

Dr. Mesfer Muhammad Al-Zahrani

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1. Summary Of Experience Record (Resume)

1.2 Education

B.S. in Civil Engineering, King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia, 1984.

M.S. in Civil Engineering, King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia, 1987.

M.S. Thesis: “*Effect of Fiber Reinforcement on the Durability of Reinforced Concrete in the Arabian Gulf Region*”.

Ph.D. in Civil Engineering, Pennsylvania State University, USA, October 1995.

Ph.D. Thesis: “*Bond Behavior of Fiber Reinforced Plastic (FRP) Reinforcements with Concrete*”.

1.3 Specialization

Main area of specialization is **structure and materials**. Research interests include durability of construction materials, corrosion of steel reinforcement, cathodic protection, repair and rehabilitation of structures, and applications of advanced composite materials in construction; particularly the fiber reinforced plastic reinforcement.

1.4 Employment

- 1984-1987 Graduate assistant, King Fahd University of Petroleum and Minerals (KFUPM), Dhahran, Saudi Arabia.
- 1987-1990 Lecturer, KFUPM. Worked in research studies related to concrete durability and corrosion of steel reinforcement.
- 1990-1995 Graduate student, Pennsylvania State University, USA.
- 1993-1995 Research assistant, Penn State University, USA. Worked in a research project entitled “Accelerated Test Methods to Determine Long-term Behavior of Fiber Reinforced Plastic (FRP) Composite Materials”, funded by the Federal Highway Administration (FHWA).
- 1996-2008 Assistant Professor, Civil Engineering Department, KFUPM.
- 2008-Present Associate Professor, Civil Engineering Department, KFUPM.

- 1996-2005 Coordinator for the Building Materials Research Group in the Materials Section, Center for Engineering Research, Research Institute, KFUPM.
- 2005-2008 Assistant Dean of Students Affairs for Employment and Training, Deanship of Student Affairs, KFUPM.
- 2008-2016 Dean of Students Affairs, KFUPM.
- 2016-2018 Dean of College of Engineering Sciences, KFUPM.
- 2019-present Vice rector for Academic Affairs, KFUPM.

1.5 Membership

- The American Concrete Institute.
- The American Concrete Institute, Saudi Arabian Chapter.
- The American Society of Civil Engineers.
- The American Society of Civil Engineers, Saudi Arabia Section.
- The Saudi Society of Civil Engineers.
- The Saudi Chamber of Engineers.

2. Teaching

2.1 Courses Taught

In addition to my assignment in the Center for Engineering Research, Research Institute during the period 1996-2005, I taught the following courses in the Civil Engineering Department:

- CE 201 Statics
- CE 203 Structural Mechanic I
- CE 303 Structural Materials
- CE 315 Reinforced Concrete I
- CE 351 Cooperative Work
- CE 411 Senior Design Project
- CE 501 Concrete Materials

2.2 Seminars & Public Lectures

1. “Bond Behavior of FRP Rebars with Concrete - Experimental Results”, a CE seminar, Civil Engineering Department, KFUPM, May 6th, 1997.
2. Presentation of results from the study “Comparative Study of the Performance of HADEED Quenched Steel Bars with Other Products in the Market”, Chamber of Commerce, Dammam, June 10th, 2000.
3. CE 599 Seminar titled “Durability Performance of Glass Fiber Reinforced Plastic Bars”, Civil Engineering Department, KFUPM, November 13th, 2001.
4. Presented “Long-term Field Station for Improving Concrete Durability in the Arabian Gulf Region”, organized by Saudi Council of Engineers in cooperation with the Saudi Iron and Steel Company, Meredian Hotel, Al-Khobar, January 5th, 2004 (in Arabic).
5. Presentation titled “Glass Fiber Reinforced Plastic Bars for Concrete Structures,” delivered to managers at the Royal Commission for Jubail and Yanbu, Jubail Industrial City, June 1st, 2005.

