BARZIN MOBASHER
Professor of Civil, Environmental, and Sustainable Engineering
School of Sustainable Engineering and the Built Environment
Arizona State University

EDUCATION

Ph.D. Northwestern University, Evanston, IL, 1990
M.S. Northeastern University, Boston, MA, 1985
B.S. University of Wisconsin-Platteville, Platteville, WI, *Summa Cum Laude*, 1983

ACADEMIC EXPERIENCE

2004- Present	Arizona State University, Professor
2013-2015	Department of Civil Engineering, COPPE/Universidade Federal do Rio de Janeiro Brazil, Visiting Professor, Science without Borders Program
1997- 2004	Arizona State University, Associate Professor
1991- 1997	Arizona State University, Assistant Professor
1986-1989	Northwestern University, Research Assistant
1983-1985	Northeastern University, Research and Teaching Assistant
1980-1983	University of Wisconsin-Platteville, Teaching Assistant

INDUSTRIAL EXPERIENCE

1989-1991	USG Corp. Research Center, Libertyville, IL., Member of Technical Staff
1985-1986	Federal Highway Administration, McLean, VA. Research Fellow

PROFESSIONAL REGISTRATION

P.E. Registered Professional Engineer in Arizona, License Number: 40230

BOOKS

Mobasher, B., Mechanics of Fiber and Textile Reinforced Cement Composites, CRC press, Release Date: Sept, 2011, 480 pp ISBN: 9781439806609.

Peled, A., Mobasher, B., Bentur, A., Textile Reinforced Concrete, Taylor and Francis, Modern Concrete Technology, 18, 2017

Mobasher, B., and Skalny, J. P. (Editors), Transport Properties and Concrete Quality: Materials Science of Concrete , Special Volume, January 2007, ISBN: 978-0-470-09733-5, Hardcover, 238 pages, Wiley.

Massicotte, B., Charron, J.P., Plizzari, G., Mobasher, B., Editors, (2016) “Fibre Reinforced Concrete: from Design to Structural Applications,” FRC 2014 Joint ACI-fib International Workshop, Montreal, Canada. 676 p.

Massicotte, B., Charron, J.P., Plizzari, G., Mobasher, B., Editors,,Editor, SP-310: Fibre-Reinforced Concrete: From Design to Structural Applications FRC 2014: ACI-fib International Workshop (2017)

MEMBERSHIP IN SCIENTIFIC AND PROFESSIONAL SOCIETIES

- Fellow, American Concrete Institute
- Member, American Ceramic Society
- Member, American Society of Civil Engineers
- Member, International Editorial Board, Computers and Concrete, an International Journal, Techno-Press, 2008
- Chair, American Concrete Institute, Committee 544, Fiber Reinforced Concrete, 2011-2017
- Chair, American Concrete Institute, Sub-Committee 544D, Structural Design Fiber Reinforced Concrete, 2010-2018
- Co-Chair, Conference, FRC 2014 Joint ACI-fib International Workshop on Fibre Reinforced Concrete: from Design to Structural Applications, Montreal 2014
- Member, fib TG 8.3: Fiber Reinforced Concrete
- Member, Rilem, A framework for durability design of fibre-reinforced strain-hardening cement-based composites (SHCC) TC-240-FDS, 2013-2015
- Member of Technical Activities Committee, Rilem, (The International Union of Laboratories and Experts in Construction Materials, Systems and Structures)- 2012-2018
- Technical Committee Convener, Rilem, (The International Union of Laboratories and Experts in Construction Materials, Systems and Structures)- 2014-2018
- Session Organizer, Chair, ACI-International Cooperation Between ACI Technical Committees" 2015, Kansas City Mo, three sessions dedicated to design with Fiber Reinforced Concrete
- Co-Chair, Conference, FRC 2014 Joint ACI-fib International Workshop on Fibre Reinforced Concrete: from Design to Structural Applications, Lake Garda, Italy 2018
- Board of Directors, Navajo Flexcrete Building Systems, 2014-2018
- Technical Activities Committee, TAC< American Concrete Institute, 2018-2021

REVIEWER

National Science Foundation, ACI Materials Journal, Journal of Advanced Cement Based Materials, Journal of Materials Research, Journal of Composites Engineering, Journal of American Society of Civil Engineers, Engineering Mechanics Division and Materials Division, Journal of Cement and Concrete Research, Transportation Research Board, Journal of American Ceramic Society.

AREAS OF TEACHING AND RESEARCH INTERESTS

Teaching: Solid mechanics, experimental stress analysis, reinforced concrete design, properties of concrete, structural steel design, structural analysis, engineering materials, mechanics of materials, composite materials.

Research: Constitutive modeling of quasi-brittle materials, fracture mechanics, non-destructive testing techniques, experimental stress analysis, biomechanics, brittle matrix composite materials, chemical, mechanical, and durability of concrete.

