and Foundations Division*, ASCE, Vol. 98, No. SM7, July, 1972, pp. 667-692. (Won the *Norman Medal* of ASCE.)
5. Drnevich, V.P., "Undrained Cyclic Shear of Saturated Sand," *Journal of the Soil Mechanics and Foundations Division*, ASCE, Vol. 98, No. SM8, August, 1972, pp. 807-825.
6. Drnevich, V.P., "Constrained and Shear Moduli for Finite Elements," *Journal of the Geotechnical Engineering Division*, ASCE, Vol. 101, No. GT5, May, 1975, pp. 459-473.
7. Gorman*, C.T., Hopkins, T.C., Deen, R.C., and Drnevich, V.P., "Constant-Rate-of-Strain and Controlled-Gradient Consolidation Testing," *Geotechnical Testing Journal*, ASTM, Vol. I, No. 1, February, 1978, pp. 1-18.
8. Drnevich*, V.P., and Massarsch*, K.R., "Effect of Sample Disturbance on Stress-Strain Behavior of Cohesive Soils," *Journal of the Geotechnical Engineering Division*, ASCE, Vol. 105, No. GT9, Proc. Paper 14809, September, 1979, pp. 1001-1016.
9. Samarasinghe*, A.M., Huang*, Y.H., and Drnevich, V.P., "Permeability and Consolidation of Normally Consolidated Soils", *Journal of the Geotechnical Engineering Division*, ASCE, Vol.108, No. GT5, June, 1982, pp. 835-850.
10. Chung*, R.M., Yokel*, F.Y., and Drnevich, V.P., "Evaluation of Dynamic Properties of Sands by Resonant Column Testing," *Geotechnical Testing Journal*, GTJODJ, Vol. 7, No. 2, June 1984, pp. 60-69.
11. Huang*, Y.H., Drnevich*, V.P., and Hossein, R., "Centrifuge Simulator for Testing Asphalt Pavement Distress," *Transportation Research Record*, Transportation Research Board, 1991. 81 p.

12. Drnevich*, V.P., Hossain*, M.M., Wang, J., and Graves, R.C., "Determination of Layer Moduli in Pavement Systems by Non Destructive Testing," *Transportation Research Record*, No. 1278 Transportation Research Board, 1990, pp 18-26.
13. Graves*, R. Clark, and Drnevich*, Vincent P., "Calculating Pavement Deflections with Velocity Transducers," *Transportation Research Record No. 1293*, Transportation Research Board, 1991, pp. 12-23.
14. Zhang*, M., Street*, R., Harris, J., and Drnevich, V.P. (1993) "A Note on the Influence of Site Conditions on Ground Motion Values Observed for the Southeastern Illinois Earthquake of June 10, 1987," *Seismic Research Letters*, Vol. 64, No. 2, April-June, pp. 149-156.
15. Ashmawy*, A., and Drnevich, V.P. (1994) "General Dynamic Model for the Resonant Column/Quasi-Static Torsional Shear Apparatus," *Geotechnical Testing Journal*, ASTM, Vol. 17, No. 3, September, pp. 337-348.
16. Salgado, R., Drnevich, V. P., Ashmawy, A., Grant, P., and Vallenias, P. (1997). "Interpretation of Large-Strain Crosshole Tests." *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, Vol.123, No. 4, April, pp. 382-388.
17. Guha, S., Drnevich, V.P., and Bray, J.D., (1997) "Dynamic Characteristics of Old Bay Clay," *Geotechnical Testing Journal*, ASTM, Vol. 20, No. 4, December, pp. 383-393.
18. Ashmawy, A.K, Bourdeau, P.L., Drnevich, V.P., Dysli, M., (1999) "Cyclic Response of Geotextile-Reinforced Soil," *Journal of Soils and Foundations*, Vol. 39, No. 1, February, pp.
19. Feng, W., Lin, C.P., Deschamps, R.J., and Drnevich, V.P., (1999) "Theoretical Model of a Multi-Section TDR Measurement System," *Water Resource Research*, Vol. 35, No. 8, Aug., 2321-2331.
20. Siddiqui, S.I., Drnevich, V.P., and Deschamps, R., (2000) "Time Domain Reflectometry Development for Use in Geotechnical Engineering," *Geotechnical Testing Journal*, ASTM, Vol. 23, No. 1, March, 2000, pp. 9-20. (ASTM Award for Outstanding Article on the Practice of Geotechnical Testing of ASTM, 2002)
21. Lin, C.P., Drnevich, V.P., Deschamps, R.J., (2001) "Full Waveform Analysis of Non-uniform TDR Measurement Systems: Simulation of TDR Waveforms," Submitted to *Water Resources Research*, January 2001.
22. Galvao, T.C.D., Drnevich, V.P., Schulze, D.G., (2003) "A Technique for Cutting Undisturbed Lateritic Soil Block Samples," *Environmental Monitoring and Assessment*, Vol. 84, Kluwer Academic Publishers, Netherlands, pp. 175-181.
23. Yu, X., Drnevich, V. P., 2004, "Time Domain Reflectometry for Compaction Control of Stabilized Soils", *Transportation Research Record*, *Journal of the Transportation Research Board*, 1868, pp 14-22.
24. Yu, X. , and Drnevich, V.P., (2004) "Soil Water Content and Dry Density by Time Domain Reflectometry," *J. of Geotechnical and Geoenvironmental Engineering*, ASCE, Volume 130, Issue 9, September, pp. 922-934.
25. Drnevich, V.P., Ashmawy, A.K., Yu, X., and Sallam, A.M., (2005) "Time Domain Reflectometry for Water Content and Density of Soils: Study of Soil-Dependent Calibration Constants," *Canadian Geotechnical Journal*, August. Vol. 42, No. 4, pp. 1053-1065
26. Yu, X., and Drnevich, V.P., (2005) "Density Compensation of TDR Calibration for Geotechnical Applications," *Journal of ASTM International*, DOI: 10.1520/JAI12190, January, 16p. (<http://www.astm.org/cgi-bin/SoftCart.exe/JOURNALS/JAI/PAGES/198.htm?L+mystore+cjck2255+1144370439>)
27. Drnevich, V.P., (2005) "Time Domain Reflectometry to Study Soil Behavior," (Invited paper), Presented at the *2nd Chinese Conference on Unsaturated Soils*, and published in the *Chinese Journal of Geotechnical Engineering* (2006).

28. Chen, R.P., Daita, R.K., Drnevich, V.P., and Kim, D.H., (2005) "Laboratory monitoring of physico-chemical process in lime kiln dust stabilized clayey soil," Presented by Dr. R.P. Chen at the *2nd Chinese Conference on Unsaturated Soils* in April 2005, and to be published in the *Chinese Journal of Geotechnical Engineering* (2006). (This paper was recognized as one of the four top of the 52 papers to the conference.)
29. Chen, R., Drnevich, V.P., Yu, X., Nowack, R. (2006) "Water Content Measurements with Time Domain Reflectometry in Highly Conductive Soils using Reflections from the Soil Surface" Accepted for publication in the *J. of Geotechnical and Geoenvironmental Engineering*, ASCE.
30. Daita, R.K., Drnevich, V.P., Kim, D., Chen, R., (2006) "Quality Assessment of Lime Kiln Dust (LKD) Modified Soils by Electrical Conductivity Measured with Time Domain Reflectometry (TDR)," Transportation Research Record: *Journal of the Transportation Research Board*, No. 1952, Transportation Research Board of the National Academies. Washington, D.C., 2006, pp. 101-109.
31. Chen, R., Drnevich, V.P., Daita, R.K., (2007) "Estimating Chemical Dosage and Strength Development of Lime Kiln Dust Treated Soils by TDR" submitted for publication in the *J. of Geotechnical and Geoenvironmental Engineering*, ASCE.

e. Notes and Discussions in Refereed Archival Journals

1. Massarsch*, K.R., and Drnevich, V.P., "Seismic Response of Nonlinear Soil Media," Discussion of paper by Taylor, P.W. , and Larkin, T.T., in the *Journal of the Geotechnical Engineering Div.*, ASCE March, 1978.
2. Min*, T., Drnevich*, V.P., and Wang, J., "Effects of Imperfect Fixity in Spring-Top Resonant Column Tests," Technical Note in *Geotechnical Testing Journal*, ASTM, Vol. 13, No. 4, December 1990, pp. 351-60.
3. Galvão, T.Cássia de Brito., Drnevich, V.P., and Schulze, D.G., "A Technique for Cutting Brittle Undisturbed Soil Block Samples," *Journal of the Geotechnical and Geoenvironmental Engineering*, ASCE, 1998.

f. Articles in Refereed Proceedings

1. Drnevich*, V.P., Hall, J. R., Jr., and Richart, F. E., Jr., (1967) "Effects of Amplitude of Vibration on the Shear Modulus of Sand," *Proceedings*, Symposium on Wave Propagation and Dynamic Properties of Earth Materials, Univ. of New Mexico, Albuquerque, N.M., pp 189-199.
2. Drnevich, V.P., "Hollow Cylinder Resonant Shear Apparatus," *Proceedings*, 7th International Conference on Soil Mechanics and Foundation Engineering, Mexico City, Vol. 3, 1969, page 529.
3. Drnevich, V.P., "An Innovative A.S.C.E. Student Chapter Structure," *Proceedings of the ASCE Conference on Civil Engineering Education*, Vol. I, Part 2, February, 1974, pp. 988-992.
4. Drnevich, V.P., "Insitu Measurement of Initial Stresses and Deformation Characteristics," *Proceedings of the Geotechnical Engineering Division, ASCE, Specialty Conference*, Raleigh, North Carolina, Vol. II, June, 1975, pp. 244-252.
5. Drnevich*, V.P., Hardin, B.O., and Shippy, D.J., "Modulus and Damping of Soils by the Resonant Column Test," *Dynamic Geotechnical Testing, ASTM STP 654*, American Society for Testing and Materials, September, 1978, pp. 91-125. (**Hogentogler Award of ASTM**)
6. Drnevich, V.P., "Resonant Column Testing-Problems and Solutions," *Dynamic Geotechnical Testing, ASTM STP 654*, American Society for Testing and Materials, September, 1978, pp. 384-398.

