CURRICULUM VITAE

April 2021

SHAHID AHMAD
Department of Civil, Structural, & Environmental Engineering
239 Ketter Hall, SUNY at Buffalo, Amherst, NY - 14260
E-mail: sahmad@buffalo.edu

FIELD OF SPECIALIZATION: Geotechnical Engineering / Computational Mechanics

EDUCATION

Ph.D. (Civil Engineering) **SUNY** at Buffalo, January 1986
MS (Civil Engineering) **SUNY** at Buffalo, September 1983
BS (Civil Engineering) **N.E.D**. University of Engineering & Tech. (Pakistan), 1981

EMPLOYMENT

Sept.'99- Present **Professor**, Dept. of Civil Engineering, SUNY at Buffalo.
Sept.'91- Aug.'99 **Associate Professor**, Dept. of Civil Engineering, SUNY at Buffalo.
Jan.'86-Aug.'91 **Assistant Professor**, Dept. of Civil Engineering, SUNY at Buffalo.
July'83-Dec.'85 **Research Assistant**, Dept. of Civil Engineering, SUNY at Buffalo.
Jan.'82-May'83 **Teaching Assistant**, Dept. of Civil Engineering, SUNY at Buffalo.
Jan.'81-Jan.'82 **Assistant Engineer**, McDonald Layton Costain Ltd., Supervised construction work at a Thermal Power Project in Karachi, Pakistan.

AWARDS AND HONORS

- The "**SUNY Chancellor's Award for Excellence in Teaching**" (1997)
- '**Who's Who in America's Teachers'** (1998 & 2005)
- "**Most Favorite Engineering Professor**"--- The Engineer's Angle(1996)
- Honorary Membership of the 'Golden Key National Honor Society' (1994)
- Certificate of Recognition for Positive Influence on Graduating Class of 1999

-

Presented by UB Career Planning & Placement

- Certificate of Recognition from UB for teaching excellence, 2003.
- Dean's list (1977-1981), N.E.D. University, Pakistan.
- Engineering University Undergraduate Scholarship, 1977-1981

PROFESSIONAL AFFILIATIONS

- Member of the ASCE's National 'Soil Dynamics Committee' (1988-1996)
- Member of American Society of Civil Engineers (ASCE)
- Member of American Society for Engineering Education (ASEE)
- Member of International Society of Soil Mechanics & Foundations Engineers

RESEARCH PORTFOLIO

1.1 GRANTS

(PD = Project Director/Principal Investigator, Co-PI = Co-principal Investigator)

	Title	Sponsor	Amount	Award Period
1.	Development of the Boundary Element Method for Acoustic Analysis of Car Compartment. Co-PI: S. Ahmad (with P.K. Banerjee)	Ford Motor Company	$71,000	9/1/86-8/31/87
2.	Seismic Behavior of Pile Foundations. Principal Investigators: Co-PI: S. Ahmad (with P.K. Banerjee)	NCEER	$60,000	9/1/87-8/31/88
3.	Study of Vibration Isolation in Multilayered 3-D Soil Media. PD: S. Ahmad	NSF	$64,000	9/1/88-12/31/89
4.	Local Site Effects on Seismic Ground Motion. PD: S. Ahmad (Co-PI: G. Gazetas)	NYSSTF	$94,500	9/1/88-2/28/91
5.	Study of Vibration Screening Effectiveness of Wave Barriers Under plane-strain condition. PD: S. Ahmad	NSF	$23,000	9/11/89-2/31/90
6.	Seismic Performance Analysis & Design of Bridge Pier-Pile Foundation Systems. Co-PI: S. Ahmad (with G. Gazetas)	NCEER	$90,000	9/1/89-8/31/91
7.	Analysis and Design of a Seismic Soil-Structure Interaction Test Box. Co-PI: S. Ahmad (with K. Fishman & R. Richards)	NCEER	$101,000	9/1/90-8/31/91
8.	Study of Sliding Friction of HDPE-Clay and HDPE-Geotextile Interfaces. PD: S. Ahmad (with K. Fishman)	Hyland Associates, New York	$10,600	9/1/90-8/31/91
9.	Seismic Settlements and Bearing Capacity of Foundation and Bridge Abutments in Dry Soil. Co-PI: S. Ahmad (with R. Richards)	NCEER	$38,000	9/1/90-8/31/91
10.	Seismic Slope Stability Study for the Farmersville (NY) Landfill Co-PI : S. Ahmad (with K. Fishman)	AFI, Buffalo (NY)	$17,450	9/1/91-8/31/92

Grants (continued)