CONFERENCE AND SESSION ORGANIZER

- ASCE, Session Chair, Third Materials Engineering Conference, ASCE, 1994.
- MRS, Session Chair, Fall Meeting, 1996.
- American Ceramic Society, Session Chair, Cements Div., 1997
- American Ceramic Society, Session Chair, Cements Div., 1998
- American Ceramic Society, Symposium Co-sponsor, Cements Division, 1999
- American Ceramic Society, Program Chair, Cements Div., 1999
- American Ceramic Society, Program Chair, Cements Div., PAC-RIM Conf. Maui, 2001.
- American Concrete Institute, Program Committee, Annual convention Fall 2002 ASU/ADOT Material-Pavement Conference, Organizing Committee, 2000-2002
- American Concrete Institute, Session organizer, Fall 2003, Boston, MA.
- ASCE-EMD, Session Organizer, Conf. July 2003.
- American Concrete Institute, Session organizer, Spring 2005, NY, NY.
- Transport Properties and Concrete Quality Workshop, Organizer and Chair, ASU, Oct 2005.
- Session Chair, *Textile Reinforced Concrete* session sponsored by the ACI Committees 544 and 549,ACI Spring Convention, New York, April 20, 2005.
- Session Chair, *Textile Reinforced Concrete (TRC) - German/International Experience* symposium sponsored by the ACI Committee 549, ACI 2005 Fall Convention, Kansas City, Missouri, Nov., 2005.
- Session Chair,8th International Symposium on Brittle Matrix Composites (BMC8) in Warsaw, October 22-25, 2006.
- Session Chair, International Workshop: Microstructure and Micromechanics of Stone Based Infrastructure Materials, Virginia Tech, VA, October 5-6, 2006.
- Session Chair, HPFRCC5 -High Performance Fiber Reinforced Cement Composites, Mainz, Germany, 2007.
- Session Chair, ACI 435/544 Fall 2007 Puerto Rico, ACI 549 Fabrication Technologies For Thin Cementitious Products.
- Session Chair, Deflection And Stiffness Issues In FRC And Thin Structural Elements ACI 435/544 Fall 2007 Puerto Rico.
- Session Chair, Annual Meeting of American Ceramics Society Cements Division, ACerS, TMS-2007 Sept. 2007.

SPONSORED PROJECTS

https://asu.pure.elsevier.com/en/persons/barzin-mobasher/projects/

1. Evaluation of Processing Techniques for Manufacturing High-Performance Cement Based Composites, National Science Foundation, 1992-96, $110,000.
2. Mechanical Testing and Design Optimization of Lightweight Steel Framing Systems, (with S.D. Rajan), Allied American, Inc., Phoenix, Az, 1994-97, $207,000.
3. Predicting Structural Changes Due to Radial Keratotomy Using Finite Element Analysis, (with S. D. Rajan), Gary Hall Eye Surgery Institute, 1992-93, $58,500
4. Application of Copper Slag in Concrete, Minerals Research and Recovery, Inc. Tucson, Az. 1992-95. $29,000
5. Mechanical Properties of Base Isolation Systems, The Lorant Group, Phoenix, Az, 1993. $2,050
6. Finite Element Modeling of Keratorefractive Surgeries, ASU Faculty Grant in Aid, 1993, $5,800.
7. Mechanical Response of Seismic Clips, TEKTON Corp., Phoenix Arizona, 1994-1997, $9,215.

8. Analysis of Radial Keratotomy Surgeries Using a Finite Element Model, Arizona State Research Institute,1994, $12,000.
9. Mechanical Response of Glass/Epoxy and Carbon/Epoxy Composites, SATCON Inc. Tucson, AZ, 1996-1997, $9,750
10. Use of Alkali-Resistant Glass Fibers In Reinforcing Conventional Concrete Materials, CEMFIL Corporation, 2001. (Mobasher, B., P.I.) , $16,800
11. Effect Of Flyash Composition On Its Reactivity And Strength Development In Concrete Materials, 2000 Salt River Project, (Mobasher, B., P.I.), $ 22,000
12. An Integrated System For Design Of Carnioplastic Devices, 1999, Kleft Palate Foundation (Mobasher, B., P.I., Tim Littlefield), $5,000.
13. FEM Simulation of Corneal Refractive Procedures for Laser Assisted In-Situ Keratomileusis (LASIK), 2002, ALCON, Inc. (Mobasher, B., P.I.), $20,000.
14. Explicit Finite Element Analysis Modeling of Multi-Layer Composite Fabric for Gas Turbine Engines Containment Systems, 2001 (S.D. Rajan, PI, Mobasher, B. Co PI) FAA AACE Grant $487,000.
15. Characterization and Utilization Of Concrete With Flyash, Salt River Project , (Mobasher, B., P.I.), 2001, $25,000.
16. Use of Flyash in Concrete, Salt River Project , (Mobasher, B., P.I.), 2002, $25,000
17. Development of Algae-Resistant Cement Based Canal Surfacing Materials, Mobasher, B., PI, NSF Water Quality Center at ASU, $ 17,800
18. Use Of Alkali-Resistant Glass Fibers In Reinforcing Conventional Concrete Materials, CEMFIL Corporation, 2003. (Mobasher, B., P.I.) , $4,000
19. Mechanical Properties of Technical Fabrics used for Retrofitting Unreinforced Masonry Walls, Saint-Gobain Technical Fabrics, Canada, 2003, $28,700
20. Laboratory Evaluation of ADOT's Ultra Thin Whitetopping PCC Test Sections - Sunland Gin Road, FNF Construction , 2003, $25,000
21. Laboratory Evaluation of ADOT's Ultra Thin Whitetopping PCC Test Sections – Cottonwood AZ, FNF Construction , 2003, $25,000.
22. Pultruded Fabric-Reinforced Cement Composites, 2003-2007, NSF, (Mobasher, B., PI), $219,000
23. Pultrusion Technology for the Production of Fabric-Cement Composites, 2003, United States-Israel Bi-National Science Foundation, 2003-2006 (Alva Peled, PI, Mobasher, B., Co PI, $60,000)
24. Development Of Reliable Modeling Methodologies For Fan Blade Out Containment Analysis, 2003-2006 (S.D. Rajan, PI 50%, Mobasher, B. Co PI 50%) FAA-AACE Grant $760,000.
25. Use of flyash in Concrete, Salt River Project, (Mobasher, B., P.I., 100%), 2004, $32,000
26. Consulting Services for ADOT Transportation Product Evaluation Program, Western Technology Incorporated, 2003-2008, (Mobasher, B., PI, 100%), $167,000
27. Physical and Mechanical Properties of Carbon Fiber Epoxy Composites, KPFF Consulting Engineers (Mobasher, B., PI, 100%, $52,000)
28. Predicting Short Term and Long Term Ectasia in Corneas Subjected to Lasik Surgery, Vision Quest (Mobasher, B., S. D. Rajan, PI, 50%, $55,000)
29. Long-range Testing of Flyash and Cement Products, Salt River Materials (Mobasher, B., PI, 100%, $51,000)
30. Laboratory Evaluation of ADOT's Thin Whitetopping PCC Test Sections - I-40 Andy Devine TI, Arizona Department of Transportation (Mobasher, B., co-PI, 40%, $40,000)
31. High-Strain Rate Testing of Fabrics Used in Engine Containment Systems, FAA-Federal Aviation Administration (Mobasher, B., co-PI, 50%, $130,000), 2005-2008.