3. Research

3.1 Publications

3.1.1 Papers in Refereed Journals

1. Al-Tayyib, A.J., **Al-Zahrani, M.M.**, Rasheeduzzafar, and Al-Sulaimani, G.J., "Effect of Polypropylene Fiber Reinforcement on the Properties of Fresh and Hardened Concrete in the Arabian Gulf Environment," *Cement and Concrete Research*, Vol. 18, No. 4, July 1988, pp. 561-570.
2. Al-Tayyib, A.J. and **Al-Zahrani, M.M.**, "Corrosion of Steel Reinforcement in Polypropylene Fiber Reinforced Concrete Structures," *ACI Materials Journal*, Vol. 87, No. 2, March-April 1990, pp. 108-113.
3. Al-Tayyib, A.J. and **Al-Zahrani, M.M.**, "Use of Polypropylene Fibers to Enhance Deterioration Resistance of Concrete Surface Skin Subjected to Cyclic Wet/Dry Sea Water Exposure," *ACI Materials Journal*, Vol. 87, No. 4, July-August 1990, pp. 363-370.
4. Al-Dulaijan, S.U., Al-Tayyib, A.J., **Al-Zahrani, M.M.**, Parry-Jones, G., and Al-Mana, A.I., "²⁹Si MAS-NMR Study of Hydrated Cement Paste and Mortar Made with and without Silica Fume," *Journal of the American Ceramic Society*, Vol. 78, No. 2, February 1995, pp. 342-346.
5. Bakis, C.E., Al-Dulaijan, S.U., Nanni, A., Boothby, T.E., and **Al-Zahrani, M.M.**, "Effect of Cyclic Loading on Bond Behavior of GFRP Rods Embedded in Concrete Beams," *Journal of Composites Technology & Research, JCTRER*, Vol. 20, No. 1, January 1998, pp. 29-37.
6. **Al-Zahrani, M.M.**, Al-Dulaijan S.U., Nanni, A., Bakis, C.E., and Boothby, T.E., "Evaluation of Bond Using FRP Rods with Axisymmetric Deformations," *Construction and Building Materials*, Elsevier Science Ltd., Vol. 13, 1999, pp. 299-309.
7. Al-Dulaijan, S.U., **Al-Zahrani, M.M.**, Nanni, A., Bakis, C.E., and Boothby, T.E., "Effect of Environmental Pre-conditioning on Bond of FRP Reinforcement to Concrete", *Journal of Reinforced Plastics and Composites*, Vol. 20, No. 10, 2001, pp. 881-900.
8. Maslehuddin, M., **Al-Zahrani, M.M.**, Al-Dulaijan, S.U., Abdulquddus, Rehman, S., and Ahsan, S.N., "Effect of Steel Manufacturing Process and Atmospheric Corrosion on the Corrosion-resistance of Steel Bars in Concrete," *Special Issue on Corrosion of Steel in Concrete, Cement & Concrete Composites*, Vol. 24, No. 1, 2002, pp. 151-158.
9. Al-Dulaijan, S.U., **Al-Zahrani, M.M.**, Saricimen, H., Maslehuddin, M., Shameem, M., and Abbasi, T.A., "Effect of Rebar Cleanliness and Repair Materials on Reinforcement Corrosion and Flexural Strength of Repaired Concrete Beams," *Special Issue on Corrosion of Steel in Concrete, Cement & Concrete Composites*, Vol. 24, No. 1, 2002, pp. 139-149.