7. Massarsch*, K.R., and Drnevich, V.P., "Deformation Properties of Normally Consolidated Clays," *Proceedings of the Seventh European Conference on Soil Mechanics and Foundation Engineering*, Brighton, England, September, 1979, pp. 16-20.
8. Drnevich, V.P., "Normalized Stress-Strain for Undrained Shear Tests," *Laboratory Shear Strength of Soil, ASTM STP 740*, R.N. Yong and F.C. Townsend, Eds., American Society for Testing and Materials, 1981, pp. 387-409.
9. Rose*, J.G., Lin*, C., and Drnevich, V.P., "Hot-Mix Asphalt for Railroad Trackbeds - Construction, Performance, and Overview," *Proceedings*, 1984 Annual Technical Sessions, Association of Asphalt Paving Technologists, 1984, pp. 19-50.
10. Rose*, J.G., Huang*, Y.H., and Drnevich, V.P., "Hot-Mix Asphalt Underlayments for Heavy-Haul Trackbeds," *Heavy Haul Railroad Conference*, Nov. 1985, 35 p.
11. Armour*, D.J. and Drnevich*, V.P., "Improved Techniques for the Constant-Rate-of-Strain Consolidation Test," *ASTM STP 892*, R.N. Yong and F.C. Townsend, Eds., American Society for Testing and Materials, Philadelphia, 1986, pp. 170-183.
12. Drnevich, V.P., "Report on Laboratory Tests for Consolidation Behavior," *Consolidation of Soils: Testing and Evaluation, ASTM STP 892*, R.N. Yong and F.C. Townsend, Eds., American Society for Testing and Materials, Philadelphia, 1986, p. 107-114.
13. Drnevich, V.P., "Report on Laboratory Tests for Consolidation Behavior," *Consolidation of Soils: Testing and Evaluation, ASTM STP 892*, R.N. Yong and F.C. Townsend, Eds., American Society for Testing and Materials, Philadelphia, 1986, p. 107-114.
14. Hossain*, M., and Drnevich*, V.P., "Numerical and Optimization Techniques Applied to Surface Waves for Backcalculation of Layer Moduli," *First International Symposium on Nondestructive Testing of Pavements and Backcalculation of Moduli*, ASTM Special Technical Publication, 1990.
15. Sayyedsadr*, M., and Drnevich*, V.P., "SASWOPR: A Program to Operate on Spectral Analysis of Surface Wave Data," *First International Symposium on Nondestructive Testing of Pavements and Backcalculation of Moduli*, ASTM Special Technical Pub., 1990.
16. Anderson, M., and Drnevich, V.P., "A True Dynamic Method for Nondestructive Testing of Rigid Pavements with Overlays," *Proc. of the Fourth International Conference on Concrete Pavement Design and Rehabilitation*, Purdue University, April 1989.
17. Ouyang*, Y., Drnevich, V.P., and Allen, D.L. "Estimating Span-Loss Type Bridge Collapse due to Earthquake Induced Abutment Sliding," *Proceedings of the Central Pennsylvania Geotechnical Group, ASCE*, Conference, Harrisburg, April 1990.
18. Zaghoul*, S.M., White*, T.D., Drnevich, V.P., and Coree, B. (1994) "Dynamic Analysis of FWD Loading and Pavement Response Using a Three-Dimensional Dynamic Finite Element Program." *Nondestructive Testing of Pavements and Backcalculation of Moduli (Second Volume)*, ASTM STP 1198, H.L. Von Quintas, A.J. Bush, and G.Y. Baladi, Eds., American Society for Testing and Materials, Philadelphia, PA., pp.
19. Hardin*, K.O., Drnevich*, V.P., Wang, J., and Sams, C.E. (1994) "Resonant Column Testing at Confining Pressures to 3.5MPa (500 psi), *Dynamic Geotechnical Testing II, ASTM 1213*, R.J. Ebelhar, V.P. Drnevich, B.L. Kutter, Eds., American Society for Testing and Materials, Philadelphia, PA., pp. 222-233.
20. Frost*, J.D., and Drnevich, V.P. (1994) "Towards Standardization of Torsional Cyclic Shear Testing," *Dynamic Geotechnical Testing II, ASTM 1213*, R.J. Ebelhar, V.P. Drnevich, B.L. Kutter, Eds., American Society for Testing and Materials, Philadelphia, PA., pp. 276-287.

21. Ashmawy, A.K, Salgado, R., Guha, S., and Drnevich, (1995) "Analysis of Soil Damping and Its Application to Earthquake Engineering," *Third International Conf. on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics*, St. Louis, Missouri, Paper 1.13, April pp. 35-41.
22. Galvão, T.Cássia de Brito, Drnevich, V.P., and Schulze, D.G., (1995) "Chemical, Mineralogical, and Compressibility Characteristics of a Collapsible Lateritic Soil from Minas Gerais, Brazil," *First International Conf. on Unsaturated Soils*, Paris, Balkema Publishers, pp. 39-44.
23. Galvão, T.Cássia de Brito, Drnevich, V.P., and Schulze, D.G., (1995) "A Technique for Cutting Brittle Undisturbed Block Samples," XIV International Conference on Soil Mechanics and Foundation Engineering, November.
24. Lin, C-P, Siddiqui, S., Feng, W., Drnevich, V. P., and Deschamps, R. J., (2000) "Quality Control of Earth Fills Using Electromagnetic Waves," *Constructing and Controlling Compaction of Earth Fills*, ASTM STP 1384, D. W. Shanklin, K. R. Rademacher, and J. R. Talbot, Eds., American Society for Testing and Materials, West Conshohocken, PA, pp. 290-310.
25. Lin, Chih-Ping, Drnevich, Vincent P., Feng, Wei, and Richard J. Deschamps, (2000) "Time Domain Reflectometry for Compaction Quality Control," Geotechnical Special Publication on *Use of Geophysical Methods in Construction - GeoDenver2000*, conference sponsored by the GeoInstitute of ASCE in August, pp. 15-34.
26. Drnevich, Vincent P., (2000), "The Purdue Time Domain Reflectometry Method," *Geotechnical Engineering Trends in The New Millennium*, Central Pennsylvania Section ASCE and the Pennsylvania Department of Transportation, November 1-3, 16 pages.
27. Drnevich, V.P., Siddiqui, S.I., Lovell, J., and Yi, Q. (2001). "Water Content And Density Of Soil Insitu by the Purdue TDR Method," *TDR 2001: Innovative Applications of TDR Technology*, Infrastructure Technology Institute, Northwestern University, Evanston, IL, September.
28. Drnevich, V.P., Lovell, J., Tishmack, J., and Yu, X., (2001). "Temperature Effects on Dielectric Constant Determined by Time Domain Reflectometry," *TDR 2001: Innovative Applications of TDR Technology*, Infrastructure Technology Institute, Northwestern University, Evanston, IL, September.
29. Yi, Q., Drnevich, V.P., and Lovell, J., (2001). "Limitations of the Purdue TDR Method for Soils with Large Particles," *TDR 2001: Innovative Applications of TDR Technology*, Infrastructure Technology Institute, Northwestern University, Evanston, IL, September
30. Drnevich, V.P., Yu, X., and Lovell, J., (2003) "Time Domain Reflectometry for Water Content and Density of Soils: Test Procedures and Typical Results," *TRB Annual Meeting*, Washington, D.C., January.
31. Haldavnekar, V., Bobet, A., Santagata, M., and Drnevich, V. (2004). "Soil Treatment with a Thixotropic Fluid: An Autoadaptive Design for Liquefaction Prevention," *11th International Conference on Soil Dynamics and Earthquake Engineering*, Berkeley, California, January.
32. Yu, X. and Drnevich, V.P., (2004) Time Domain Reflectometry for Compaction Control of Stabilized Soils, *TRB Annual Meeting*, Washington, D.C., January.
33. Yu, X., Drnevich, V.P., and Olek, J., (2004) "Time Domain Reflectometry for Measuring Water-Cement Ratio of Concrete," *International Conference on Advances in Concrete through Science and Engineering, RILEM*, Evanston, Illinois, March.
34. Yu, X., Drnevich, V.P., and Olek, J., (2004) "Predicting Strength Development of Concrete by Time Domain Reflectometry," *International Conference on Advances in Concrete through Science and Engineering, RILEM*, Evanston, Illinois, March.
35. Daita, R.K., Drnevich, V.P., and Kim, D., (2005), "Automated Generation of a Family of Compaction Curves", *TRB Annual Meeting*, Washington, D.C., 21 p.