	Title	Sponsor	Amount	Award Period
11.	Experimental and Analytical Studies of Bridge Foundations and Abutments. PD: S. Ahmad (with K. Fishman & R. Richards)	NCEER	$75,000	9/1/91-8/31/93
12.	Experimental Investigation on Vibration Screening Effectiveness of In-filled Trench Barriers. PD: S. Ahmad	NSF	$75,000	1/1/92-12/31/93
13.	Soil-pile Interaction: Effect of Kinematic Interaction on Structural Response and Damping Co-PI: S. Ahmad (with G. Gazetas)	FHWA	$55,000	10/1/92-4/1/94
14.	Dynamic Boundary Element Analysis of Multi-layered Anisotropic Solids PI: S. Ahmad (with Prof. N. Rajapakse)	NATO Research Grant Program	97,000 Francs	5/1/95-4/30/98
15.	Development of a Multi-institutional Graduate Professional Educational Program in Earthquake Engineering.	MCEER	$27,000	3/1/1999-6/30/2000

1.2 GRADUATE STUDENT SUPERVISION

Major Advisor for PhD degree

- Tahmeed M. Al-Hussaini, `Vibration Isolation Systems Using Wave Barriers,' **Ph.D.**, July 1992. (**Current Position: Associate Professor, Bangladesh University of Engineering & Technology, Dahka, Bangladesh**)

- Florentino Leyte Guerrero, 'Dynamic Analysis of Anisotropic Solids by Boundary Element Method', Ph.D. , May 2002. (**Current Position: Project Engineer, GZA, Buffalo).**

- Chung Chun Lin, 'Stochastic Modeling of Market Value and Assessment of Residential Properties in Amherst, New York', Ph.D., expected to complete in February 2008.

Major Advisor for Master degree

- Manoj Chopra, `A Constitutive Model for Anisotropically Consolidated Clays Under Axisymmetric, Plane Strain and General Three-Dimensional Loading Conditions,' **M.S**., June 1988. (**Current Position: Associate Professor, Univ. Of Central Florida, Orlando, Florida)**
- Hubert Consol, 'Dynamic Compliance of Strip Foundations Under Vertical Excitation, **M.S.,** November 1988.
- Ashim Bharadwaj, `Horizontal and Rocking Stiffness of Dynamically Loaded Strip Foundations Embedded in Layered Soil,' **M.S.**, December 1989.
- Akhter Shareef, `Vertical Stiffness of Dynamically Loaded Strip Foundations Embedded in layered **M.S.**, 1990. (**Current Position: Senior Engineer, NYSDOT, Albany, NY)**
- Asohk Rupani, `Horizontal and Rocking Impedance of Square Foundations Embedded in Layered soil' **,M.S.,** January 1991.
- Hemang Desai, ' Soil Amplification Study of Memphis,' **M.S.**, 1991.
- Hangbo Xue, `Seismic Response of Canyons and Valleys for Incident SH, SV, and P Waves' **M.S.,** July 1992.
- Avtar Singh Vasu , ' Vibration Isolation of 3-D Machine Foundations by Trench Barriers', **M.S.**, May 1993 (**Current Position: Senior Engineer, NYSDOT, New York city.)**
- James M. Baker, `Experimental Study on Vibration Screening by In-filled Trench Barriers', **M.S.,** January 1994. (**Current Position: Senior Consulting Engineer, Foundation Design Inc., Rochester, NY)**
- Jiuwang Li, `Numerical Simulation of a Series of Vibration Isolation Field Tests by BEM', **M.S**., June 1994. (**Current Position: Structural Engineer, PBQD Inc., Norflok, Virginia)**
- Renganathan Vaikunthan, 'Numerical Simulation of a Series of Vibration Isolation Field Tests', **M.S**., Feb 2002.
- Matthew Abate, 'A Study of Pole Embedment Foundations in Cohesionless Soils', **M.S.** , May 2006.
- Salvatore Casucio, 'Dynamic Response of Deeply Embedded Foundations', M.E. (expected to finish December 2007).

M.E. Projects

- Chad Danforth, May 2006
- Boris Weinstein, May 2006
- Vaishali Jain, May 2006
- Matthew Jolliff, May 2006
- Kok Jin Yeo, May 2006
- Lisa M Andreson, May 2006
- Anthony Patrick Huskisson, May 2006
- Rajendra Kumar Sharma, May 2006
- Jeffery Reberholt, May 2006
- Kevin Struebel, May 2006
- Chirag D. Bhatt, May 2006