10. **Al-Zahrani, M.M.**, Al-Dulaijan, S.U., Ibrahim, M., Saricimen, H., and Sharif, A.M., "Effect of Waterproofing Coatings on Steel Reinforcement Corrosion and Physical Properties of Concrete," *Special Issue on Corrosion of Steel in Concrete, Cement & Concrete Composites*, Vol. 24, No. 1, 2002, pp. 127-137.
11. Al-Dulaijan, S.U., Maslehuddin, M., **Al-Zahrani, M.M.**, Sharif, A.M., Shameem, M., and Ibrahim, M., "Sulfate Resistance of Plain and Blended Cements Exposed to Varying Concentrations of Sodium Sulfate," *Cement & Concrete Composites*, Vol. 25, May 2003, pp. 429-437.
12. **Al-Zahrani, M.M.**, Maslehuddin, M., Al-Dulaijan, S.U., and Ibrahim, M., "Mechanical Properties and Durability Characteristics of Polymer- and Cement-based Repair Materials," *Cement & Concrete Composites*, Vol. 25, May 2003, pp. 527-537.
13. Kahraman, R., Saricimen, H., **Al-Zahrani, M.**, and Al-Dulaijan, S., "Effect of Inhibitor Treatment on Corrosion of Steel in a Salt Solution," *Journal of Materials Engineering and Performance*, Vol. 12, No. 5, October 2003, pp. 524-528.
14. Al-Mathami, A., Saricimen, H., Kahraman, R., **Al-Zahrani, M.**, and Al-Dulaijan, S., "Inhibition of Atmospheric Corrosion of Mild Steel by Sodium Dihydrogen Orthophosphate Treatment," *Anti-Corrosion Methods and Materials*, Vol. 51, No. 1, 2004, pp. 121-129.
15. **Al-Zahrani, M.M.**, Al-Tayyib, A.J., Al-Dulaijan, S.U., and Osei-Twum, E., "²⁹Si MAS-NMR Study of Hydrated Cement Paste and Mortar with Varying Content of Fly Ash," *Advances in Cement Research*, Vol. 18, No. 1, 2006, pp. 27-34.
16. Maslehuddin, M., **Al-Zahrani, M.M.**, Ibrahim, M., Al-Mehthel, M.H., and Al-Idi, S.H., "Effect of Chloride Concentration in Soil on Reinforcement Corrosion," *Construction and Building Materials*, Vol. 21, 2007, pp. 1825-1832.
17. **Al-Zahrani, M.M.**, "Performance of Plain and Blended Cements Exposed to Varying Concentrations of Sodium Sulfate," *Advances in Cement Research*, Vol. 19, No. 4, 2007, pp. 177-184.
18. Hesham K. Alfares, Muhammad H. Al-Haboubi, and **Mesfer M. Al-Zahrani**, "Community Service in Saudi Arabian Universities: A Comparative Study", *Journal of Community Engagement and Higher Education*, 2013, Volume 5, Number 2; p.56-64.
19. Jung J. Kim¹, Muhammad K. Rahman, Abdulaziz A. Al-Majed, **Mesfer M. Al-Zahrani**, and Mahmoud M. Reda Taha, "Nanosilica Effects on Composition and Silicate Polymerization in Hardened Cement Paste Cured Under High Temperature and Pressure," *Cement & Concrete Composites*, 43, 2013, pp. 78-85.

20. Ashraf A. Bahraq, Mohammed A Al-Osta; Shamsad Ahmad, **Mesfer M. Al-Zahrani**, Salah O. Al-Dulaijan and Muhammad Kalimur Rahman, "Experimental and Numerical Investigation of Shear Behavior of RC Beams Strengthened by Ultra-High Performance Concrete" *International Journal of Concrete Structures and Materials*; 2019; 13:6.
21. **Al-Zahrani, M.M.**, Al-Sodani, K.A.A., Maslehuddin, M., Al-Amoudi, O.S.B., and Al-Dulaijan, S.U., "Chloride Diffusion Models for Type V and Silica Fume Cement Concretes under Field and Laboratory Conditions-Special Issue," *ACI Materials Journal* (Accepted-June 2019).
22. Al-Sodani, K.A.A., **Al-Zahrani, M.M.**, Maslehuddin, M., Al-Amoudi, O.S.B., and Al-Dulaijan, S.U., "Chloride diffusion modelling of Type I and fly ash cement concrete under field and laboratory conditions," *Construction and Building Materials Journal* (Submitted-July 2019).