32. High Performance Alkali Resistant glass Reinforced Concrete Materials for Shrinkage Control: Design and Specification Challenge, Mobasher, B., PI, 100%, St. Gobain Specialty Fibers $37,324
33. LS_DYNA Implemented Multi-Layer Fabric Material Model Development for Engine Fragment Mitigation, (S.D. Rajan, PI 50%, Mobasher, B. Co PI 50%) FAA-AACE Grant, $250,000
34. NSF-International: United States-Pakistan Workshop on Advanced Cement-Based Composites, NSF, Mobasher, B. PI 100%, $29,425.00
35. High flyash, fiber, and rubber reinforced concrete materials: structural efficiency, Salt River Project , (Mobasher, B., P.I., 100%), $31,940
36. Dynamic Testing of Fuse Cutouts, Wynn and Wynn P.C., (Mobasher, B. PI 100%) $20,000.
37. Concrete Mixtures Design and Thermal Properties. Meccano (10/15/2009 - 5/15/2010). (Mobasher, B. P.I., Kaloush,K. E., $51,000)
38. Optimization of Early Strength Shotcrete for Rapid Shaft Sinking. Rio Tinto (10/29/2008 - 6/30/2011). Mobasher, B., P.I.
39. "Economical Concrete Mix Designs Utilizing Blended Cements, Performance Based Specifications, and Rational Pay Factors, ADOT (7/8/2008 - 11/15/2012, Mobasher, B. P.I., Borror,C. M. , Montgomery, D. C. , Roy, D. M . $160,000)
40. Materials Evaluation for ADOT Approved Products List. ADOT (7/1/2008 - 8/12/2010). Mobasher, B. P.I.
41. Physical and Mechanical Properties of Aerated Concrete Blocks. Navajo Flexcrete (1/15/2008 - 4/30/2010). Mobasher, B., P.I.
42. Pultruded Fabric-Reinforced Cement Composites. Us-Israel Binational Science Foundation (10/1/2007 - 9/30/2012). Mobasher, B., Co. P.I.
43. MPD 31-11 Product Evaluation (On-Call Consultant Services for Research (DT11-002985)). ADOT (8/10/2011 - 1/27/2013). Mobasher, B., P.I.
44. Task Order 25: MPD 25-11 Product Evaluation (On-Call Consultant services for Research (DT11-002985)). ADOT (5/1/2011 - 1/27/2013). Mobasher, B., P.I.
45. High Temperature Concrete – Abener Engineering (4/15/2011 - 8/12/2011). Mobasher, B., P.I.
46. Task Assignment: MPD 053-15 Product Evaluation Services-Materials. ADOT (5/14/2015 - 6/30/2016).
47. MPD 23-15: Product Evaluation Services - MATERIALS. ADOT (10/17/2014 - 9/30/2015).
48. Polypropylene Textile Reinforced Cement Composites for High Strength and Ductility Applications. BASF (6/1/2014 - 8/31/2015).
49. MPD 31-14: Product Evaluation (On-Call Consultant Services for Research). ADOT (12/13/2013 - 6/30/2015).
50. MPD 66-13: SPR 116 - Product Eval - Materials ASU Apr2013. AZ DEPT OF TRANSPORTATION (6/21/2013 - 6/30/2015).
51. MPD 22-13: Product Evaluation Services - Materials (Discipline 9). ADOT (12/20/2012 - 6/30/2015).
52. Use of Wollastonite as a Microfiber Reinforcement in Cement Composite systems. (11/1/2012 - 7/1/2013).
53. MPD 97-12: SPR116 - Product Evaluation Services MATERIALS: Subcommittee: Pipe. AZ Dept. Of Transportation (5/29/2012 - 6/30/2014).
54. PD 84-12: Product Evaluation Services - MATERIALS Subcommittee: Detectable Warning Devices (DWD). ADOT(4/26/2012 - 9/30/2015).
55. MPD 88-12: Product Evaluation Services - MATERIALS. ADOT (4/15/2012 - 1/15/2013).
56. MPD 31-11: Product Evaluation (On-Call Consultant Services for Research). ADOT (8/10/2011 - 4/5/2013).