Co-Advisor for Ph. D. Degree

- K. Chen, `Dynamic Analysis of 3D Foundations by Boundary Element Method,' **Ph.D.,** 1987 . (Major Advisor: Prof. P. K. Banerjee)
- S.M. Mamoon, `Dynamic Behavior of Pile Foundations,' **Ph.D.,** 1990. (Major Advisor: Prof. P. K. Banerjee)
- A.M. Israil, `Elastic and Inelastic Dynamic Response of Foundations,' **Ph.D.,** 1990. (Major Advisor: Prof. P. K. Banerjee)
- Ke Fan, `Seismic Behavior of Pile Groups,' **Ph.D.**, August 1992. (Major Advisor: Prof. G. Gazetas)
- G. Dargush, `BEM for Analogous Problems of Thermo-mechanics and Soil Consolidation,' **Ph.D.,** 1987. (Major Advisor: Prof. P. K. Banerjee)
- D. Henry, `Advanced Development of BEM for Elastic and Inelastic Thermal Stress Analysis,' **Ph.D.,** 1987. (Major Advisor: Prof. P. K. Banerjee)
- H.C. Wang, `Dynamic Stress Analysis of Axisymmetric Bodies Under Generalized Loading,' **Ph.D**., 1989. (Major Advisor: Prof. P. K. Banerjee)
- Shyh-Chang Huang, `BIE Formulations of Exterior Helmholtz Problems,' **Ph.D.**, 1989. (Major Advisor: Prof. R. Shaw)
- M.D. Nasim Uddin, `Seismic Behavior of Earth Dams,' **Ph.D.**, June 1992. (Major Advisor: Prof. G. Gazetas)
- Xiaocheng Shi, 'Plastic Analysis for Seismic Stress Fields', **Ph.D.**, March 1993. (Major Advisor: Prof. R. Richards)
- Chaojie Huang, 'Plastic Analyses for Seismic Stress and Deformation Fields', **Ph.D.**, November 1996. (Major Advisor: Prof. R. Richards)

- Debashis Basu, ' Numerical Simulation of Structural Acoustics Using Coupled Finite Element and Boundary Element Techniques', **Ph.D.**, September 1997. (Major Advisor: Prof. P.K. Banerjee)
- Swaminathan Sureshkumar, 'Advanced Non-linear Finite Element Analyses of Manufacturing Processes and Construction', **Ph.D.**, October 1997. (Major Advisor: Prof. P.K. Banerjee)
- S. Nesarajah, 'Dielectric Despersion and Some Geotechnical Applications', **Ph.D**., January 1998. (Major Advisor: Prof. Theva)
- Dezhang Song, 'Advanced Development of Finite Element Method for Practical Application of Plasticity', **Ph.D**., February 1998. (Major Advisor: Prof. P.K. Banerjee)
- Rumpa Chandoary, 'Advanced Nonlinear Analysis of Microelectronics packaging ', **Ph.D.**, August 1998. (Major Advisor: Prof. C. Basaran)
- Ali Reza Hadjesfandiari, 'Theoretical and Computational Concepts in Engineering Mechanics', **Ph. D**., February 1999. (Major Advisor: Prof. Gary Dargush)
- Semih Kucukarslan, 'Linear and Non-linear Soil-Pile-Structure Interaction Under Static and Impact Loading', **Ph.D**., January 2000. (Major Advisor: Prof. Banerjee)
- Kyung-Ho Park, 'Development of BEM for Transient Coupled Problems', **Ph.D**., February 2001. (Major Advisor: Prof. Banerjee)
- Rafeek Nashed, ' Liquefaction Mitigation of Silty Soils using Dynamic Compaction,' **Ph.D.,** December 2005 (Major Advisor: Prof. Theva)
- T. Shenthan, 'Liquefaction Mitigation in Silty Soils using Stone Columns supplemented with Wick Drains,', **Ph.D**., December 2005 (Major Advisor: Prof. Theva)
- Thangalingam Kanagalingam, 'Liquefaction Resitance of Granular Mixes Based on Contact Density and Energy Considerations.', **Ph.D.**, February 2006. (Major Advisor: Prof. Theva)
- Jaideep Chaterejee, 'Nonlinear Deformation and Collapse Analyses by Boundary Element Method', **Ph. D.,** December 2006. (Major Advisor: Prof. Banerjee).
- Weiwei Jia, 'Electro-Osmatic Grouting Technique for Liquefaction-Mitigation of Low Permeability Silty Soils', **Ph.D.,** September 2006. (Major Advisor: Prof. Theva)

1.3 PUBLICATIONS

Refereed Journal Papers

1. S. Ahmad, T.G. Davies and G.D. Manolis; `Viscoelastic Analysis of Piles and Pile Groups', International Journal of Analytical and Numerical Methods in Geomechanics, Vol. 9, No. 3, 237-252, 1985.

2. S. Ahmad and P.K. Banerjee; `Free Vibration Analysis by Boundary Element Method Using Particular Integral', ASCE Journal of Engineering Mechanics, Vol. 112, No. 7, 682-695, 1986.

3. P.K. Banerjee, S. Ahmad and G.D. Manolis; `Transient Elastodynamic Analysis of 3-D Problems by Boundary Element Method', Earthquake Engineering and Structural Dynamics, Vol. 14, 933-949, 1986.