3.1.2 Refereed Conference Papers

1. Bakis, C.E., Nanni, A., Boothby, T.E., Huang, H.A., **Al-Zahrani, M.M.**, and Al-Dulaijan, S.U., "Measurement of Bond of FRP Composite Reinforcement in Concrete Structures," *Proceedings of ICCM-10*, Edited by A. Poursatip and K. Street, Published by Woodhead, Vol. 6, 1995, pp. 635-642.
2. Nanni, A., **Al-Zahrani, M.M.**, Al-Dulaijan, S.U., Bakis, C.E., and Boothby, T.E., "Bond of FRP Reinforcement to Concrete – Experimental Results," *Proceedings, 2nd International RILEM Symposium on Non-Metallic (FRP) Reinforcement for Concrete Structures, (FRPRCS-2)*, published by E&FN Spon, Ghent, Belgium, 1995, pp. 135-145.
3. **Al-Zahrani, M.M.**, Nanni, A., Al-Dulaijan, S.U., and Bakis, C.E., "Bond of Fiber Reinforced Plastic (FRP) Rods to Concrete," *51st Annual Conference & EXPO 96*, Cincinnati, OH, February 5-7, 1996.
4. Al-Dulaijan, S.U., Nanni, A., **Al-Zahrani, M.M.**, Bakis, C.E., and Boothby, T.E., "Bond Evaluation of Environmentally Conditioned GFRP/Concrete Systems," *Proceedings, 2nd International Conference on Advanced Composite Materials in Bridges and Structures (ACMBS-II)*, Montreal, Canada, August 11-14, 1996, pp. 845-852.
5. **Al-Zahrani, M.M.**, Nanni, A., Al-Dulaijan, S.U., and Bakis, C.E., "Bond of FRP to Concrete in Reinforcement Rods with Axisymmetric Deformations," *Proceedings, 2nd International Conference on Advanced Composite Materials in Bridges and Structures (ACMBS-II)*, Montreal, Canada, August 11-14, 1996, pp. 853-860.
6. Al-Dulaijan, S.U., **Al-Zahrani, M.M.**, Nanni, A., Bakis, C.E., and Boothby, T.E., "Effect of Cyclic Loading on Bond between FRP Reinforcement and Concrete," *Symposium on Composite Materials in Non-Aerospace Applications, ASTM STP 1323*, November 1996.

7. **Al-Zahrani, M.M.**, Al-Dulaijan, S.U., and Nanni, A., "The Potential Use of Fiber Reinforced Plastic (FRP) Materials in the Reinforcement of Concrete," *Symposium on Maintenance Systems and Application of Materials in the Saudi Arabian Environment*, KFUPM, Dhahran, Saudi Arabia, November 12-13, 1996, pp. 1-24.
8. Al-Dulaijan, S.U. and **Al-Zahrani, M.M.**, "Effect of Environmental Conditioning on Bond between Commercial FRP Rods and Concrete," *Proceedings of the Symposium on Performance of Concrete Structures in the Arabian Gulf Environment*, KFUPM, Dhahran, November 15-17, 1998, pp. 148-159.
9. Al-Dulaijan, S.U., **Al-Zahrani M.M.**, and Nanni, A., "Effect of Environmental Conditioning on Bond between FRP Rods and Concrete," *Proceedings, The Fifth Saudi Engineering Conference*, Makkah, 1-4 March, 1999, Vol. 3, pp. 61-69.
10. **Al-Zahrani, M.M.**, Al-Dulaijan S.U., and Nanni, A., "Bond Evaluation of Glass/Vinylester FRP Rods to Concrete," *Proceedings, The Fifth Saudi Engineering Conference*, Makkah, 1-4 March, 1999, Vol. 3, pp. 137-145.
11. Al-Juraifani, E.A., Alidi, S.H., Maslehuddin, M., **Al-Zahrani M.M.**, and Al-Dulaijan, S.U., "Performance Evaluation of Repair Materials under Hot and Arid Conditions, *ACI SP-192-58*, Barcelona, Spain, June 4-9, 2000, pp. 949-964.
12. Al-Dulaijan, S.U., Maslehuddin, M., **Al-Zahrani, M.M.**, Al-Juraifani, E.A., Al-Idi, S.H., and Al-Mehthel, M., "Performance Evaluation of Cement-Based Surface Coatings," *ACI Fourth International Conference on Repair, Rehabilitation and Maintenance of Concrete Structures and Innovation in Design and Construction (ACI SP-193-20)*, Seoul, Korea, September 2000, pp. 321-335.
13. Al-Dulaijan, S.U., Maslehuddin, M., **Al-Zahrani, M.M.**, Sharif, A.M., Al-Juraifani, E.A., and Alidi, S.H., "Performance Evaluation of Resin-Based Surface Coatings," *Proceedings, 6th International Conference on Deterioration and Repair of Concrete Structures in the Arabian Gulf*, Bahrain, November 2000, pp. 345-362.
14. Rahman, F., Ali, M.A., and **Al-Zahrani, M.M.**, "Utilization of Petroleum Pitch to Produce Carbon Fiber – An Economic Evaluation," *The 3rd Middle East Refining and Petrochemicals Exhibition and Conference, PETROTECH 2001, PNI20*, 29-31 October, 2001, pp. 1-16.
15. Al-Dulaijan, S.U., Maslehuddin, M., **Al-Zahrani, M.M.**, Sharif, A.M., Alidi, S.H., and Al-Mehthel, M.H., "Effect of Aggregate Quality on the Properties of Concrete," *Proceedings, The 6th Saudi Engineering Conference*, KFUPM, Dhahran, Saudi Arabia, 14-17 December, 2002, Vol. 3, pp. 125-136.
16. **Al-Zahrani, M.M.**, Al-Dulaijan, S.U., Sharif, A., and Maslehuddin, M., "Durability Performance of Glass Fiber Reinforced Plastic Reinforcement in

Harsh Environments,” *Proceedings, The 6th Saudi Engineering Conference*, KFUPM, Dhahran, Saudi Arabia, 14-17 December, 2002, Vol. 3, pp. 307-319.