36. Prochaska, A.B., Drnevich, V.P., Kim, D., and Sommer, K., (2005), "A Vibrating Hammer Compaction Test for Granular Soils and Dense Graded Aggregates," *TRB Annual Meeting*, Washington, D.C., 25 p.
37. Drnevich, V.P., (2005), "Some New Uses of Time Domain Reflectometry in Geotechnical Engineering," Richard D. Woods Symposium, *Proceedings, GeoFrontiers Conference*, ASCE, Austin, TX, January, 15 p.
38. Prochaska, A.B., and Drnevich, V.P., (2005), "One-Point Vibrating Hammer Compaction Test for Granular Soils," *Proceedings, GeoFrontiers Conference*, ASCE, Austin, TX, January, 25 p.
39. Drnevich, V.P., (2005) "Some New Uses of Time Domain Reflectometry in Geotechnical Engineering," Richard D. Woods Symposium," *Symposium on Applied Geophysics for Engineering and Environmental Problems* (SAGEEP), Environmental & Engineering Geophysical Society, Atlanta, GA, April 4, 2005.
40. Yu, X., Drnevich, V. P., and Nowack, R. L., (2005) "Statistical Comparison of Models for Soil Dielectric Spectrum", *Symposium on Applied Geophysics for Engineering and Environmental Problems* (SAGEEP), Environmental & Engineering Geophysical Society, Atlanta, GA, April 4.
41. Yu, X., Drnevich, V.P. and Nowack, R.L., (2005), "Comprehensive Evaluation of Near Surface Soil Properties by Combining Electromagnetic Wave and Seismic Wave Method", *Proc., 16th International Conference on Soil Mechanics and Geotechnical Engineering (ICSMGE)*, Osaka, Japan, September
42. Drnevich, V.P., (2005), "Time Domain Reflectometry to Study Soil Behavior," (Invited), *Proc. 2nd Chinese Conference on Unsaturated Soils*, Zhejiang University, Hangzhou, Peoples Republic of China, April.
43. Daita, R.K., Drnevich, V.P., Kim, D., Chen, R., (2006), "Quality Assessment of Lime Kiln Dust (LKD) Modified Soils by Electrical Conductivity Measured with Time Domain Reflectometry (TDR)", *TRB Annual Meeting*, Washington, D.C., January
44. Yu, X., and Drnevich, V.P. (2006) "Mobile Computer for Portable Field Instrumentation System" *Proc., ASCE GeoCongress*, Atlanta, GA, February.
45. Drnevich, V.P., Yu, X., Zambrano, C., and Nowack, R. (2006) "Refined One-Step TDR Method for Water Content and Density" *Proc., ASCE GeoCongress*, Atlanta, GA, February.
46. Yu, X., Drnevich, V.P. and Nowack, R.L., (2006), "Soil Property Variation by Time Domain Reflectometry" *Proceedings, UNSAT2006, The 4th International Conference on Unsaturated Soils*, Phoenix, AZ, April.
47. Zambrano, Carlos E., Drnevich, Vincent, P., Yu, Xiong, Nowack, Robert, (2006). "Soil Texture Characterization from TDR Waveform Analysis", *Proc. TDR 2006*, Purdue University, West Lafayette, USA, Sept. Paper ID 1, 21 p., <https://engineering.purdue.edu/TDR/Papers>.
48. Yu, Xiong, Drnevich, Vincent P. and Nowack, Robert L., (2006). "Improvements of Soil Dielectric Mixing Model for Inversion Analysis of Time Domain Reflectometry Measurements", *Proc. TDR 2006*, Purdue University, West Lafayette, USA, Sept., Paper ID 4, 19 p., <https://engineering.purdue.edu/TDR/Papers>
49. Chen, R. P., Chen, Y. M., Wang, J. X. and Drnevich, V. P., (2006). "Application of TDR on LKD and Cement-Treated Soils", *Proc. TDR 2006*, Purdue University, West Lafayette, USA, Sept., Paper ID 38, 11 p., <https://engineering.purdue.edu/TDR/Papers>
50. Evans, A.C. and Drnevich, V.P. (2007) "TDR for Compaction Control of Granular Materials with Large Particle Sizes," *20th Symposium on Applications of Geophysics to Engineering and Environmental Problems*, SAGEEP, Denver, Colorado, March.

51. Zambrano, C.E., Drnevich, V.P., Yu, X., and Nowack, R. (2007) "Soil Texture from TDR Waveform Analysis," *20th Symposium on Applications of Geophysics to Engineering and Environmental Problems, SAGEEP*, Denver, Colorado, March.
52. Drnevich, V.P., and Nowack, R. (2007) "Summary of New Developments in TDR for Soils," *20th Symposium on Applications of Geophysics to Engineering and Environmental Problems, SAGEEP*, Denver, Colorado, March.

g. Other Proceedings Articles

1. Drnevich, V.P., "Exploration Methods," *Proceedings of the Second Ohio River Valley Soils Seminar*, Louisville, Kentucky, October 15, 1971, pp. 2-1 - 2-43.
2. Drnevich, V.P., "Generalized Sliding Wedge Method for Slope Stability and Earth Pressure Analysis," *Proceedings of the Third Ohio River Valley Soils Seminar*, Cincinnati, Ohio, October 27, 1972.
3. Gorman, C.T., Hopkins, T.C., and Drnevich, V.P., "Insitu Shear Strength Parameters by Dutch Cone Penetration Tests," *Proceedings of the Fourth Ohio River Valley Soils Seminar*, Lexington, KY, October 5, 1973, pp. 2-1 - 2-11.
4. Drnevich, V.P., Gorman, C.T., and Hopkins, T.C., "Shear Strength of Cohesive Soils and Friction Sleeve Resistance," *Proceedings of the European Symposium on Penetration Testing*, Stockholm, Sweden, Vol. 2:2, June 1974, pp. 129-132.
5. Drnevich, V.P., "Use of Conventional Boring Rigs for Cone Penetration Testing," *Proceedings of the European Symposium on Penetration Testing*, Stockholm, Sweden, Vol. 2:2, June 1974, pp. 125-128.
6. Drnevich, V.P., Williams, G.P., and Ebelhar, R.J., "Soil Mechanics Tests on Coal Mine Spoils," *Proceedings of the Second Kentucky Coal Refuse Disposal and Utilization Seminar*, Pine Mountain State Park, Kentucky, May 20, 1976.
7. Drnevich, V.P., Ebelhar, R.J., and Williams, G.P. "Geotechnical Properties of some Eastern Kentucky Surface Mine Spoils," *Proceedings of the 7th Ohio River Valley Soils Seminar on Shales and Mine Wastes: Geotechnical Properties, Design, and Construction*, October 8, 1976, Lexington, Kentucky, pp. 1-1 - 1-13.
8. Drnevich, V.P., Hopkins, T.C., Allen, D.L., and Hale, S.S., "Geotechnical Properties of Kentucky Oil Shales," *Proc. 1981 Eastern Oil Shale Symposium*, University of Kentucky, Institute for Mining and Minerals Research, IMMR82/066, June 1982, pp. 99-107.
9. Drnevich, V.P., Hopkins, T.C., and Hale, S.S., "Design of Oil Shale Disposal Embankments," *Proceedings of the 1982 Oil Shale Symposium*, Lexington, Kentucky, October, 1982.
10. Drnevich, V.P., and Hall, J.R., Jr., "Spectral Analysis Techniques for Vibration Measurement," *Proceedings of the XIVth Ohio River Valley Soils Seminar*, Louisville, Kentucky, October, 1983.
11. Drnevich, V.P., "Site Studies in Soil-Structure Interaction," *Proceedings of the International Workshop on Dynamic Soil-Structure Interaction, State-of-the-Art and Research Needs*, University of Minnesota, September 1984, pp. 67-72.
12. Drnevich, V.P., Kim, S-I, Kohn, S., and Alexander, D.A., "Spectral Analysis of Surface Waves Using Random Noise Excitation," *Society of Exploration Geophysicists*, October, 1985, 5 pages.
13. Drnevich, V.P., "Recent Developments in Resonant Column Testing," *Invited Richart Commemorative Lecture for the Annual Meeting of the American Society of Civil Engineers*, Detroit, October, 1985, 29 pages.

14. Harris, S.A., and Drnevich, V.P., "Amplification of Earthquake Motions At Maysville, Kentucky," *Proceedings of the XVth Ohio River Valley Soils Seminar*, Lexington, Kentucky, October, 1985, 15 pages.
15. Harris, S.A., Street, R.L., and Drnevich, V.P., "Amplification of Seismically Induced Ground Motions in the Ohio River Valley Sediments," *Proceedings of the Eastern Section Meeting of the Seismological Society of America*, Knoxville, Tennessee, October, 1985.
17. Allen, D.L., and Drnevich, V.P., "Earthquake Hazard Mitigation of Transportation Facilities in Kentucky," *Proceedings of the Fourth U.S. National Conference on Earthquake Engineering*, May 1990, Palm Springs, CA, Vol. 1, pp. 703-712.
16. Allen, D.L., Ouyang, Y., and Drnevich, V.P., "Earthquake Mitigation Planning for Transportation Facilities in Western Kentucky," *Proceedings of the Annual Meeting of the American Public Works Association*, September, 1990, 25 p.
17. Amir W. Al-Khafaji, Samuel Clemence, Vincent Drnevich, Mike Kupferman, William F. Marcuson, Thomas A. Lenox, Gayle Mitchell, James T.P. Yao, "THE SCHOLARSHIP LANDSCAPE IN CIVIL ENGINEERING: A BRIDGE BETWEEN RHETORIC AND REALITY", Report of the American Society of Civil Engineers Task Force on Redefining Scholarly Work, November 1997, 33p.
18. Drnevich, V.P., and Tener, R.K., "Opposition to Mandatory Use of PE/FE Exams as Assessment Tools," *Proceedings, 1998 Annual Conference of the American Society for Engineering Education*, Session 2515, Seattle, June, 1998.
19. Drnevich, V.P., "Changes in Engineering Education and Practice for the 21st Century," National Engineers Week, an Advertising Supplement to the Indianapolis Business Journal, February 1999, Pg. 9.
20. Drnevich, V.P., "Educating 21st Century Engineers," National Engineers Week, an Advertising Supplement to the Indianapolis Business Journal, February 2000.
21. Drnevich, V.P., "ASTM Standard Test Method on Time Domain Reflectometry for In-Place Measurement of Water Content and Density," D6780, ASTM, January 2002.
22. Drnevich, V.P., "A New Method for Water Content and Insitu Density Determination," *Proceedings of the Great Lakes Geotechnical and Geoenvironmental Conference*, Toledo, Ohio, May 2002.

h. Reports

Numerous research reports have been submitted over the years. A listing is available.

Zambrano, C.E., Drnevich, V.P., and Bourdeau, P., "Advanced Compaction Quality Control," Joint Transportation Research Program, Project No. C-36-36SS, File No. 4-14-44, SPR-2928, November 2006.