57. MPD 25-11: Product Evaluation (On-Call Consultant services Research). ADOT (5/1/2011 - 1/27/2013).
58. Developing ultra-high performance concrete mix designs for Arizona bridge element connections, Arizona Department of Transportation (2016-2018)
59. Creep Characteristics of Polypropylene based Fiber Reinforced Concrete, BASF Corporation, 2016
60. Polypropylene Textile Reinforced Cement Composites for Light-weight, High Strength and Ductility Applications, BASF Corporation, 2016
61. Effect of Calcination and Geopolymerization Of Kirkland Mine Aluminosilicate Material (2016)
62. Product Evaluation Services-Materials Committee. ADOT (5/14/2002 - present).
63. Polypropylene Textile Reinforced Cement Composites for High Strength and Ductility Applications, BASF Corporation, 6/1/14 - 8/31/15
64. MPD 024-16 H80 SPR745 Developing Ultra-High-Performance Concrete Mix Designs for Arizona Bridge Elements, Mobasher, B. & Neithalath, N., ADOT, 3/24/16 - 9/30/17
65. WET CENTER PROJECT: Evaluation of Aluminosilicate Material from Kirkland Mine as Water Filtration Medium, Mobasher, B., Abbaszadegan, M. & Neithalath, N., Kirkland Mine Company, 3/1/16 - 2/28/17
66. Creep Characteristics of Polypropylene based Fiber Reinforced Concrete Mobasher, B., BASF Corporation, 12/1/15 - 5/31/17 Project: Research project
67. Polypropylene Textile Reinforced Cement Composites for Light-weight High Strength and Ductility Applications, Mobasher, B. BASF Corporation, 11/30/15 - 5/29/17

JOURNAL PUBLICATIONS

1. Cohen, M. D., Mobasher, B., "Drying Shrinkage of Expansive Cements", Journal of Materials Science, 23, (1988) pp. 1976-1980.

2. Shah, S. P., Ludirdja, D., Daniel J. I., Mobasher, B."Toughness-Durability of Glass Fiber Reinforced Concrete Systems", ACI Materials Journal, Sept-Oct. 1988, pp. 352-360. Discussion, 85-M39, ACI Materials Journal, July-Aug. 1989, p 425.

3. Mobasher, B., and Shah, S. P.,"Test Parameters in Toughness Evaluation of Glass Fiber Reinforced Concrete Panels", ACI Materials Journal, Sept-Oct. 1989, pp. 448-458.

4. Stang, H., Mobasher, B., Shah, S. P.,"Quantitative Damage Characterization In Polypropylene Fiber Reinforced Concrete", Cement and Concrete Research., Vol. 20, No. 4, pp. 540-558, 1990.

5. Mobasher, B., Stang, H., Shah, S. P.,"Microcracking in Fiber Reinforced Concrete", Cement and Concrete Research, Vol. 20, No. 5, pp. 665-676, 1990.

6. Mobasher, B., Castro-Montero, A., Shah, S. P., "A Study of Fracture in Fiber Reinforced Cement-Based Composites Using Laser Holographic Interferometry," Experimental Mechanics, Vol. 30, No.3, 1990, pp. 286-294.

7. Ouyang, C. S., Mobasher, B., and Shah, S. P., "An R-Curve Approach for Fracture of Quasi-Brittle Materials", Engineering Fracture Mechanics, Vol. 37, No.4, pp. 901-913, 1990.

8. Mobasher, B., Ouyang, C. S., and Shah, S. P., "Modeling of Fiber Toughening in Cementitious Composites using an R-Curve Approach", International Journal of Fracture, 50: 199-219, 1991.

9. Li, Z., Mobasher, B., and Shah, S. P., "Characterization of Interfacial Properties in Fiber-Reinforced Cement Based Composites", Journal of American Ceramic Society, 74 (9) 2156-64, 1991.

10. Cohen, M. D., Mobasher, B., "Effects of Sulfate and Expansive Clinker Contents on Expansion Time of Expansive Cement Paste", Journal of Cement and Concrete Research, 21, No. 1, pp. 147-157, 1991.

11. Hall G.W., Krischer C., Mobasher, B., Rajan S.D., "The Construction Of Sutureless Cataract Incision And The Management Of Corneal Astigmatism," Current Opinion In Ophthalmology 4 (1): 33-38 Feb 1993.

12. Perez-Pena, M., Mobasher, B., "Mechanical Properties of Hybrid Fiber Reinforced Cementitious Composites," Journal of Cement and Concrete Research, Vol. 24, No. 6, pp 1121-1132, 1994.

13. Mobasher, B., Li, C. Y., "Mechanical Properties of Hybrid Cement Based Composites," ACI Materials Journal, Vol. 93, No.3, pp.284-293, 1996.

14. Mobasher, B., Li, C. Y., "Modeling of Stiffness Degradation of the Interfacial Zone During Fiber Debonding," Journal of Composites Engineering, Vol. 5, N0. 10-11, pp. 1349-1365, 1995.

15. Mobasher, B., Li, C. Y., "Effect of Interfacial Properties on the Crack Propagation in Cementitious Composites," Journal of Advanced Cement Based Materials, Vol. 4. No. 3, Nov. Dec. 1996, pp. 93-106.

16. Gettu, R., Mobasher, B., Carmona, S., and Jansen, D., "Testing of Concrete Under Closed-Loop Control," Invited Article, Journal of Advanced Cement Based Materials, Vol. 3, No.2, March 1996, pp. 54-71.

17. Shah, S. P., Li, Zongjin, and Mobasher B., "Reply to 'Comment on Characterization of interfacial properties in fiber reinforced cementitious composites'", J. American Ceramic Society, Vol. 76, No. 6, 1993, pp. 1617-1618.

18. Mobasher, B., Mamlouk, M., and Lin, H.M., "Evaluation Of Crack Propagation Properties of Asphalt Mixtures," ASCE Journal of Transportation Engineering, Sept- Oct. 1997, pp.405-413.

19. Mobasher, B., Pivacek A., and Haupt, G. J. " Cement Based Cross-Ply Laminates," Journal of Advanced Cement Based Materials, 1997, 6, pp. 144-152.

20. Pivacek A., Mobasher, B.,"A Filament Winding Technique for Manufacturing Cement Based Cross-Ply Laminates," Innovations Forum, ASCE Journal of Materials Engineering, May 1997, pp 55-58.