4. S. Ahmad and G.D. Manolis; `Dynamic Analysis of 3-D Structures by Transformed Boundary Element Method', International Journal of Computational Mechanics, Vol., 3, 185-196, 1987.
5. S. Ahmad and P.K. Banerjee; `Multi-Domain BEM Analysis for Two-dimensional Problems of Elastodynamics', International Journal for Numerical Methods in Engineering, Vol. 26, No. 4, 891-912, 1988.

6. P.K. Banerjee, S. Ahmad and H.C. Wang; `A New BEM Formulation for the Acoustic Eigenfrequency Analysis', Int. Journal for Numerical Methods in Engineering, Vol. 26, No. 6, 1299-1309, 1988.

7. S. Ahmad and P.K. Banerjee; `Time Domain Transient Elastodynamic Analysis of 3-D Solids by BEM', International Journal for Numerical Methods in Engineering, Vol. 26, No. 8, 1709-1728, 1988.

8. S. Ahmad; `Dynamic Stress Analysis of a Class of Geomechanics Problems by BEM', International Journal for Numerical and Analytical Methods in Geomechanics, Vol. 13, No. 4, 401-417, 1988.

9. P.K. Banerjee, S. Ahmad and K.Chen; `Advanced Application of BEM to Wave Barriers in Multi-layered Three-dimensional Soil Media', Earthquake Engineering and Structural Dynamics, Vol. 16, 1041-1060, 1988.

10. G.D. Manolis and S. Ahmad; `Ground Motion Resulting from a Pressurized Buried Cavity', Journal of Wave Motions, Vol. 10, 465-478, 1988.

11. S. Ahmad, A.S.M. Israil, and K. Chen; `Comparison of Dynamic Stiffness of Rigid Square and Rectangular Foundations by DBEM and IBEM', Int. Journal for Numerical and Analytical Methods in Geomechanics, Vol. 12, 657-678, 1989.

12. A.S.M. Israil and S. Ahmad; `Dynamic Vertical Compliance of Strip Foundations in layered Soils', Jour. of Earthquake and Structural Dynamics, Vol. 18, 933-950, 1989.

13. S.M. Mamoon and S. Ahmad; `Seismic Response of Piles to Obliquely Incident SH, SV and P Waves', ASCE Journal of Geotechnical Engineering, Vol. 116, No. 2, 186-204, 1990.

14. S. Ahmad and P.K. Banerjee; `Inelastic Transient Dynamic Analysis of Three-dimensional Problems by BEM', Int. Journal for Numerical Methods in Engineering, Vol. 29, 371-390, 1990.

15. S. Ahmad and T.M. Al-Hussaini; `Simplified Design for Vibration Screening by Open and In-filled Trenches', ASCE Journal of Geotechnical Engineering, Vol. 117, No. 1, 67-88, 1991.

16. T.M. Al-Hussaini and S. Ahmad, `Design of Wave Barriers for Reduction of Horizontal Ground Vibration', ASCE Journal of Geotechnical Engineering, Vol. 117, No. 4, 616-636, 1991.

17. S. Ahmad and A. Bharadwaj; `Dynamic Horizontal Stiffness of Embedded Strip Foundations in Layered Soil', ASCE Journal of Geotechnical Engineering, Vol. 117, No. 7, 1021-1041, 1991.

18. Ke Fan, G. Gazetas, S. Ahmad and A. Kaynia; `Kinematic Seismic Response of Single Piles and Pile Groups', ASCE Journal of Geotechnical Engineering, Vol. 117, No. 12, 1860-1879, 1991.

19. S. Ahmad and G. Gazetas; `Torsional Stiffness of Arbitrarily Shaped Embedded Foundations', ASCE Journal of Geotechnical Engineering, Vol. 118, No. 8, 1168-1185, 1992.

20. S. Ahmad and G. Gazetas; `Torsional Radiation Damping of Arbitrarily Shaped Embedded Foundations', ASCE Journal of Geotechnical Engineering, Vol. 118, No. 8, 1186-1199, 1992.

21. A. Bharadwaj and S. Ahmad; `Rocking Impedance of Embedded Strip Foundations in Layered Soil', ASCE Journal of Geotechnical Engineering, Vol. 119, No. 5, 796-813, 1993.

22. K.L. Fishman and S. Ahmad; `Seismic Response for Alluvial Valleys Subjected to SH, P, and SV Waves', Soil Dynamics and Earthquake Engineering, Vol. 14, 249-258,1995.

23. T.M. Al-Hussaini and S. Ahmad; `Active Isolation of Machine Foundations by in-Filled Trench Barriers,' ASCE Journal of Geotechnical Engineering ,Vol. 4, 288-294,1996.

24. S. Ahmad, T.M. Al-Hussaini and K.L. Fishman; `An Investigation on Active Isolation of Machine Foundations by Open Trenches', ASCE Journal of Geotechnical Engineering, Vol. 6, 454-461, 1996.

25. S. Ahmad and K. Rupani 'Horizontal Impedance of Embedded Square Foundations
in Layered Soil', International Journal of Soil Dynamics and Earthquake Engineering, Vol. 18, 61-71, 1999.