2. INVITED PRESENTATIONS

1. "Effects of Amplitude of Vibration on the Shear Modulus of Sand," Symposium on Wave Propagation and Dynamic Properties of Earth Materials, Albuquerque, New Mexico, August, 1967.
2. "Resonant Column Apparatus for Testing Hollow Cylindrical Soil Specimens," 71st Annual Meeting of ASTM, San Francisco June, 1968.
3. "Liquefaction of Sand," "Microwave Ovens for Moisture Content of Soils," and "Modulus and Damping Due to Simple Shear," 21st Annual Kentucky Highway Conference, November, 1969
4. "Hollow Cylinder Resonant Shear Apparatus," Specialty Session 16, Seventh International Conference on Soil Mechanics and Foundation Engineering, Mexico City, August, 1969.
5. Eight Lectures at a two-week intensive short course, "Vibrations in Soils and Foundations," University of Michigan, Ann Arbor, August 3-14, 1970. (course cancelled due to insufficient enrollment)
6. "Associate Member Viewpoints", Kentucky Section, ASCE, February 19, 1971
7. "Shear Modulus and Damping in Soils", Soil Mechanics and Foundations Group, Kentucky Section, ASCE, April 9, 1971.
8. "Innovative Teaching Methods", To the faculty of Jefferson County Community College, Louisville, Kentucky, September 11, 1971.
9. "Exploration Methods," Second Ohio River Valley Soils Seminar, Louisville, Kentucky, October 15, 1971.
10. "Generalized Sliding Wedge Method for Slope Stability and Earth Pressure Analysis," Third Ohio River Valley Soils Seminar, Cincinnati, Ohio, October 27, 1972.
11. "Shear Modulus and Damping in Soils," A series of five half-day workshops provided for the U.S. Bureau of Reclamation, Denver, Colorado, May 1974.
12. "Shear Modulus and Damping in Soils," Seminar presented to the California Department of Transportation, Sacramento, September 1974.
13. "Use of Conventional Drill Rigs for Dutch Cone Testing," European Symposium on Penetration Testing, Stockholm, Sweden, June 1974.
14. "Insitu Measurement of Soil Properties," Geotechnical Engineering Division, ASCE, Specialty Conference, Raleigh, North Carolina, invited panelist for session on "Insitu Measurement of Initial Stresses and Deformation Characteristics," June 1975.
15. "Resonant Footing Method for Compaction Control," Invited to make a field training TV tape for California Department of Transportation, Sacramento California, July 1975.
16. "Seismic Techniques for Lab and Field Determination of Soil Properties," Presentation of the October meeting of the Pittsburgh Section, ASCE, Geotechnical Engineering Group, October 1975
17. "Resonant Column Method for Laboratory Testing," Invited to give two-day workshop to Earthquakes and Vibration Division personnel, U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Mississippi, December 1975.

18. "Dutch Cone Testing Procedures and Data Analysis," Invited to give a seminar and provide field instruction to U.S. Department of Interior, Bureau of Reclamation, Earth Sciences Branch, Denver, Colorado, April 1976.
19. "Introduction to Geodynamics," A three-day national seminar to Geotechnical Engineers of Sweden sponsored by the Building Research Council of Sweden and the Royal Institute of Technology, Stockholm, Sweden, June 1976.
20. "Advanced Soil Dynamics," Graduate short course at the Department of Soil and Rock Mechanics, Royal Institute of Technology, Stockholm, Sweden, June 1976.
21. "Some Current Engineering Approaches to Problems in Soil Dynamics," Lectures given at the Regional Universities of Sweden (Lund, Lulea, Chalmers (Gothenberg), Uppsala) to Swedish Geotechnical Society, and to the Swedish Geotechnical Institute, June 1976.
22. "Geotechnical Engineering in Sweden," Presentation to the September meeting of the Kentucky Soil Mechanics and Foundations Group, Kentucky Section, ASCE, September 24, 1976.
23. "What Soil Dynamics Tells Us About Soil," Graduate Geotechnical Engineering Seminar Presented to Purdue University, Department of Civil Engineering, March 18, 1977.
24. "Resonant Column Testing - Problems and Solutions," Paper presented and invited panelist to ASTM Symposium on Dynamic Soil and Rock Testing, Denver, Colorado, June 28, 1977.
25. Invited to chair a panel on "Dynamic Soil Properties and Measurement Techniques in the Laboratory" for the workshop on Research Priorities for Geotechnical Earthquake Engineering Applications sponsored by the National Science Foundation and held at the University of Texas, Austin, June 2-3, 1977.
26. "Comparison of Laboratory Measurement Techniques for Dynamic Soil Properties," U.S. Department of the Interior, Bureau of Reclamation, Denver, June 30, 1977.
27. "Machine Foundation Vibrations," Graduate seminar to Department of Civil Engineering, Case Western Reserve University, Cleveland, Ohio, March 1978.
28. "Stability Analysis of Refuse Embankments, Hollow Fills, and Spoil Banks," Three day short course for geotechnical and mining engineers on use of hand and computer methods of analysis, July, 1978, August, 1978, and February, 1979.
29. "Effects of Sample Disturbance on Stress-Strain Behavior of Soils," Symposium on Soil Sampling and Its Importance to Dynamic Laboratory Testing, ASCE Annual Meeting, Chicago, October 20, 1978
30. "Results of the Resonant Column Round Robin Testing Program," ASTM Committee D-18 Winter Meeting, Ft. Lauderdale, Florida, January 1979.
31. "Accounting for Sample Disturbance on the Stress-Strain Behavior of Soils," U.S. Army Corps of Engineers, Waterways Experiment Station, McClelland Engineers, Houston, Texas, and Northwestern University, Evanston, Illinois, all in May, 1979.
32. Invited by American Society of Civil Engineers to participate in eleven man delegation to Peoples' Republic of China in September 1979 to give series of lectures on Soil Dynamics. The National Science Foundation sponsored the trip.
33. "Use of Minicomputers in Materials Testing," Highway Engineering Exchange Program Meeting, Lexington, Kentucky, June 1980
34. "Geotechnical Engineering in China," Presentation to the Kentucky Geotechnical Engineering Group, September 1980.

35. "Recent Developments in Geotechnical Engineering," One-day company seminar presented to professional staff of ATEC Associates, Indianapolis, March 21, 1981
36. "Use of Dynamic Soil Parameters in Static Analyses", invited presentation at workshop on Soil Dynamics, VBB Consultants, Stockholm, Sweden, May 1981.
37. "Dynamic and Static Properties of Drammen Clay with Anisotropic States of Stress," Invited presentation to the technical staff of the Norwegian Geotechnical Institute, Oslo, Norway, June 1981.
38. "Engineering Properties of Kentucky Oil Shales," 1981 Eastern Oil Shale Symposium, Lexington, Kentucky, November 15-17, 1981.
39. "The Resonant Column Method for Dynamic Soil Testing," Graduate Seminar, University of Pittsburgh, March 1982.
40. "New Developments in the Resonance Testing of Soils," Graduate Seminar, Norwegian Technological University, Trondheim, Norway, May 1982.
41. "Insitu Stress-Strain from Laboratory Tests by Use of an Incremental Normalizing Technique," Geotechnical Society of Italy, Bergamo, Italy, June, 1982
42. "Design of Oil Shale Disposal Embankments," Graduate seminars presented at the University of Michigan (January 1983), University of Notre Dame (March 1983), and Ohio State University (March 1983).
43. "Management/Leadership Seminars for Engineering Students," Presentation to the Bluegrass Chapter, KSPE, March, 1983.
44. "Spectral Analysis Techniques for Vibration Measurement," XIVth Ohio River Valley Soils Seminar, Louisville, Kentucky, October 1983 and for Pittsburgh Geotechnical Engineering Group, ASCE, November 1983.
45. "Use of Asphalt in Railroad Trackbeds," U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Mississippi, March 1984 and Civil Engineering Graduate Seminar, University of Michigan, Ann Arbor, September 1984.
46. "Experimental Laboratory and Field Methods in Dynamic Soil-Structure Interaction Research," NSF Workshop on Dynamic Soil-Structure Interaction, University of Minnesota, September 1984.
47. "Report on Laboratory Tests for Consolidation Behavior," ASTM Symposium on Consolidation of Soils: Testing and Evaluation, Ft. Lauderdale, Florida, January 1985.
48. "Nondestructive Testing of Pavements", Air Force Engineering and Services Center, Tyndall AFB May 1985.
49. "Use of Random Noise Excitation for Spectral Analysis of Surface Waves in Pavement Testing," Nondestructive Pavement Testing Workshop at North Carolina State University co-sponsored by N.C. State University and The Air Force Engineering and Services Center, August 1985.
50. "Anisotropy and Cyclic Loading," Invited Panelist at Session 2B on Laboratory Testing - New Procedures and Data Acquisition Techniques, The XIth International Conference on Soil Mechanics and Foundation Engineering, San Francisco, August 1985.
51. "Recent Developments in Resonant Column Testing," Richart Commemorative Lecture, Invited by Soil Dynamics Committee, ASCE for ASCE Annual Meeting, Detroit, October 1985.
52. "Earthquake Effects on Structures in Kentucky," Meeting of the Lexington Chapter of the Construction Specifications Institute, January 1986.