17. **Al-Zahrani, M.M.**, Maslehuddin, M., Al-Dulaijan, S.U., Sharif, A., and Alidi, S.H., “Performance Evaluation of Repair Materials,” *Proceedings, The 6th Saudi Engineering Conference*, KFUPM, Dhahran, Saudi Arabia, 14-17 December, 2002, Vol. 3, pp. 95-109.
18. **Al-Zahrani, M.M.**, Sharif, A., Eid, O.A., Saricimen, H., Al-Dulaijan, S.U., and Maslehuddin, M., “Field Research Station for Concrete Durability,” *Proceedings, The 6th Saudi Engineering Conference*, KFUPM, Dhahran, Saudi Arabia, 14-17 December, 2002, Vol. 3, pp. 233-247.
19. **Al-Zahrani, M.M.**, Sharif, A., Saricimen, H., Al-Dulaijan, S.U., Maslehuddin, M., and Eid, O.A., “Khaleej Mardomah Research Station – A New Strategy to Assess Long-term Durability Performance of Concrete in the Arabian Gulf,” *Proceedings, 7th International Conference on Concrete in Hot and Aggressive Environments*, Bahrain, 13-15 October, 2003, pp. 679-695.
20. **Al-Zahrani, M.M.**, Alidi, S.H., Al-Dulaijan, S.U., and Al-Mehthel, M.H., “Durability Performance of Three Types of GFRP Bars Under Accelerated Exposure Conditions,” *Proceedings, 7th International Conference on Concrete Technology in Developing Countries*, Kuala Lumpur, Malaysia, 5-8 October, 2004, pp. 295-304.
21. **Al-Zahrani, M.M.**, “Effect of Accelerated Laboratory Conditions on Tensile Strength and Moisture Absorption of Two Types of GFRP Bars,” *Proceedings, Third International Conference on Composites in Construction*, Lyon, France, 11-13 July 2005, pp. 775-782.
22. **Al-Zahrani, M.M.**, Alidi, S.H., Al-Dulaijan, S.U., and Al-Mehthel, M.H., “High Temperature Effect on Tensile Strength of GFRP Bars and Flexural Behavior of GFRP Reinforced Concrete Beams,” *8th International Symposium on Fiber Reinforced Polymer Reinforcement for Concrete Structures*, University of Patras, Patras, Greece (July 2007).

3.1.3 Patents

Nanoclay As An Additive For High Pressure & High Temperature Well Cementing

Abstract: A cement slurry composition, containing hydraulic cement, water, and from 1 to less than 4% of an organically modified nanoclay. A method for cementing a high pressure high temperature well by pumping the cement composition of claim 1 between a casing and a formation of a well bore to fill a gap between the casing and the formation, and allowing the cement to harden.

Inventors: Muhammad Kalimur RAHMAN, Mobeen MURTAZA, Abdulaziz Abdalla AL-MAJED, **Mesfer M AL-ZAHRANI**

Publication number: 20160177663

Type: Application

Publication date: June 23, 2016

Applicant: King Fahd University of Petroleum and Minerals

Link: <http://patents.justia.com/patent/20160177663>

2- Title: Nanoclay - Enhanced Cement Composition For Deep Well Treatment

Publication number: 10,065,890

Abstract: A cement slurry composition, containing hydraulic cement , water , and from 1 to less than 4 % of an organically modified nanoclay. A method for cementing a high pressure high temperature well by pumping the cement composition of claim 1 between a casing and a formation of a well bore to fill a gap between the casing and the formation, and allowing the cement to harden.