26. S. Ahmad, F. Leyte and R.K.N.D. Rajapakse, 'BEM Analyses of two-dimensional Elastodynamic Problems of Cross-Anisotropic Solids', Journal of Engineering Mechanics , Vol. 127, No.2, 149-156, 2001

Chapters in Books

27. G.D. Manolis, S. Ahmad and P.K. Banerjee; `Boundary Element Method Implementation for Three-dimensional Elasto-dynamics', Chapter 2 in Developments in Boundary Element Methods - IV, Eds. P.K. Banerjee and J.O. Watson, Elsevier Applied Science Publishers, London, pp. 29-63, 1985.

28. G.D. Manolis, S.Ahmad and P.K. Banerjee; `Surface disturbance Due to Underground Explosions', Chapter 6 in Developments in Soil Mechanics and Foundation Engineering-3, Ed. P.K. Banerjee, Elsevier Applied Science Publishers, London, pp. 209-232, 1987.
29. P.K. Banerjee, S. Ahmad and G.D. Manolis; `Advanced Dynamic Analysis of Three-dimensional Structures', Chapter 8 in Boundary Element Methods in Mechanics, Ed. D.E. Beskos, Computation Methods in Mechanics Series, Vol., 3, pp. 256-284, North Holland, Amsterdam, 1987.

30. P.K. Banerjee, H.C. Wang and S. Ahmad; `Advanced Development of BEM for Elastic and Inelastic Dynamic Analysis of Solids', Chapter 3 in Development in Boundary Element Methods - V, Eds. P.K. Banerjee and R.B. Wilson, Elsevier Applied Science Publishers, London, 77-117, 1989.

31. P.K. Banerjee, H.C. Wang and S. Ahmad; `Multi-region periodic dynamic analysis of 2-D, axisymmetric and 3-D problems,' Chapter 2 in `Advanced Dynamic Analysis by Boundary Element Method,' Development in Boundary Methods, Vol. 7, Elsevier Appl. Scie., London, pp. 27-74, 1992.

Conference Proceedings (published)

32. P.K. Banerjee and S. Ahmad; `Advanced Three-Dimensional Dynamic Analysis by Boundary Element', Proc. ASME Conf. on Advanced Topics in Boundary Element Analysis, Florida, Nov. 1985, and Vol. 72, pp. 65-81.

33. P.K. Banerjee, S.T. Raveendra and S. Ahmad; `Progress in 3D Boundary Element Analysis Via Examples', Proc. International Conf. on BEM in Engineering, Tsighua University, Beijing, China, Oct. 1986, Ed. Du Quinghua, Pergamon Press, pp.19-38.

34. S. Ahmad and T. Al-Hussaini; `Study of Vibration Screening in Layered Soils by BEM', 26th Annual Technical Meeting of the Society of Engineering Science, Sept. 18-20, 1989, University of Michigan, Ann Arbor.

35. S. Ahmad; `Inelastic Dynamic Analysis of 3-D Solids by BEM', 26th Annual Meeting of the Society of Engineering Science, September 18-20, 1989, University of Michigan, Ann Arbor.

36. T. Al-Hussaini and S. Ahmad; `Simple Design Methods of Vibration Isolation by Wave Barriers', Proc. of 2nd Int. Conf. on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, St. Louis, MO., March 11-15, 1991,University of Missouri-Rolla Publication,pp.1493-1500.

37. S. Ahmad, E. Gazetas H. Desai; `Study of Site Response at Memphis due to a Large New Madrid Earthquake', Proc. of 2nd Int. Conf. on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, St. Louis, MO., March 11-15, 1991,University of Missouri-Rolla Publication,pp.1259-1265.

38. S. Ahmad and S.M. Mamoon, `Seismic Response of Floating Piles to Obliquely Incident Waves', Proc. of 2nd Int. Conf. on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, St. Louis, MO., March 11-15, 1991,University of Missouri-Rolla Publication,pp.805-814.
39. S. Ahmad and K.L. Fishman; `Response of Alluvial Valleys to SH, SV and P Waves', Proc. of 3rd Inter. Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, St. Louis, Missouri (USA), April 2-7, 1995,University of Missouri-Rolla Publication, pp.709-714.

40. S. Ahmad, J. Baker, and J. Li; `Experimental and Numerical Investigation on Vibration Screening by In-filled Trenches,' Proc. of 3rd Inter. Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, St. Louis, Missouri (USA), April 2-7, 1995,University of Missouri-Rolla Publication, pp.757-762.

41. S. Ahmad and T. M. Al-Hussaini; `Simple Model for Active Isolation of Machine Foundations by Open trenches', Proc. of 3rd Inter. Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, St. Louis, Missouri (USA), April 2-7, 1995,University of Missouri-Rolla Publication, pp.747-752.