53. "Some Recent Developments at the University of Kentucky on Spectral Analysis of Surface Waves," U.S. Army Waterways Experiment Station, Vicksburg, Mississippi, March 1987.
54. "Some Uses of Wave Propagation in Geotechnical Engineering," Graduate Seminar to Engineering Mechanics Department at the University of Kentucky, April 1987.
55. "Effects of Earthquakes on Soils and Structures," Governor's Earthquake Awareness Conference, October 16-18, 1987, Louisville
56. "Influence of Local Soil Deposits on Earthquake Motions and Recommended Seismic Provisions to Building Codes," Governor's Earthquake Awareness Conference, University of Louisville, October 1987.
57. "Earthquake Hazard Mitigation in Civil Engineered Structures in Kentucky," Capitol Branch, Kentucky Section, ASCE, December 17, 1987, Frankfort and Bluegrass Branch, Kentucky Section, ASCE, March 1988.
58. "CUSEC at the University of Kentucky," A presentation to the Board of Directors of the Central United States Earthquake Consortium associated with a proposal to have the organization headquarters at the University of Kentucky. (with John Kiefer, Assistant State Geologist and Assoc. Director of the Kentucky Geologic Survey, St. Louis, March 1988.
59. "Numerical and Optimization Techniques Applied to Surface Waves for Backcalculation of Layer Moduli," with doctoral student M. Hossain, First International Symposium on Nondestructive Testing of Pavements and Backcalculation of Moduli, ASTM, Baltimore, June 1988.
60. "SASWOPR: A Program to Operate on Spectral Analysis of Surface Wave Data," a poster session presentation with doctoral student M. Sayyedsadr, First Int. Symposium on Nondestructive Testing of Pavements and Backcalculation of Moduli, ASTM, Baltimore, June 1988.
61. "Moduli of Pavement Systems," Annual Meeting of the Kentucky Crushed Stone Association, Gatlinburg, Tennessee, August 1988.
62. "Earthquakes and Earthquake Resistant Design in Kentucky," Annual Meeting of the Kentucky Section of the American Society of Civil Engineers, Louisville, September 1988.
63. "Asphalt and Pavement Research at the University of Kentucky," Annual Meeting of the Asphalt Institute, San Diego, December 1988.
64. "When the Earthquake Comes to Kentucky," U.K. Saturday Seminar to the Public, September 3, 1988, Annual Meeting of the Kentucky Section of the American Society of Civil Engineers, September 1988, Constructions Specifications Institute of Kentucky, October 1988, Donovan Scholars Forum, March 1989, Cumberland Gap Chapter, KSPE, March 1990.
65. "Earthquake Hazard Mitigation in Transportation Systems," Graduate Seminar to Civil Engineering Department, Cornell University, October 1988.
66. UK/IBM EXCEL II Distinguished Lecturer Series, invited to give half day lecture on Earthquakes in the Central United States, Fall 1989.
67. "Determination of Layer Moduli in Pavement Systems by Non Destructive Testing," Presented at the 1990 Transportation Research Board Meeting, Washington, D.C., January
68. "Estimating Span-Loss Type Bridge Collapse due to Earthquake Induced Abutment Sliding," Proceedings of the Central Pennsylvania Geotechnical Group, ASCE, Conference, Harrisburg, April 1990.
69. Invited to give luncheon address at the Chi Epsilon Luncheon at the Annual Meeting of the American Society for Engineering Education, Toronto, June 1990

70. University of Kentucky College of Engineering Commencement Address, May 1991
71. "Role of Engineering Practice in Engineering Education," Annual Meeting of the Kentucky Section, ASCE, September, 1991, Western Society of Engineers, November 1991, and Cincinnati Section of ASCE, February 1992.
72. "The Engineering is in the Selection and Use of Models," Twenty Fourth Ardaman Lecture, University of Florida, March 1992. Also presented at the University of Texas at San Antonio, January 1993.
73. "Engineering Design at Purdue," Department Heads Forum, Annual Meeting of ASCE, New York, October 1992.
74. "SDOF, MDOF, and FER," A Celebration of Our Academic Heritage - Symposium on Soil Dynamics Honoring Professor F.E. Richart, Jr., Ann Arbor, Michigan, November 5, 1993.
75. "The Practicing Engineer and Engineering Education," Invited presentation to the engineering staff of the Chicago Office of Fluor Daniel, Inc., February 21, 1995
76. Facilitator, ASCE Education Conference, Denver, June 1995.
77. "Civil Engineering Education in the Future," Presentation to the Indiana Section, ASCE, June 13, 1995.
78. "Practitioners in Residence," Principal's Forum, Annual Meeting of ASCE, San Diego, CA, October 24, 1995.
79. "New Developments in U.S. Engineering Education", Tsinghua University, Beijing, China, September 1996 and Hong Kong University of Science and Technology, Hong Kong, September 1996.
80. "Are We Teaching the Right Stuff", ACI Forum 123, American Concrete Institute Annual Meeting, Seattle, Washington, April 1997
81. "A New Technology for Soil Water Content and Density Measurement for Construction Control", University of Washington, Seattle, April 1996
82. "Department Heads Forum", Chaired the forum of civil engineering department heads/chairs at the Annual Meeting of ASCE, Minneapolis, Minnesota, October 1997.
83. "Opposition to Mandatory Use of PE/FE Exams as Assessment Tools," ASEE Annual Meeting, Session 2515, Seattle, WA, June 30, 1998.
84. "Department Heads Forum", Chaired the forum of civil engineering department heads/chairs at the Annual Meeting of ASCE, Boston, October 1998.
85. "Quality Control of Earth Fills Using Electromagnetic Waves," University of South Florida, September 3, 1999.
86. "Department Heads Forum", Chaired the forum of civil engineering department heads/chairs at the Annual Conference of ASCE, Charlotte, October 1999.
87. "Civil Engineering Department Heads' Council Update," Mid West Civil Engineering Department Heads Meeting, Iowa State University, Ames, IA, March 2-3, 2000.
88. "Quality Control of Earth Fills Using Electromagnetic Waves," Cincinnati-Dayton Geotechnical Group, ASCE, Cincinnati Ohio, March 7, 2000.
89. "Civil Engineering Department Heads' Council Update," Middle Atlantic Civil Engineering Department Heads Meeting, Carnegie Mellon University, Pittsburgh, PA, March 17, 2000.

90. "Civil Engineering Education and Research in the 21st Century," Led a retreat of Department Heads Council Executive Committee, ASCE, St. Louis, MO, June 17, 2000.
91. "Department Heads Forum", Chaired the forum of civil engineering department heads/chairs at the Annual Conference of ASCE, Seattle, WA, October 2000.
92. "Faculty Roles in the New Millennium," ASCE Annual Conference, Seattle, WA, October 2000.
93. "Time Domain Reflectometry for Construction Quality Control," *Use of Geophysical Methods in Construction - GeoDenver2000*, conference sponsored by the GeoInstitute of ASCE, Denver, CO, August 6, 2000. (with Chih-Ping Lin)
94. Demonstration of Purdue Time Domain Reflectometry Method at Field Demonstration Site associated with *GeoDenver2000*, conference sponsored by the GeoInstitute of ASCE, Denver, CO, August 8, 2000. (with Chih-Ping Lin)
95. "The Purdue Time Domain Reflectometry Method," Kentucky Geotechnical Engineering Group, ASCE, Frankfort, KY, September 7, 2000. (also presented at the Central PA ASCE/PennDoT conference, November 3, 2000; GAI Consultants, Inc., Monroeville, PA, December 14, 2000; Gannett Fleming Consultants, Inc., Pittsburgh, PA, December 19, 2000.)
96. "Soil Properties from Electromagnetic Wave Propagation," Graduate Seminar in Civil and Environmental Engineering, Carnegie Mellon University, Pittsburgh, PA, December 3, 2000. (also presented to Geotechnical Seminar, School of Civil Engineering, Purdue University, January 17, 2001.)
97. "Water Content and Density of Soil in Place by the Purdue Time Domain Reflectometry Method," (with Barry Newman, GAI Consultants, Inc.), Committee A2K02, Transportation Research Board Meeting, January 9, 2001.
98. "Water Content and Density of Soil in Place by Time Domain Reflectometry (TDR)," Task Group D18.08.03, ASTM, Reno Nevada, January 24, 2001.
99. "Water Content And Density Of Soil Insitu by the Purdue TDR Method," *TDR 2001: Innovative Applications of TDR Technology*, Infrastructure Technology Institute, Northwestern University, Evanston, IL, September 2001. (Co-authored with: Siddiqui, S.I., Lovell, J., and Yi, Q.)
100. "Temperature Effects on Dielectric Constant Determined by Time Domain Reflectometry," *TDR 2001: Innovative Applications of TDR Technology*, Infrastructure Technology Institute, Northwestern University, Evanston, IL, September 2001. (Presented by Xiong Yu, co-authored with Lovell, J., Tishmack, J., and Yu, X.)
101. "Limitations of the Purdue TDR Method for Soils with Large Particles," *TDR 2001: Innovative Applications of TDR Technology*, Infrastructure Technology Institute, Northwestern University, Evanston, IL, September 2001. (Co-authored with: Yi, Q. and Lovell, J.)
102. Short Course on "The Purdue TDR Method for Measuring Water Content and Density of Soil," University of South Florida/Florida DOT, November 5, 2001; INDOT Division of Materials and Tests, December 19, 2001; GAI Consultants, Inc. January 2, 2002; H.C. Nutting Company, February 1, 2002.
103. "Ethics and Professionalism for Practicing Professionals", Paul I. Cripe, Inc., Indianapolis, IN, April 19, 2002.
104. Invited Key Note Speaker to the *Great Lakes Geotechnical-Geoenvironmental Conference*, Toledo, OH, May 2002. Title of paper and talk: "A New Method for Water Content and Insitu Density Determination"
105. Invited to give the *Chi Epsilon Lecture at the 2002 ASEE Annual Conference*, Montreal, Canada, June 2002. Title of talk: "Getting Rewarded for Teaching: Some Tricks of the Trade"
106. "Time Domain Reflectometry for Water Content and Density of Soils: Test Procedures and Typical