21. Tixier, R., Devaguptapu, R., and Mobasher, B., "The Effect of Copper Slag on the Hydration and Mechanical Properties of Blended Cementitious Mixtures," Journal of Cement and Concrete Research, Vol. 27, No. 10., pp. 1569-1580, 1997.

22. Mobasher, B., Pivacek, A.,"A Filament Winding Technique for Manufacturing Cement Based Cross-Ply Laminates," Journal of Cement and Concrete Composites,20 (1998) 405-415.

23. Li, C.Y., Mobasher, B., "Finite Element Simulations of Toughening in Cement Based Composites," Journal of Advanced Cement Based Materials, 1998, 7, pp. 123-132.

24. Ariño, A.M., Mobasher, B. " Effect Of Copper Slag On The Strength, And Toughness Of Cementitious Mixtures" ACI Materials Journal, V 96, No. 1, Jan-Feb, 1999, pp.68-73.

25. Mobasher, B., S-Y.Chen, C. Young and S. D. Rajan, " Cost-Based Design Of Residential Steel Roof Systems: A Case Study" Structural Engineering and Mechanics 8: (2) 165-180 Aug 1999.

26. Montesinos J., Gorur R. S., Mobasher, B., Kingsbury D., "Brittle Fracture in Nonceramic Insulators Part I: Electrical Aspects of Microscopic Flaws in Glass Reinforced Plastic GRP Rods," IEEE Transactions on Dielectrics and Electrical Insulation, 2002, Vol. 9.pp. 236-243.

27. Montesinos J., Gorur R. S., Mobasher, B., Kingsbury D., "Brittle Fracture in Nonceramic Insulators," IEEE Transactions on Dielectrics and Electrical Insulation, 2002, Vol. 9.pp. 244-252.

28. Mobasher B., Kingsbury D., Montesinos J., Gorur R. S., "Brittle Fracture in Nonceramic Insulators Part II: Mechanical Aspects of Crimped Glass Reinforced Plastic (GRP) Rods" IEEE Transactions on Power Delivery, 2003, pp 852-858.

29. Tixier, R., Mobasher, B., "Modeling of Damage in Cement–Based Materials Subjected To External Sulfate Attack- Part 1: Formulation", ASCE Journal of Materials Engineering, Vol. 15, No. 4, pp 305-313, July/August 2003.

30. Tixier, R., Mobasher, B., "Modeling of Damage in Cement–Based Materials Subjected To External Sulfate Attack- Part 2: Comparison with Experiments, ASCE Journal of Materials Engineering, Vol. 15, No. 4, pp 314-322, July/August 2003.

31. Mobasher, B., "Micromechanical Modeling of Filament Wound Cement-Based Composites," ASCE, Journal of Engineering Mechanics, Volume 129, No. 4, pp. 373-382, 2003. DOI: 10.1061/(ASCE)0733-9399(2003)129:4(373)

32. Assadi Zeidabadi, N., Mirtalae, K., Mobasher, B., "Optimized Use Of The Outrigger System To Stiffen The Coupled Shear Walls In Tall Buildings," International Journal on the Structural Design of Tall Buildings, Volume 13, Issue 1 , Pages 9 - 27, 2004.

33. Mamlouk M.S., Mobasher, B. "Cracking Resistance of Asphalt Rubber Mix Versus Hot-Mix Asphalt," International Journal of Road Materials and Pavement Design. Vol. 5, No. 4, pp. 435-452, 2004.

34. R. S. Gorur, Mobasher, B., Discussion of Paper "Can Water Cause Brittle Fracture Failures of Nonceramic Insulators in the Absence of Electric Field", by Kumosa et al., IEEE Transactions on Dielectrics and Electrical Insulation, pp. 621-626, Vo. 12, No. 1, 2005.

35. Peled, A., Mobasher, B.,"Pultruded Fabric-Cement Composites," ACI Materials Journal, Vol. 102, No. 1, pp. 15-23, 2005.

36. Deenadayalu, C., Mobasher, B., Rajan, S.D., and Hall, G., "Refractive Change Induced by the Lasik Flap in a Biomechanical Finite Element Analysis Model", Journal of Refractive Surgery, 22:3, 1-7, 2006.

37. Mobasher, B., Pahilajani, J., Peled, A.,"Analytical Simulation of Tensile Response of Fabric Reinforced Cement Based Composites", Journal of Cement and Concrete Composites, Vol. 28, No. 1, Jan-2006, pp. 77-89.

38. Sharda, J., Deenadayalu, C., Mobasher, B., and Rajan S. D., "Modeling of Multi-Layer Composite Fabrics for Gas Turbine Engine Containment Systems,", ASCE Journal of Aerospace Engineering, Vol. 19, No. 1, 2006. pp. 38-45.

39. Mobasher, B., Peled, A., and Pahilajani, J., "Distributed cracking and stiffness degradation in fabric-cement composites", Materials and Structures, (2006) 39:317–331

40. Peled, A., Mobasher, B., "Properties of Fabric-Cement Composites Made by Pultrusion," Materials and Structures, Vol. 39, No. 8, October 2006, 39:787–797

41. Peled, A., Sueki, S., and Mobasher, B., "Bonding In Fabric-Cement Systems: Effects Of Fabrication Methods", Journal of Cement and Concrete Research, 36:9, (2006) 1661–1671, 2006.

42. Sueki, S., Soranakom, C., Peled, A., and Mobasher, B., "Pullout-Slip Response of Fabrics Embedded in a Cement Paste Matrix, ASCE Journal of Materials Engineering, Vol. 19, 9, 2007.

43. Peled, A., Mobasher, B.,"Tensile Behavior of Fabric Cement-Based Composites: Pultruded and Cast" ASCE Journal of Materials in Civil Engineering, Volume 19, Issue 4, pp. 340-348, 2007.