42. T. Al-Hussaini and S. Ahmad; `Reduction of Wave Energy by Hollow and Solid Wave Barriers', Proc. of the 1st Int. Conf. on Earthquake Geotechnical Engineering, Tokyo (Japan), Nov. 14-16, 1995, A. A. Balkema/Rotterdam/Brookfield Publication, pp. 517-524.

43. S. Ahmad, R.K.N.D. Rajapakse F. Leyte and F. Leyte, 'BEM Analyses of 2-D Elastodynamic Problems of Anisotropic Solids', International Symposium on Engineering Mechanics, June 1997, Chicago (USA).

43. S. Ahmad, F. Leyte and R.K.N.D. Rajapakse, 'Analysis oF Elastodynamic Problems of Orthotropic & Non-Orthotropic Solids by BEM', 13th ASCE Engineering Mechanics Conference, Baltimore, MD, June13-16, 1999.

44. S. Ahmad and A. Reinhorn, 'A New Approach to Civil Engineering Education at SUNY-Buffalo', ASEE Conference on 'Reshaping Engineering & Engineering Technology Education', PennState, Erie, April9-10, 1999.

45. T.M. Al-Hussaini and S. Ahmad, 'Numerical and Experimental Studies on Vibration Screening by Open and In-filled Trench Barriers', Wave 2000, Chouw & Schmid (eds), Balkema, Rotterdam, 241-250, 2001.

Technical Reports

46. S. Ahmad; `Linear and Nonlinear Dynamic Analyses by Boundary Element Method', NASA Contract Report # 187228, Oct.1991.

47. S. Ahmad and A.S.M. Israil; `Dynamic compliance of Vertically Loaded Strip Foundations in Multilayered Viscoelastic Soils' National Center for Earthquake Engineering Research Technical Report-88-0017, SUNY at Buffalo, 1988.

48. S.M. Mamoon, P.K. Banerjee and S. Ahmad; `Seismic Response of Pile Foundations', National Center for Earthquake Engineering Research Technical Report 88-0034. SUNY at Buffalo, 1988.

49. H. Desai, S. Ahmad, G. Gazetas and Myoung R. Oh; `Study of Soil Amplification at a Selected Site in Memphis', National Center for Earthquake Engineering Research Technical Report 90-0023, SUNY, at Buffalo, 1990.

50. Ke Fan, G. Gazetas, S. Ahmad and A. Kaynia; 'Kinematic Seismic Response of Single Piles and Pile Groups, National Center for Earthquake Engineering Research Technical Report 91-0003 SUNY at Buffalo, 1991.

1.5 INVITED SEMINAR PRESENTATIONS

- `Dynamic Analysis of Three Dimensional Solids by Boundary Element Method', Dept. of Civil Engineering, University of California at Davis, Feb. 4, 1986.
- `Nonlinear and Linear Dynamic Analysis of Structures by BEM', Dept of Civil Engineering, Miami University, Coral Gable, FL, Feb. 21, 1986.
- `Application of the BEM to a class of Geotechnical Engineering Problems', Dept. of Civil Engineering, Stanford University, Feb. 25, 1988.
- `Simplified Procedures for the Design of Vibration Screening Systems', Dept of Civil Engineering, University of Arizona, Tucson, AZ, April 7, 1989.
- 'Dual Degree Programs in Civil Engineering', the 1999 ACSE DHC (Department Head Council) Forum in Charlotte, N. Carolina, October 18th,1999.

TEACHING PROTFOLIO

2.1 TEACHING AWARDS AND RECOGNITION

- **'SUNY Chancellor's Award for Excellence in Teaching', (1997)**
- **'Who's Who Among America's Teachers', (1998 & 2005)**
- **"Most Favorite Engineering Professor" , The Engineer's Angle (1996)**
- **Honorary membership in the "Golden Key National Honor Society" (1994)**
- **Certificate of Recognition for Positive Influence on Graduating Class of 1999**

-

Presented by UB Career Planning & Placement

- **Certificate of Recognition from UB for teaching excellence, 2003**

2.2 TEACHING EXPERIENCE

Professional Courses

- P.E. License Review Course - Taught from 1987 to 1992.
- Soils & Hydrogeology - PSTP Course # 2979B (Public Service Training Program, Rockefeller college, SUNY/Albany) - Taught in October 1989.
- Foundation Design and Construction - PSTP Course (Public Service Training Program, Rockefeller College, SUNY/Albany), - Taught in September 1997 and October 1998.