- Results,” *TRB Annual Meeting*, Washington, D.C., V. P. Drnevich, X. Yu, and J. Lovell (Presentation made by X. Yu.), January 2003.
107. “Using TDR to Estimate W/C Ratio and Predict Performance,” *Midwest Concrete Consortium Meeting*, Chicago, April 10, 2003.
108. “One-Step TDR Method for Water Content and Dry Density of Soil,” *ASTM Committee D18.08.03*, Denver, CO, June 17, 2003.
109. “A Study of Effective Soil Compaction Control of Granular Soils,” *Indiana Department of Transportation, Division of Materials and Tests*, October 15, 2003 (with Adam Prochaska).
110. “Connecting Predominantly Undergraduate Institutions to Doctoral Education,” *National Science Foundation*, Washington, D.C., December 17, 2003.
111. “Vibratory Hammer Method for Compaction of Granular Soils,” *ASTM Committee D18.03*, Tampa, Florida, January 12, 2004.
112. “A Better Way for Lab Compaction of Granular Soils and a Better Way to Measure Compaction in the Field,” Department of Civil and Environmental Engineering, University of South Florida, Tampa, January 13, 2004.
113. “Some Insights on Dynamic Soil Properties and Their Determination,” University of Illinois Student Chapter of the Earthquake Engineering Research Institute, November 17, 2004
114. “Recent Developments in Use of TDR for Soil and Concrete Properties,” Graduate Seminar, University of Missouri, Rolla, November 3, 2004.
115. “New Developments in Time Domain Reflectometry for Soils and Concrete and Shear Wave Velocities from Standard Boring Log Information,” 2004 Kentucky Geotechnical Engineering Group - University of Kentucky Distinguished Lecture, Lexington, KY, December 7, 2004
116. “Automated Generation of a Family of Compaction Curves”, *TRB Annual Meeting*, Washington, D.C., (presentation made by R.K. Daita), January 10, 2005
117. “A Vibrating Hammer Compaction Test for Granular Soils and Dense Graded Aggregates,” *TRB Annual Meeting*, Washington, D.C., 25 p., January 10, 2005.
118. “Some New Uses of Time Domain Reflectometry in Geotechnical Engineering,” Richard D. Woods Symposium, *GeoFrontiers Conference*, ASCE, Austin, TX, January 25, 2005.
119. “One-Point Vibrating Hammer Compaction Test for Granular Soils,” *GeoFrontiers Conference*, ASCE, Austin, TX, January, 25, 2005 (Presentation made by Adam Prochaska).
120. “Some New Uses of Time Domain Reflectometry in Geotechnical Engineering,” Richard D. Woods Symposium,” *Symposium on Applied Geophysics for Engineering and Environmental Problems (SAGEEP)*, Environmental & Engineering Geophysical Society, Atlanta, GA, April 4, 2005.
121. “Time Domain Reflectometry to Study Soil Behavior,” (Invited presentation), *2nd Chinese Conference on Unsaturated Soils*, Zhejiang University, Hangzhou, Peoples Republic of China, April 22, 2005.
122. “Comprehensive Evaluation of Near Surface Soil Properties by Combining Electromagnetic Wave and Seismic Wave Method”, Proc., *16th International Conference on Soil Mechanics and Geotechnical Engineering (ICSMGE)*, Osaka, Japan, September, 2005

123. "Refined One-Step TDR Method for Water Content and Density" *Proc., ASCE GeoCongress*, Atlanta, GA, February 2006.
124. "Time Domain Reflectometry in Geotechnical Engineering," 23rd Annual Geotechnical Seminar *Geo-Omaha*, February 17, 2006, Omaha, Nebraska. [Invited].

3. OTHER EVIDENCE OF EXCELLENCE IN RESEARCH

Research in the mid-1990s with graduate assistant, Shafiqul Siddiqui led to a breakthrough in the use of time domain reflectometry (TDR) for measuring moisture content and density of soil. The process and equipment received three patents for Purdue University. Subsequent work with students Wei Feng and Chih-Ping Lin led to even more important breakthroughs in this technology, most notably the complete removal of effects of apparatus, cable, and probe, the ability to model TDR signals with exceptional accuracy, and the first steps in using inverse theory to identify soil properties from TDR signatures. More recent work with Jie Zhang, Quanghee Yi, and Xiong Yu identified effects of temperature, large particle sizes, and soil additives. Work in this area is led to an ASTM Standard on Time Domain Reflectometry for In-Place Measurement of Water Content and Density. In the spring 2002, Mr. Xiong Yu and I discovered a One-Step Method for determining both water content and dry density directly from a single TDR measurement. A patent has been issued by the U.S. Patent Office in May 2006.

In 1997, I worked with Dr. Robert Bernhard, Professor of Mechanical Engineering and others at Purdue to secure for Purdue University the Institute for Safe Quiet Durable Highways, a University Transportation Center sponsored by the U.S. Department of Transportation. This Institute is a joint venture between the School of Civil Engineering and the School of Mechanical Engineering at Purdue and has the Pennsylvania Transportation Institute at Penn State University as a collaborator. Professor Bernhard is the Director and I am the Co-Director. The SQDH Institute reports through the Joint Transportation Research Program at Purdue. The Institute received funding of \$267,000 per year for the first two years, \$540,000 per year for the second two-year period and competed unsuccessfully against 16 other centers for \$1,000,000 per year for the third two-year period. All of these funds must be matched, one for one.

I have served on the Editorial Board of the *Geotechnical Testing Journal* continuously since 1983 and coordinate the reviews of three to five papers every year. In 2003, I was invited to join the Editorial Board of the Journal of ASTM International and manage the reviews of three to five papers per year in this capacity.

Starting in the fall of 2005, I formed an Organizing Committee to host *TDR 2006 Workshop and Symposium* at Purdue University. This 2.5 day program featured participants and speakers from over 12 countries. The Proceedings (<https://engineering.purdue.edu/TDR>) contain 35 technical papers, 5 plenary lectures, and one banquet presentation.

4. INVOLVEMENT IN GRADUATE RESEARCH

a. Major Professor for Completed Theses and Dissertations

Date	Name	Degree	Title	Pubs. ¹
1971	Sherril Ray Smith	M.S.C.E.		
1972	Elliott P. Cleveland	M.S.C.E.		
1973	Dorairaja Raghu	M.S.C.E.		
1974	John P. Jent	M.S.C.E.		
1976	Hugo Aparacio	M.S.C.E.		
1976	C. Thomas Gorman	M.S.C.E.		d.7, g.4, 5
1977	James E. Black	M.S.C.E.		
1977	Ronald J. Ebelhar	M.S.C.E.		g.7, 8, b.2
1977	Edmund G. McNulty	M.S.C.E.		
1978	Timothy McGlaughlin	M.S.C.E.		
1980	Stephen H. Bickel	M.S.C.E.		
1980	Wesley Wayne Dempsey	M.S.C.E.	non-thesis	
1980	Joseph P. Koester	M.S.C.E.		
1981	Dennis K. Guinn	M.S.C.E.	non-thesis	
1982	Mark Anderson	M.S.C.E.		
1982	Samuel Hale	M.S.C.E.		g.9, 10
1982	Stanley A. Harris	M.S.C.E.		g.15, 16
1982	Charles A. Rivette	M.S.C.E.		
1984	Chiang Lin	Ph. D.	Hot-Mix Asphalt for Railroad Trackbeds	f.8
1985	L. Ray Hendry	M.S.C.E.	non-thesis	
1986	Suzette Coleman	M.S.C.E.		
1987	Don W. Armour	M.S.C.E.		f.10.
1988	Mark Anderson	Ph. D.	A Data Base Method for Backcalculation of Composite Pavement Layer Moduli	f.15
1989	Ronnie Clark Graves	M.S.C.E.		f.12, 13,
1990	Makbul Hossain	Ph. D.	Numerical and Optimization Techniques Applied to Spectral-Analysis-Of-Surface-Waves Method for In Situ Determination of Elastic Layer Moduli	d.12, f.13
1990	Yu Ouyang	M.S.C.E.		f.16, g.18
1990	Jainren Wang	M.S.C.E.		d.12, e.2, f.18
1991	Donnie W. Fuller	M.S.C.E.	non-thesis	
1991	Evan Mossbarger	M.S.C.E.	non-thesis	
1991	Mostafa Sayyedsadr	M.S.C.E.	SASWOPR: A Program to Operate on Spectral Analysis of Surface Wave Data	f.14
1993	Alaa Ashmawy	M.S.C.E.	non-thesis	d.15, f.20
1993	Abidin Kaya	M.S.C.E.	non-thesis	
1993	T. Cássia de Brito Galvão ²	Ph. D.	Mineralogical and Geotechnical Properties of a Latosol from Minas Gerais, Brazil	f.21, f.22, e.3
1994	Soumitra Guha ³	Ph. D.	Dynamic Characteristics of Old Bay Clay Deposits in the East San Francisco Bay Area	d.17,d.18, f.20
1995	Alaa K. Ashmawy ⁴	Ph. D.	Analysis and Modeling of the Response of Geotextile-Reinforced Soil to Monotonic and Cyclic Loading	d.15, d.16, d.18, f.20

Date	Name	Degree	Title	Pubs. ¹
1995	Shafiqul I. Siddiqui	Ph. D.	A New Method of Measuring Density and Moisture Content of Soil Using the Technique of Time Domain Reflectometry	d.20, d.23
1999	Wei Feng ⁵	Ph. D.	Modeling of Time Domain Reflectometry and Measurement of Dielectric Properties of Soils	d.19, f.23, f.24, f.25
1999	C.P. Lin ⁵	Ph. D.	Soil Characterization Using Time Domain Reflectometry	d.19, d.21, f.23, f.24, f.25
2002	Aaron Altwies	M.S.	Non-thesis	
2002	Corey Switanowski	M.S.	Non-thesis	
2002	Weiyi Ma	M.S.	Non-thesis	See Pubs.
2003	Michael Haldavnekar ⁶	M.S.	Auto Adaptive Media for Liquefaction Prevention	See Pubs.
2003	Peng Zhang	M.S.	Non-thesis	See Pubs.
2003	Alison Hunyar	M.S.	Non-thesis	See Pubs.
2003	Xiong Yu	Ph.D.	Influence of Material Properties and Environmental Conditions on Electromagnetic Wave Propagation in Soil	See Pubs.
2004	Adam Prochaska	M.S.	An Alternative Method for Effective Compaction Control of Granular Soils	See Pubs.
2005	Radha K. Daita	M.S.	Family of Compaction Curves for Chemically Modified Soils	See Pubs.
2006	Carlos Zambrano	M.S.	Soil Type Identification Using Time Domain Reflectometry	See Pubs.
2006	Teresa E. Dallinger ⁷	M.S.	Geometric and Temperature Effects on Time Domain Reflectometry Measurements in Soils	See Pubs.
2006	Aaron Evans	M.S.	Compaction Control of Large-Sized Granular Soils/Aggregates: The Vibrating Hammer Method of Compaction and Time Domain Reflectometry	See Pubs.