44. Soranakom, C., and Mobasher, B.,"Closed-Form Moment-Curvature Expressions For Homogenized Fiber Reinforced Concrete, ACI Materials Journal, V. 104, No. 4, July-August 2007, pp. 351-359.

45. Soranakom, C., and Mobasher, B., "Closed Form Solutions for Flexural Response of Fiber Reinforced Concrete Beams" ASCE Journal of Engineering Mechanics, Volume 133, Issue 8, August 2007, pp. 933-941.

46. Soranakom, C., and Mobasher, B., "Correlation of Tensile and Flexural Responses of Strain Softening and Strain Hardening Cement Based Composites," Cement and Concrete Composites, Volume 30, Issue 6, pp 465-477, July 2008

47. Alum, A., Rashid, A., Mobasher, B., and Abbaszadegan, M., "Cement-Based Biocide Coatings for Controlling Algal Growth in Water Distribution Canals", Journal of Cement and Concrete Composites, Vol 30, No 9, pp 839-847, 2008.

48. Soranakom, C., and Mobasher, B., "Geometrical and Mechanical aspects of Fabric Bonding and Pullout in Cement Composites," Materials and Structures, 2009, Vol. 42. pp. 765-777 DOI 10.1617/s11527-008-9422-6.

49. Naik, D., Sankaran, S., Mobasher, B., Rajan, S. D., and Pereira, J.M.,"Development of Reliable Modeling Methodologies for Fan Blade-Out Containment Analysis. Part I: Experimental Studies," International Journal of Impact Engineering, 36 (2009), International Journal of Impact Engineering, Vol 36, No. 1, Jan 2009, Pages 1-11 doi:10.1016/j.ijimpeng.2008.03.007

50. Alum, A., Rashid, A., Mobasher, B., and Abbaszadegan, M., "A Non-Disruptive Method to Quantify Algal Growth on Concrete Surfaces", ASCE Journal of Environmental Engineering, Journal of Environmental Engineering, Vol. 135, No. 3, March 1, 2009. DOI: 10.1061/_ASCE_0733-9372_2009_135:3_185_

51. Stahlecker, Z., Sankaran, S., Mobasher, B., Rajan, S. D., and Pereira, J.M.,"Development of Reliable Modeling Methodologies for Fan Blade-Out Containment Analysis. Part II: Finite Element Analysis" International Journal of Impact Engineering, Volume 36, Issue 3, March 2009, Pages 447-459.

52. Bansal, S.; Mobasher, B.; Rajan, S. D.,; and Vintilescu, I.,"Development of Fabric Constitutive Behavior for Use in Modeling Engine Fan Blade-Out Events" Journal of Aerospace Engineering, ASCE, Journal of Aerospace Engineering, Vol. 22, No. 3, July, 2009. p. 249-259.

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180. Short course, Fiber Reinforced Concrete, Federal University of Rio de Janeiro, Brazil, June 2013

2014

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2. B. Mobasher, ACI 544.8R-16: Report on Indirect Method to Obtain Stress-Strain Response of Fiber-Reinforced Concrete (FRC), ACI Spring Convention, Salt Lake City, Utah, March 28th, 2018

3. Mobasher, B., Developing Fiber Reinforced Concrete Specifications For SRP Structural and Precast Concrete applications, USCID, 2018, Annual Meeting, Invited Talk, Mesa Arizona, October, 2018

4. Yao, Y., J. Bauchmoyer, V. Dey, H. Mehere, N. Neithalath, A. Arora, K. Aswani, X. Wang, Sustainable infrastructure with fiber and textile reinforced concrete systems: Manufacturing, properties, analysis and design, Summer School Graduate Research Program, Dresden, Germany, 2018

5. B. Mobasher, "From Montreal 2014 to Desenzano 2018-Developments in Fiber Reinforced Concrete, FRC 2018, Desenzano, Lake garda, Italy, FRC2018, Sponsored by ACI, Rilem and fib.

6. L. Ferrara, and B. Mobasher, "Development of Recent Guides and Rools for Fiber Reinforced Concrete, ACI-Committee 544 report", 2018-Developments in Fiber Reinforced Concrete, FRC 2018, Desenzano, Lake garda, Italy, FRC2018, Sponsored by ACI, Rilem and fib.

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8. Neithalath, N., Mobasher, B., and Arora, A., (2018). "Advances in material design for ultra-high performance concrete", National Institute of Technology Surathkal, India as part of International Conference on Sustainable Construction and Building Materials (Keynote lecture)

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10. Yiming Yao, Jingquan Wang, Aashay Arora, Narayanan Neithalath, Barzin Mobasher. Materials Formulation and Serviceability Design for Ultra-high Performance Concrete. UHPC2018-China The 2nd International Conference on UHPC Materials and Structures.

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Professional Service Committee Work

1. American Concrete Institute, Chair, Committee 544 Fiber Reinforced Concrete, 2010- present
2. American Concrete Institute, Chair, Subcommittee 544-f Durability and Physical Properties of Fiber Reinforced Concrete, 2002- 2010
3. American Concrete Institute, Chair, Subcommittee 549-A Development of Analysis and Design Guidelines for Thin section Fiber Reinforced Concrete, 2005- present
4. International Scientific Committee, COMAT 2007, 4th international conference on science and Technology of Composite materials
5. Associate Editor, Computers and Concrete, an International Journal, Techno Press, 2008
6. Associate Editor, RILEM Journal of Materials and Structures
7. American Concrete Institute, member of TAC

8. Rilem , Convener, TAC.
9. ACI, Chair Sub-Committee 544-D
10. ASCE, Engineering Mechanics Division, Experimental Analysis and Instrumentation (EA&I) Committee
11. Arizona Rock Products Association (ARPA) / Arizona Department of Transportation (ADOT), Task group on Concrete Materials, committee member, 2006-2018

Dissertations Awarded

Cheng Yu, Li, Ph.D. Mechanical behavior of cementitious composites reinforced with high volume content of fibers Thesis (Ph.D.) Arizona State University, 1995.
Currently With : URS Greiner Consulting Engineers, Denver, Colorado

Raphael Tixier, Ph.D., Microstructural development and sulfate attack modeling in blended cement-based materials Thesis (Ph.D.)-Arizona State University, 2000.
Currently with: Western Technology Laboratories, Phoenix, Arizona.