COURSES TAUGHT AT UB :

COURSE	Credit Hours	Semesters/Years	Enrollments
EAS205 Applied Mechanics I (Required course until 1995)	4	Fall'94 and Fall'95	191 & 207
EAS206 Applied Mechanics II (Required course until 1995)	4	Fall'86,87,88,89,90, 91 and Spring'90	51,54,59,67,58,53 & 196
EAS 207 Statics (Required) Taught one large class till 2003. Teaching 2 sections since 2004.	3	Fall'96 - 2006 Summer 1998 -2020	200 to 300 students 30 to 60 students
EAS 208 Dynamics	3	Summer 1998-2006	20 to 30 students
EAS 209 Solid Mechanics	3	Spring 2007 -2020 Summer 2006-2020	75 to 150 students 30 to 60 students
CIE 334 (434) Soil Mechanics (Required course)	3 (4)	Fall'87, 88,89 and Spring' 94,96,97, 98, 2001-2003 & 2006	52,75,95 87,85,66, 41, 57, 41, 64, 75 & 83

COURSE	Credit Hours	Semesters/Years	Enrollments
EAS 103 Intro. to Engineering (one section)	1	Fall 1991	12
EAS 495 Engineering Summer Institute (one section)	3	Summer 1997, 1998, 2000-2005	9, 16, 18, 16, 12,15 & 16
CIE 435 Foundation Design	3	Spring 1996 & 2002	15 & 26
CIE404 Civil Engr. Internship	3	1998 - 2005	10 to 20 students
CIE534 Soil Dynamics (old course)	3	Spring'86, 87, 88, 89, 91 and 1993	5, 9, 6, 8, 5 and 6
CIE 534 Earthquake Engr. & Foundation Dynamics	3	Spring 1997 – 2000, 2002, 2004 & 2005	8, 16, 11, 12, 9, 8 and 9
CIE 530 Fund. of Soil Behavior	3	Fall 1986	7
CIE533 Adv. Foundation Design	3	Spring 1992 and 1993	10 , 10
CIE 630 Experimental Soil Mech.	3	Spring'91,92,93 & 94	5,6,8 and 5
CIE 499 Independent Study	1-6	Fall 1992 & Summer'96	2 (a total of 6 credit hrs.)
CIE501/502 Individual Problems	1-6	Fall'86 – Fall'05	18 (a total of 30 cr. hrs.)
CIE 557/558/560/559 MS Project & Thesis	3-6	Fall'86 – Spring 2006	20 students (a total of 66 cr. hrs.)
CIE 659/660 Dissertation	1-6	Fall'86 – Spring 2005	67 cr. Hrs.

SERVICE PORTFOLIO

3.1 DEPARTMENTAL SERVICES

BS(Civil) / BS(Computer Science) Dual-Degree Program:

Developed and started a four-and-a-half-year BS(Civil)/BA(Computer Science) dual-degree program. The dual-degree program blends the training on information technology with education & training on design and construction of engineering structures and systems. This program started in fall'98.

Combined BS(Civil) / MEng(Civil) Degree Program:

Developed a combined BS/MEng degree program in Civil Engineering and obtained approvals from the School of Engineering, the University and the New York State Education Department. The new program is geared towards the proposed requirement of at least a Master's degree for the professional practice of Civil engineering at entry level (ASCE Board of Directors resolution, 1998). This program has started in fall 1999.

Co-op Program in Civil Engineering:

Establish a Co-op program in Civil Engineering in 1998. This program takes 4.5 years to complete the BS(Civil) degree. Students enrolled in the program gain valuable practical experience by working full-time in engineering industry for 10 months after their junior year.

BS(Civil) / MBA Dual-Degree Program:

Developed a BS(Civil)/MBA dual degree program with the Management School and obtained approval from the University and the New York State Education Department. The first few students from this program graduated in 2002.

Mandatory Faculty Advisement Program For Undergraduates:

Developed a mandatory departmental faculty advisement program for Civil engineering undergraduates. Developed and implemented various procedures and means for the advisement program. Such as, prepared a handbook for faculty titled 'Undergraduate Advisement Handbook for Civil Engineering Faculty' that provides complete guidelines and information for undergraduate advisement.

M.Eng. Program in Earthquake Engineering:

Developed and started in fall'99 a Master of engineering (M. Eng.) program in Earthquake Engineering in collaboration with the MCEER. In September 2000, five students graduated from the program.

Faculty Advisor, ACSE Student Chapter (1995-96)

In 1996, the ASCE student chapter received two national awards for its exceptional performance. Furthermore, It hosted the AISC/ASCE National Bridge competition at SUNY/Buffalo, and for the first time in the history of regional bridge design competition, one school, U.B. placed both first and second.

Faculty Advisor, Concrete Canoe Team (1995-96)**:**

The University of Buffalo Concrete Canoe team was placed third in the regional competition held at the Clarkson University.

Director of Undergraduate Studies (May 1997 – 2000)

- Was responsible for development of **Undergraduate Curriculum** and departmental
  advisement of students.
- Advised Civil engineering undergraduates on academic probation and worked with them to improve their standings.

Associate Chairman for Scheduling and Planning (1996 – 1999)

Was responsible for coordinating course and teaching schedules for the department.