1. Information in this column refers to subsection and article number for articles listed in Part B, Section. Published Work.
2. Co-major advisor with Prof. Darrell Schultze, Agronomy Department, School of Agriculture
3. Co-major advisor with Prof. Jonathan Bray, U. of California at Berkeley
4. Co-major advisor with Prof. Philippe Bourdeau
5. Co-major advisor with Prof. Rick Deschamps, Fuller Mossbarger Scott and May. *(Both of these students earned M.S. degrees in Electrical Engineering while completing Ph.D. degrees in Civil Engineering.)*
6. Co-Advisor with Profs. Antonio Bobet and Marika Santagata.
7. Co-Advisor with Prof. Marika Santagata.

b. Major Professor for Current Thesis and Dissertation Students

Current Theses and Dissertations

Start Date	Name	Expected Degree	Title	Pubs.
Aug. 2005	Julia Clarke ¹	M.S.		

1. Co-Advisor with Prof. Marika Santagata

c. Involvement on Committees of Thesis, Dissertation, and Non-Thesis Students

Hong Sung Lee (2002-2003), David Federoff (2002-present), Asha Sreekrishnavilasam (2005-2006), Chadi El-Mohtar (2004-present), Yeoun-Ike Kang (2004-present), Yiannis Zevgolis (2005-present), Adam Rudy (2005-present), Chul Min Jung (2006-present), Brock Barry (Doctoral student in Engineering Education, 2006-present)

5. RESEARCH INVOLVEMENT OF UNDERGRADUATES

Until the move to Purdue, approximately one student each year involved in special projects. (At least five undergraduates have won Oswald Awards in the Physical Sciences Division (campus wide competition) and many have won prizes awarded in the Civil Engineering Department and in the Kentucky Section of the American Society of Civil Engineers) At Purdue, at least five undergraduate students have been engaged in research projects.

6. RESEARCH GRANTS AND AWARDS RECEIVED**RESEARCH GRANTS**

Period covered: Since coming to Purdue University in 1991.

Beg. Date	End Date	Sponsor	Topic	Amount	Co PI's, % Resp., etc.
Nov. 1991	April 1992	Law Engineering	Shear Modulus and Damping of Soils at High Confining Stresses	\$12,000.	100%
July 1992	Sept. 1992	Dames and Moore	Shear Modulus and Damping of Soils at Savannah River Site	\$25,000.	100%
Sept. 1992	Dec. 1993	Kresge Foundation, Science Initiative	Integrating Today's Research with Education to Solve Tomorrow's Problems	\$500,000.	100%
Aug. 1993	Feb. 1996	FHWA/INDOT/JTRP	Time Domain Reflectometry for Moisture Content of Soils	\$88,000.	100%
July 1995	June 1997	Fed. Highway Admin./14 States	North Central SUPERPAVE Center	\$1,183,958.	33% (Jan Olek and Donald W. Lucas)
Jan. 1996	June 1998	FHWA/INDOT/JTRP	Automation and Standardization of Measuring Moisture Content and Density of Soil Using Time Domain Reflectometry.	\$90,000.	50% w/ Deschamp
Jan. 1998	June 2000	FHWA/INDOT/JTRP	Fundamental Engineering Properties of Soil Using Time Domain Reflectometry	\$95,000	50% w/ Deschamp
June 1998	July 2003	U.S. Dept. of Transportation	Safe Quiet Durable Highways	\$3,500,000	50% w/ Bernhard
Sept. 1999	June 2001	FHWA/INDOT/JTRP	Fundamental Engineering Properties of Soil Using Time Domain Reflectometry (Expansion of above project with same title.)	\$39,000	100%
Sept. 2000	Aug. 2002	FHWA/INDOT/JTRP	Beta Testing Implementation of the Purdue Time Domain Reflectometry (TDR) Method for Soil Water Content and Density Measurement.	\$120,000	100%
Aug. 2001	Jan. 2003	National Science Foundation	Soil Treatment with Thixotropic Fluids: An Autoadaptive Design for Liquefaction Prevention	\$67,827	20% w/ Bobet and Santagata
Nov. 2001	Oct. 2002	University of South Florida	Beta Testing Consortium	\$20,000	100%
Dec. 2001	Dec. 2002	GAI Consultants, Inc.	Beta Testing Consortium	\$10,000	100%
Jan. 2002	Dec. 2002	H.C. Nutting Company	Beta Testing Consortium	\$10,000	100%
June 2002	Apr. 2003	Rutgers University	Beta Testing Consortium	\$10,000	100%
July 2002	Feb. 2003	NSF	Development of an Example-Based Teaching Module for Pre-Algebra, Algebra I and Pre-Calculus Courses	\$4,550	A.Bobet, M. Santagata,20%

Beg. Date	End Date	Sponsor	Topic	Amount	Co PI's, % Resp., etc.
Aug. 2002	Dec. 2004	FHWA/INDOT/JTRP	A Study of Effective Soil Compaction Control of Granular Soils	\$80,000	100%
Jul. 2003	Dec. 2006	NSF	Advanced Analysis of Electromagnetic Waves for Intrinsic Soil Properties	\$201,377	Robert Nowack, Co-PI, 90%
Aug. 2003	July 2005	FHWA/INDOT/JTRP	Family of Curves for Chemically Modified Soils	\$80,000	100%
Nov. 2003	Feb. 2004	Durham Geo-Enterprises, Inc.	Use of Personal Data Assistants (PDA) for Control of Time Domain Reflectometry (TDR) Measurements	\$9,134	
Aug. 2004	Jul. 2007	NSF	Soil Treatment with Thixotropic Fluids: An Autoadaptive Design for Liquefaction Prevention	\$340,000	A. Bobet, (PI), M. Santagata, V. Drnevich, and A. Wei, (Co-PIs)
Apr. 2005	Jul. 2006	FHWA/INDOT/JTRP	Advanced Compaction Quality Control	\$28,000	P. Bourdeau, (Co-PI)
Feb. 2006	Dec. 2006	Durham Geo-Enterprises, Inc.	Conductivity and Temperature Effects on TDR Measurements	\$10,000	
May 2006	Apr. 2007	NSF	TDR 2006 Third International Symposium and Workshop on Time Domain Reflectometry	\$5,000	
				\$6,528,846.	

7. RESEARCH PROPOSALS SUBMITTED

RESEARCH PROPOSALS SUBMITTED

Date Submitted	Under Review or Not Funded	Sponsor	Topic	Amount	Co PI's, % Resp., etc.
Total					

C. EXTENSION, SERVICE, AND UNIVERSITY OUTREACH ACTIVITIES

1. EDUCATIONAL ACTIVITIES

As School Head, I was involved in a number of the extension and outreach programs of the School. Specifically, I was instrumental in securing the Indiana Pollution Prevention Institute for Purdue University (later renamed the Clean Manufacturing and Safe Materials Technical Institute. Funding for this Institute is approximately \$1,000,000 per year. I was the Director of the Joint Transportation Research Program (JTRP) and served as vice chairman of its Advisory Board 1991 to 1994. I continue to serve on the JTRP Advisory Board. I also served on the advisory board of the Indiana Local Technical Assistance Program (formerly Highway Engineering Research Project for Indiana Counties and Cities (HERPICC)) from 1991 through 2000.

a. Professional Society Programs

I am active in the American Society of Civil Engineers Geo-Institute (formerly the Geotechnical Engineering Division), and served in the Department Heads Council, and the Educational Activities Committee of ASCE. I have participated in the annual Accreditation Forums and the Department Heads Forums of ASCE on a continuing basis. I was elected to the Department Heads Council in 1995 to represent the Midwest and was reelected in 1998 to a four-year term. I served as Vice Chairman of the Department Heads Council was elected Chairman in May 1996, and re-elected twice to that position. I led the Department Heads Council through a visioning process that resulted in it having much increased prominence in ASCE. More importantly, strong communication links and working cooperation was established with civil engineering department heads/chairs across the country. I was responsible for forming a task group to "Define the Work of the Faculty." A white paper entitled "The Scholarship Landscape in Civil Engineering: A Bridge between Rhetoric and Reality" is the basis for much discussion and reform in civil engineering education.

I served for the years 1995-98 as Secretary and Treasurer of the Civil Engineering Division of the American Society of Engineering Education. I was elected to the Board of the Civil Engineering Division in 1999, served as Membership Secretary in 2001-2002, Vice Chair of the Division and Chair of the Civil Engineering Division Program Committee for the 2003 Annual Conference, which involved organizing nine technical sessions, four business sessions, and two major social functions in 2002-2003, and Chair of the Civil Engineering Division in 2003-2004.

As Chairman of the Department Heads Council, I participated in the visioning exercises of the Educational Activities Committee, EdAC of ASCE to make the organization more effective. In 1998, I was elected to a three-year term as member of EdAC. I also have been spearheading the effort to increase the participation of academic community in the Civil Engineering Research Foundation (CERF). In 1998, I led the strategic planning efforts to reorganize the Academic Research Council (ARC), served as a member of the ARC, and conducted elections of officers. Work continued on this effort through 2000.

In 1995, I was elected President of the A.A. Potter Chapter of the Indiana Society of Professional Engineers, an organization that had been defunct. It now survives to support MATHCOUNTS competition in this region. I arrange for the local MATHCOUNTS program annually since 1993 and in 1998, secured the State MATHCOUNTS competition for Purdue University on a biennial basis. I was also the driving force to have Purdue University offer eight scholarships to the top State winners.

In 2002, I was again selected to serve on the Educational Activities Committee of ASCE for a two year term. In this capacity, I am the coordinator of ASCE News articles and I have liaison responsibilities to the Civil Engineering Division of ASEE and the Publications Committee of the ASCE Journal of Professional Issues in Engineering Education and Practice.

Since 1983, I have served on the Editorial Board of ASTM's Journal of Geotechnical Testing and from 1985-1989 served as the Technical Editor. In the Fall of 2003, I was invited to the Editorial Board of the Journal of ASTM International.