Type: Application

Publication date: Sep. 4, 2018

Applicant: King Fahd University of Petroleum and Minerals

Inventors: Muhammad Kalimur Rahman, Mobeen Murtaza Okara, Abdulaziz Abdalla Al-Majed, **Mesfer Mohammed Al-Zahrani**

3.1.4 Refereed Technical Reports (examples)

1. SAB 2001/01, “Assessment of GFRP Bars under Aggressive Exposure Conditions”, (Progress Reports, Final Report), (Principal Investigator), December 2003.
2. ARP 19-10, “Inhibition of Reinforcing Steel Corrosion under Atmospheric Condition”, (Yearly reports and Final report), (Co-Author), December 2003.
3. SAB 2003/03, “Effect of Sulfate Concentration and Cation Type on Sulfate Attack in Plain and Blended Cements”, KFUPM/Sabic Grants, (Progress Reports and Final Report), (Co-Author), December 2004.

3.1.5 Technical Reports (examples)

Project Number/Report Title	Date	Role*
1. “Bond of Glass FRP Reinforcement to Concrete - Experimental Results”, Society of the Advancement of Materials and Process Engineering (SAMPE), University Park, Pennsylvania	April 1995	W
2. “Annotated Bibliography of Bond Behavior of Fiber Reinforced Plastic Rods in Concrete”, CM95-1	1995	PW
3. PN 25043, “Inspection of Precast Concrete Corbels and Marble at Al-Waha Mall in Dammam”, (SQ 5475)	June 1997	W
4. PN 25057, “Removal of Salt Contamination from Concrete by Electrochemical Process”, (final report)	June 1997	PW, E
5. PN 25057, “Effectiveness of Concrete Patch Repairs Using Formed and Non-formed Cementitious Repair Materials”, (final report)	September 1999	PW, E
6. PN 25080, “Comparative Study of the Performance of HADEED Quenched Steel Bars with Other Products in the Market”, (progress reports, final report)	February 2000	PW
7. “Effect of Rebar Cleanliness on the Effectiveness of Repairs”, (PN25057/SQ5569/TM)	May 2000	PW
8. PN 25057, “Corrosion Research: Proprietary Cement-Based Waterproofing Slurries for Use on Concrete Surfaces”, (progress reports, final report)	June 2000	W, D
9. PN 25090, “Concrete Durability Study” (progress reports, final report)	August 2000	PW
10. PN 20013, “Specification for Silica Fume to Produce Durable Concrete”, (First Progress Report - “Selection of Silica Fume Samples”), (Final Report)	December 2000	PW
11. PN 25057, “Corrosion Research: Literature Search on Durability of Glass Fiber Reinforced Plastic (GFRP) Reinforcement Bars for Concrete”, (progress report, final report)	December 2001	W, E
12. CER 2227, “Effect of Dust in Aggregates and the Chloride Concentration in Soil on Concrete Durability, (progress reports, final Report)	July 2003	PW, E
13. CER 2209, “Task II: Evaluation of Concrete Made with Mineral Admixtures in Existing Structures”, (final report)	October 2002	PW, E
14. CER 2209, “Task I: Long Term Durability Investigation of Concrete in the Arabian Gulf Environment”, (progress reports, interim report and final report)	July 2003	W, D
15. (CER 4901), Consultancy services in materials - Several	Continuous	W, PW, E

reports		
16. (CER 2242), “Durability of Glass Fiber Reinforced Plastics Bars Under Aggressive Local Exposure Conditions”, (final report)	Completed December 2005	W, E

***W**: Writing, **PW**: Partial Writing, **E**: Editing, **D**: Data Acquisition/Analysis.

4. Professional Activities (Examples)

4.1 Conference/Symposium Presentations

1. “The Potential Use of Fiber Reinforced Plastic (FRP) Bars in the Reinforcement of Concrete” in the *Symposium on Maintenance Systems & Application of Materials in the Saudi Arabian Environment*, KFUPM-Research Institute, November 12-13, 1996.
2. “Bond Evaluation of Glass/Vinylester FRP Rods and Concrete”, *Fifth Saudi Engineering Conference*, Makkah, 4th March, 1999.
3. “Field Research Station for Concrete Durability,” *Sixth Saudi Engineering Conference*, KFUPM, Dhahran, 14-17 December, 2002.
4. “Durability Performance of Glass Fiber Reinforced Plastic Reinforcement in Harsh Environments,” *Sixth Saudi Engineering Conference*, KFUPM, Dhahran, 14-17 December, 2002.
5. “Khaleej Mardomah Research Station – A New Strategy to Assess Long-term Durability Performance of Concrete in the Arabian Gulf,” *Seventh International Conference on Concrete in Hot and Aggressive Environments*, Bahrain, 13-15 October, 2003.
6. “Effect of Accelerated Laboratory Conditions on Tensile Strength and Moisture Absorption of Two Types of GFRP Bars,” *Third International Conference on Composites in Construction*, Lyon, France, 12 July, 2005.