José I. Montesinos-Silva, Ph.D. Brittle fracture of glass reinforced plastic rods for nonceramic insulators, Arizona State University, 2000. Jointly with Professor R. Gorur

Soranakom, C., Ph.D., "Multi Scale Modeling Of Fiber And Fabric Reinforced Cement Based Composites" PhD. Dissertation, Arizona State University, 2008.

D. Zhu, "Experimental Study and Finite Element Modeling of Woven Fabrics" PhD. Dissertation, Arizona State University, 2009. pp. 320 , Current position: Assistant Professor, Hunan University, China, Department of Civil Engineering

Flávio de Andrade Silva, Durability and Mechanical Properties of Sisal Fiber Reinforced Cement Composites, PhD. Dissertation, COPPE/UFRJ, Arizona State University, April, 2009. pp. 239. Current position: Assistant Professor of Civil Engineering, Catholic University of Rio de Janeiro, (PUC-Rio - Pontifical Catholic University of Rio de Janeiro), Brazil

Aboozar Bonakdar, "Multi-Scale Study Of Durability In Blended Cement Materials," PhD. Dissertation, Arizona State University, 2010. Current position: Manager Fiber Products, Euclid Chemicals Inc., Cleveland, Ohio

Mehdi Bakhshi, "Characterization and Modeling of Moisture Flow through Hydrating Cement-Based Materials under Early-Age Drying and Shrinkage Conditions" PhD. Dissertation, , Arizona State University, 2011. Current position: Sr. Tunnel Engineer at AECOM, NY, NY.

Vikram Dey, Innovative Structural Materials and Sections with Strain Hardening Cementitious Composites, PhD. Dissertation, Arizona State University, 2016

Yao, Y., PhD, Characteristics Of Distributed Cracking For Analysis And Design Of Strain Hardening Cement Based Materials, PhD. Dissertation, Arizona State University, 2016

Masters Theses Awarded

Beaty, Kirk Leslie, "Fracture properties of asphalt concrete using modified binders", Arizona State University, 1993. (with J. Zaniewski)

Lin, How-ming , "Fracture properties of asphalt-rubber mixtures," MS Thesis, Arizona State University, 1993. (with M. Mamlouk)

Devaguptapu, Ravi, "Effect of copper slag on the hydration characteristics, strength, and fracture properties of concrete, MS Thesis, Arizona State University, 1994.

Sun, C.H., "A Finite Element Model for Simulating Radial Keratotomy and Holmium:YAG Laser Thermokeratoplasty Surgeries", MS Thesis, Arizona State University, 1994.

Pagadala, Rajesh, "A finite element model for the design of keratorefractive surgeries," Arizona State University, 1994.

Ariño Moreno, Antonio, "A study of copper slag mortar based on durability, strength, and toughness properties," MS Thesis, Arizona State University, 1996.

Haupt, G.J., "Mechanical Properties of Cement based composite Laminates, " MS Thesis, Arizona State University, May, 1997.

Vodela, Rajashekar, "Evaluation of system components for cold-formed steel and lightweight cement composite," MS Thesis, Arizona State University, 1999.

Gouri, Sridevi, "Optimization of Interfacial Zone Characteristics of Fiber-Cement Matrix", MS Thesis, Arizona State University, 1999.

Pivacek, A., "Development of a Filament Winding Technique for Manufacturing Cement Based Materials," MS Thesis, Arizona State University, 2001.

Mane, Sandeep Anand, "The effect of flyash on the strength and fracture properties of concrete and cement mortar" MS Thesis, Arizona State University, 2001.

Desai, Tejal, "Mechanical properties of conventional concrete reinforced with alkali-resistant glass fibers", MS Thesis, Arizona State University, 2001.

Shah, Rimpal V., "Economical concrete mix designs for highway applications with a high dosage of flyash," MS Thesis, Arizona State University, May, 2003.

Lingannagari, Goutham Reddy, "Coefficient of thermal expansion of concrete materials," MS Thesis, Arizona State University, 2003.

Sueki, Sachiko, "An analytical and experimental study of fabric-reinforced, cement-based laminated composites" " MS Thesis, Arizona State University, 2003.

Singla, Nora , “Experimental and theoretical study of fabric cement composites for retrofitting masonry structures,” M.S. Thesis, Arizona State University, 2004.

Philajani, Jitendra, “Fabric-reinforced, cement-based laminated Composites: an experimental and theoretical study,” M.S. Thesis, Arizona State University, 2004.

Dnyanesh Naik, “Experimental Analysis Of Fabrics Used In Engine Housing Of Aircrafts”, Master of Science, Arizona State University, August 2005.

Juan Alfredo Erni, “The Development of Unidirectional and Multidirectional Composite Models Using a Modified Weibull Failure Distribution; Theory, Analysis and Applications,” Nov. 2007.

Saurabh Kumar Bansal, “The Development of Micro-Mechanical Model of Kevlar Fabrics used in Engine Containment System of Aircrafts,” Nov, 2007.