Since 1998, I have served on the Board of Directors of Paul I. Cripe, Inc., a 90 person consulting firm with headquarters in Indianapolis.

Also, see "Other Evidence of Excellence in Research" above.

b. University Programs

Freshman recruiting trip to Merriville, March 1994.
Golden Honors Program, December 1996 and 1997
Diversity Workshop, January 6-8, 1998
Gender Diversity Workshop, May 1998
Patent and Copyright Committee, 2002 to present.

2. CONFERENCES, WORKSHOPS, AND SHORT COURSES

Established and taught a one-day workshop on "The Purdue TDR Method for Water Content and Density Determination" and began teaching it in the fall 2001. It was taught six times, mostly to personnel of DOT's and Beta Testing Partner universities and private firms.

Session Chair organizer for the Civil Engineering Division programs at the Annual Meeting of ASEE in Montreal, June 2002

Chair of the Civil Engineering Division Program Committee for the 2003 Annual Conference. (See C.1.a, above.)

Co-Chair (with Marika Santagata) of the Organizing Committee for the Great Lakes Geotechnical and Geoenvironmental Conference to be held at Purdue University in May 2003.

Co-Founder (with Marika Santagata) of the Purdue Geotechnical Society (PGS), May 2003. Continued leadership involvement with Organizing Committee for PGS Workshops and Leonards Lectures in 2004, 2005, and 2006.

3. STUDENT COUNSELING

Was faculty advisor at the University of Kentucky for Chi Epsilon, 1968-1990, ASCE Student Chapter for 3 years in mid-1970's. Invited to position of faculty advisor in fall 1994 to LeaderShape, an Engineering-wide organization that sponsors leadership-training programs for students. Participated in as a Facilitator at the weeklong LeaderShape Institute for 40 Purdue Students, August, 1995. Facilitated evening sessions with industry guests at May, August, and December 1996, May 1997, and August 1998 Leadershape Institutes. Purdue LeaderShape instituted an award named in honor of my contributions as faculty advisor and named me the first recipient of the "Vinny Award".

Worked with Assistant Dean of Students Linden Petrin in Spring 2001 - present to use the Myers-Briggs Type Indicator in forming teams of students and resolving personality problems in CE 498, senior design.

Advisor to approximately 5 undergraduate students on a continuing basis.

Worked with Purdue Engineering Student Council **IDEAS Engineering Outreach Program**, a one day program to expose elementary school students to engineering. I had two groups of approximately 20 students each doing projects in the Olson Lab (West Point Bridge Contest), experiments in the Geotechnical Lab, and gave lab tours of the other laboratories, October 2002.

Horizons Program in Freshman Engineering – Mentor to Chris Durnil, August 2002 to May 2003, Michael Arvola, September 2003 to 2005.

4. UNIVERSITY AND DEPARTMENT ADMINISTRATIVE SERVICE

Head of the School of Civil Engineering July 1991 – June 2000

a. Civil Engineering Committees

CE Open Committee, 1992-2000
ABET Accreditation Preparation Committee, 2001
Civil Engineering Renovations Committee, 2001-present
Geotechnical Search Committee, 2001-2002
Senior Design Committee, 2002-present
Faculty Awards Committee, 2006-present

b. Engineering Committees

c. University Committees

Patent and Copyright Committee, July 2002-2005

5. OFFICES HELD IN STATE, NATIONAL, AND INTERNATIONAL SOCIETIES

- Preconference Publication Subcommittee, Soil Dynamics Subconference, 7th International Conference on Soil Mechanics and Foundation Engineering Mexico City, 1969
- ASTM Committee D-18 on Soil and Rock
 - Subcommittee 01 Surface and Subsurface Reconnaissance, (Vice Chmn. 1978-1980)
 - Subcommittee 05 Structural Properties of Soils
 - Subcommittee 08 Construction and Control Tests
 - Task Group 03 New Technologies, Chair 2000-present
 - Subcommittee 09 Soil Dynamics
 - Subcommittee 10 Bearing Tests of Soils In Place (1984 - 2000)
 - Subcommittee 92 Geotechnical Testing Jour. (Member 1983-present, Chmn. 1984-89)
- 1972 Kentucky Highway Conference Organizing Committee
- Kentucky Section, ASCE, Awards Committee 1971-1973, Program Committees 1976-77
- Ohio River Valley Soils Seminars, Organizing Committee '71, '72, '73, '76 (chairman), '77, '78, '79, '82, '88
American Society of Civil Engineers Committee on Soil Dynamics, 1973-1981 and 1984-1990
- Geotechnical Division, ASCE, Organizing Committee for 1978 Specialty Conference in Pasadena, California
- Kentucky Society of Professional Engineers, Bluegrass Chapter, Chairman for 1978 Engineering Week Activities, Member of the Education Committee (1978-present, chairman 1980 & 1981)
- American Society of Testing and Materials, Committee D-18 Organizing Committee for Symposium on Acoustic Emissions, June, 1981, (Vice-Chairman)
- American Society of Civil Engineers, Geotechnical Engineering Division Organizing Committee for

- Symposium on Static Cone Penetration Testing, October, 1981 (Co-Chairman)
- International Society of Soil Mechanics and Foundation Engineering Publications Committee for the XIth International Conference, San Francisco, 1985.
 - Organizing Committee of the 1983 Eastern Oil Shale Symposium
 - Governor's Earthquake Hazards and Safety Technical Advisory Panel, Mitigation Committee, Transportation and Earth Stability Subcommittee Chairman, 1983-1991.
 - Civil Engineering Visitor, Accrediting Board for Engineering and Technology, 1984-1987
 - Technical Editor of the Geotechnical Testing Journal (an international quarterly journal) of the American Society for Testing and Materials, 1984-89, (Technical Editor is the director of the Editorial Board and makes final decisions on paper acceptance and technical content of journal.), Member, Editorial Board, 1984-present.
 - Expert Task Group on Materials Sampling and Testing, Strategic Highway Research Program, National Research Council, Washington, D.C., 1988-1989.
 - Research Advisory Board, National Stone Assoc., 1988 -1991.
 - CoChairman of the ASTM Committee D-18 1994 Symposium on Dynamic Geotechnical Testing II.
 - Secretary, ASCE Committee on Practitioner-Educator Interaction, 1994-95, Vice Chair, 1995-present
 - President, A.A. Potter Chapter of Indiana Society of Professional Engineers, 1994-present
 - Department Heads Council, ASCE Education Activities Committee, Elected Member, 1995-1998, 1998-2001, Elected Vice Chairman 1995, Elected Chairman 1996, Re-elected Chairman 1997, Re-elected Chairman 1998-2000.
 - American Society for Engineering Education, Civil Engineering Division, Secretary-Treasurer, 1995-1998,
 - American Society for Engineering Education, Civil Engineering Division, Director, 1999 – present, Membership Chairman 2001-2002, Vice Chair 2002-2003, Conference Chair 2002-2003, Division Chair 2003-2004.
 - Chaired Organizing Committee for Purdue Geotechnical Society Workshops and G.A. Leonards Lectures, 2003 – present. (One day event held each spring with presentations by alumni, faculty, and students at Workshop; eminent Leonards Lecturers is open to campus-wide participation. In 2006, partial sponsorship the Purdue Sigma Xi Society. (See <https://engineering.purdue.edu/PGS/> for history of programs.)
 - Indiana Society of Professional Engineers, elected Vice President, 2006.

6. COMMUNITY SERVICE ACTIVITIES

- St. Thomas Aquinas Student Parish Programs
 - Eucharistic Minister, 1997-2000, 2001-present
 - Men's Group, Coordinator, 1994-present, Leader 1999-present
- Lafayette Elks
 - Bridge Replacement Committee (Designed new bridge for golf carts and maintenance equipment.)
 - Red Stocking Christmas program
 - Ladies Classic Tournament committee member
- Johnson Rags Ballroom Dance Club, 2003-present
- University Farm Neighborhood Association
- MATHCOUNTS Coordinated competition for Junior High Students, North Central Indiana, 1995-present, obtained eight scholarships for State winners from Purdue in 1997, coordinating local and State competition at Purdue University 1998 - present. Hosted A.A. Potter Competition, Feb. 2006, State Competition, March 2006.

7. CONSULTING ACTIVITIES

- Soil Dynamics Instruments, Inc., W. Lafayette, Indiana, Development and Calibration of Dynamic Soil Testing Apparatus, President, 1974 - present.
- Greenbaum & Associates, Louisville, Kentucky, Foundation Vibration Analysis and Redesign Recommendations, 1992.
- ICF Kaiser Engineers, Oakland, California, Assessment of Dynamic Field and Laboratory Soil Data for Earthquake Analysis of Hazardous Storage Tank Facilities at Hanford Washington Site, 1994.
- Law Engineering and Environmental Services, Assessment of Landslide in Northern Kentucky, August, 1995.
- Fuller Mossbarger Scott and May, Lexington, Kentucky, Facilitated a Day-Long Workshop of Seismic Stability of Dewey Dam where participants included nationally know experts, Corps of Engineers staff, and FMSM staff, July 1998.
- Elected to the Board of Directors of Paul I. Cripe and Associates, Indianapolis, November 1998. Continuing.
- Selected with Prof. Jerome Connor of MIT and James Wight of the University of Michigan to perform a review of the Graduate Program in the Department of Civil Engineering at Texas A&M University, November 2000.
- Selected to perform a review of the Graduate Program in the Department of Civil Engineering at the University of Houston, Summer 2002 (decline because of time conflict).
- Consulting on Time Domain Reflectometry Device Design, Data Acquisition, and Analysis, July 2004-continuing.
- Review of the Graduate Civil Engineering Program at the University of Cincinnati, Fall 2006 (One of two reviewers engaged by the Graduate School Dean at the University of Cincinnati.)
- Consulting on Design, Construction, Operation, and Data Reduction of Torsional Simple Shear/Resonant Column Apparatus, GeoComp Corporation, Boxborough, Massachusetts, July 2006-continuing.

Signature , Date 1/15/07