Member, Graduate Studies Committee (1995-98 and 2004-2005, 2006):

Other Departmental Services:

- Member, Search Committees for Geotechnical Faculty Position (1988, 94 & 95)
- Member, Search Committee for Structural Engineering Faculty Position (1996)
- Member, Search Committee for Construction Engineering Faculty (1998)

3.2 SCHOOL OF ENGINEERING AND UNIVERSITY SERVICES

- Member, University Undergraduate Curriculum Committee (2000-2005)
- Elected Member of the University Faculty senate (1998-2000)
- Member, Search Committee for Department Chair of Civil Engineering(1990)
- Member, Undergraduate Academic Program Council (1997-2000)
- Member, '1997 Chancellor's Award for Excellence in Teaching' Selection Committee
- Member, UNIX Advisory Committee (1989-92)
- Member, Engineering Library Committee (1992-96)

3.3 PROFESSIONAL SERVICES

Served on professional organizations in the capacity of chair, moderator, organizer etc.

Conferences

- **Session Chairman**, `Computational Soil Dynamics', EMD 6th Specialty Conference of ASCE at SUNY/Buffalo, May 1987. (initiated and organized the session)
- **`Official Discusser'** for the session on `Soil-Structure Interaction Under Dynamic Loading' at the 2nd International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, St. Louis, MO, March 11- 15, 1991.
- **`Official Discusser'** for the session on `Soil Amplifications during Earthquakes and Microzonation' at the 2nd International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, St. Louis, MO, March 11-15, 1991.

Workshops

- Organized and Conducted Workshops on 'Soils & Hydro-geology' and 'Foundation Design' - for Public Service Training Program, Rockefeller college, SUNY/Albany - October 1989, September 1997and October 1998

Participated in the following workshops:

- `Faculty Development Workshop', Buffalo, August 1986, Sponsor: SUNYAB
- `Recent Advancements in Soil Dynamics,' Troy, New York, June 1-5, 1987, Sponsor: RPI , Troy (New York).
- 'Geotechnical Earthquake Engineering Research', RPI, Troy (New York), July 1989, Sponsor: NCEER
- 'Seismic Design of Highway Bridges' , SUNY at Buffalo, August,1992, Sponsor: FHWA/NCEER
- 'Civil Engineering Education Beyond 2000', Boston, October 1998, Sponsor: ASCE.

Reviewer (Books):

- 'Engineering Mechanics', by I. Shames, Fourth Edition, Prentice Hall (1995)
- 'Engineering Mechanics: Statics', by M. E. Plesha, L. Gray & F. Constanzo (2006)

Reviewer (Proposals):

- National Science Foundation (Geomechanics Division).
- National Science Foundation (Earthquake Hazard Mitigation Program).

Reviewer (Papers):

- ASCE Journal of Geotechnical Engineering.
- ASCE Journal of Structural Engineering.
- International Journal for Numerical Methods in Engineering.
- International Journal of Engineering Science.
- Computation Mechanics
- Engineering Analysis
- Second International Conference of Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, St. Louis Missouri, March 11-15, 1991.
- Third International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, St. Louis, Missouri, April 2-7, 1995.
- Session on 'Soil Dynamics', EMD 6th Specialty Conference of ASCE at SUNY/Buffalo, May 1987.

3.4 ENGINEERING CONSULTING

- `Estimation of Ground Vibration and Settlement Due to Pile Driving at a Project site in Bellport (New York),' Consultant to the Giannoti Associates, New York (1989).

- `Analysis and Design of Slopes of the Hyland Ash Monofill, Angelica (New York),' Consultant to the Calocerionos & Spina Engineers, Buffalo (1990).

- `Site Feasibility Study for the Proposed Landfill at Farmersville (New York),' Consultant to the AFI Environmental, Lockport, New York (1991-1992).

- `Estimation of Bedrock Acceleration at Model City,' Niagara County, New York,' Consultant to the SEC Donohue Environment & Infrastructure, Sheboygan, Wisconsin (1992).

- `Structural feasibility of basement walls made of Hollow Thermo-blocks,' Consultant to the STS International, Getzville, New York (1993).

- `Estimation of Natural Frequencies and Dynamic Response of a Proposed Test Pad Foundation at Taylor Devices, N. Tonawanda, New York,' Consultant to the Tredo Engineers, Buffalo, New York (1994-1995).

- 'Design of DELPHI MAST Inertial Block Foundation', Lockport, New York, Consultant to Parker Bay Engineering (Buffalo, NY), (1997).

- 'Dynamic Response of Inertial Block Foundation', Delphi Mexico Technical Center II, CD. Juarez, Mexico, Consultant to Parker Bay Engineering (Buffalo, NY), (1998).

- ‘Vibration Screening Barrier for the GM facility at Silao, Mexico’, Consultant to Wiss, Janney, Elstner Associates, Inc., Chicago (ILL), (2000).