Sudheen Anantharaman, “Sulfate And Alkali Silica Resistance of Class C & F Fly Ash Replaced Blended Cements, “ Jan, 2008

Christopher Barsby, “Toughness Based Analysis and Design of Fiber Reinforced Concrete”, MS Thesis, Arizona State University, Nov. 2011. Currently with: PK Associates Structural Engineers, Scottsdale, AZ

Vikram Dey, “Low Velocity Impact Properties of Sandwich Insulated Panels with Textile - Reinforced Concrete Skin and Aerated Concrete Core”, MS thesis 2012

Yao, Y., “Application of 2-D Digital Image Correlation (DIC) method to Damage Characterization of Cementitious Composites under Dynamic Tensile Loads” , M.S. Thesis, 2013

Karan Aswani, “Design procedures for Strain Hardening Cement Composites (SHCC) and measurement of their shear properties by mechanical and 2-D Digital Image Correlation (DIC) method”, 2014

Robert Kachala, “Early-Age Drying and Cracking Properties of Wollastonite-Textile Reinforced Cement Paste Composites”, M.S. Thesis 2014

Wang, Xinmeng, M.S., “Analytical Load-Deflection Equations for Beam and 2-D Panel with a Bilinear Moment-Curvature Model, Arizona State University, 2015, 158 pages

Jacob Bauchmoyer

Himai Mehere,

Megha,

Membership in International Committees

Member of Technical Activities Committees

MS and PhD committee Chair

Soranakom, C., Doctoral Dissertation Committee Chair (13 August 2006 - present)
Tixier, Raphael, Doctoral Dissertation Committee Chair
Naik, Dnyanesh, Masters Thesis Committee Chair
Lingannagari, Goutham, Masters Thesis Committee Chair
Philajani, Jitendra, Masters Thesis Committee Chair
Singla, Nora, Masters Thesis Committee Chair
Vodela, Rajashekar, Masters Thesis Committee Chair
Shah, Rimpal, Masters Thesis Committee Chair
Sueki, Sachiko, Masters Thesis Committee Chair
Mane, Sandeep, Masters Thesis Committee Chair
Desai, Tejal, Masters Thesis Committee Chair
Singla, Nora, Masters Thesis Committee Chair (14 January 2005 - 16 December 2004)
Naik, Dnyanesh, Masters Thesis Committee Chair (3 August 2005 - 15 December 2005)
Vikram Dey, PhD Doctoral Dissertation Committee Chair
Yao, Y., PhD, Doctoral Dissertation Committee Chair

PhD and Masters Committees (since 2005)

Das, Santanu, Doctoral Dissertation Committee Member (17 November 2006 - present)
Avalos, Javier, Masters Thesis Committee Member (16 August 2006 - present)
Stahlecker, Zach, Masters Thesis Committee Member (18 July 2006 - present)
Silva, Humberto, Doctoral Dissertation Committee Member (20 June 2006 - present)
Sidhu, Rajen, Doctoral Dissertation Committee Member (24 May 2006 - present)
Swann, Cynthia, Doctoral Dissertation Committee Member (14 January 2005 - present)
Li, Wenying, Doctoral Dissertation Committee Member (11 January 2005 - present)
Khatib, Mahab, Masters Thesis Committee Member (10 January 2005 - present)
Krzyzanowski, David, Masters Thesis Committee Member (21 March 2006 - 14 Dec 2006)
Zhu, Linfa, Doctoral Dissertation Committee Member (3 March 2006 - 29 June 2006)
Natesan, Sivasaravanan, Masters Thesis Committee Member (28 June 2006 - 11 May 2006)
Shen, Li, Masters Thesis Committee Member (14 February 2006 - 11 May 2006)
Kim, Kwangkeun, Doctoral Dissertation Committee Member (27 October 2005 - 15 December 2005)
Choi, Seon-Ho, Doctoral Dissertation Committee Member (27 October 2005 - 15 December 2005)
Sankaran, Satish, Masters Thesis Committee Member (29 July 2005 - 15 December 2005)
Yang, Bo, Doctoral Dissertation Committee Member (11 January 2005 - 15 December 2005)
Xiao, Bing, Doctoral Dissertation Committee Member (8 July 2005 - 5 August 2005)

Continuing Graduate Students

Jacob Bauchmoyer, MS
Dafnik Saril Kumar David, MS
Megha Rajendrakumar Gohel, MS

Himai Mehere, MS

Visiting Scientists

Dr. Alva Peled, Ben Guron University, Ber Sheva, Israel. 2002, 2003
Dr. Seyed Kamal Mirtalaei, Isfahan University of Technology, Isfahan, Iran. 2001
Professor Sidney Diamond, Purdue University, 1999.
Dr. Mustafa Gencoglu, Istanbul University of Technology, 2004-2005.
Dr. Etore Funchal de Faria, Fundação Parque Tecnológico Itaipu – Brasil, Itaipu Dam Research Park, Foz de Iguasu, Brazil
Etore Funchal de Faria, Post Doc, 2015

Undergraduate Research
Jay Key, Closed Loop Control Algorithms for Mechanical Testing of Materials, 1994
John Engstrom, Development of a closed loop system for Mechanical Testing of Materials, 1995
Kalvin Young, Mechanical Testing and Design Optimization of Steel Truss Components, 1996
Khorshid Khoshroosafa, Crack Spacing determination in laminated composites 2002-2004
Amir Mehrnia, Tensile Testing of Kevlar and Zylon, 2004
Sandra Warren, Sulfate Attack in Concrete, 2005
Jacon Bauchmoyer, Textile Reinforced Concrete, 2015
Anna Flavia Dias, Brazil Scientific Mobility Program, 2015
Brenno Martins, Brazil Scientific Mobility Program, 2015
Jacob Bauchmoyer, MS