4.2 Conference/Symposium/Workshop/Short Course Attendance (Without Presentation)

- Short course on “Problems of Concrete Repair,” Civil Engineering Department, KFUPM, Dhahran, Saudi Arabia, 1986.
- Short course on “Computer Aided Structural Analysis,” Civil Engineering Department, KFUPM, Dhahran, Saudi Arabia, 22-26 Nov., 1986.
- Training on Image Analysis Instrument (IBAS), KFUPM-RI, Dhahran, Saudi Arabia, Oct 14. to Nov. 10, 1987.
- Training on X-Ray Diffraction – Operation and Research Studies, KFUPM-RI, Dhahran, Saudi Arabia, Second Semester 1986-1987.

- Training on X-Ray Fluorescence Spectrometer – Theory and Operation, KFUPM-RI, Dhahran, Saudi Arabia, Nov. 8, Dec. 8, 1987.
- Short course on “Durability and Repair of Concrete Structures,” Civil Engineering Department, KFUPM, Dhahran, Saudi Arabia, 1987.
- Training on Scanning Electron Microscope (SEM) – Theory and Operation, KFUPM-RI, Dhahran, Saudi Arabia, 23-27 Jan., 1988.
- Training on Electron Microprobe Analyzer (EMPA) – Theory and Operation, KFUPM-RI, Dhahran, Saudi Arabia, Jan. 30-Feb. 3, 1988.
- A 5-day short course on “Cathodic Protection System in Concrete Structures,” offered by the Department of Civil Engineering, KFUPM, Dhahran, Saudi Arabia, Feb. 20-24, 1988.
- Workshop on “International Research on Advanced Composites in Construction (IRACC 96),” Bologna, Italy, June 10 and 11, 1996.
- Symposium on “Maintenance Systems & Application of Materials in the Saudi Arabian Environment,” KFUPM-Research Institute, November 12-13, 1996.
- ACI Fall Convention, “Recreational Concrete and Fiber Reinforced Polymers,” Baltimore, USA, October 31-November 5, 1998.
- “FRP Composites for Concrete Reinforcement in the Arabian Gulf, Design and Applications,” Bahrain, 18-19 November, 2000.
- Symposium on “Energy Conservation and Management in Buildings,” organized by KFUPM, 5-6 February, 2002.
- Symposium on “Engineering Design Standards and Specifications,” organized by Saudi Engineering Society, 14-15 May, 2002.
- Symposium on “Certification of Practicing Engineers in Saudi Arabia: Issues and Challenges,” KFUPM, Dhahran, April 30, 2002.
- Workshop on “Introduction to Outcome-based Program and Course Assessment,” organized by Deanship of Academic Development, KFUPM, Dhahran, October 7, 2003.

4.3 Honors and Awards

- Received **third honor** for the BSc Degree in Civil Engineering from KFUPM, 1984.
- Received the **Phi-Kappa-Phi honor society recognition** for the excellent achievement in the course work during the PhD program, 1995.

- **Prince Muhammad Award** for the Team of “*Corrosion Research–PN 25057,*” April 1992-July 2000, Research Institute, KFUPM, Dhahran, Saudi Arabia.
- **Outstanding Project Team Award (2000)** for the team of “*Concrete Durability*” project sponsored by Saudi ARAMCO, Research Institute, KFUPM, Dhahran, Saudi Arabia.
- **Prince Muhammad Award (2001)** for the Team of “*Comparative Study of the Performance of Hadeed Quenched Steel Bars with Other Products in the Market,*” March 1997-June 2000, Research Institute, KFUPM, Dhahran, Saudi Arabia.
- **Distinguished Research Team Award (2003-2004)** for the Corrosion Research Project sponsored by the Royal Commission.
- **Outstanding Applied Researcher Award** of the Research Institute for the year 2003-2004.

4.4 Editorial Work

Reviewed several papers for publication in several journals such as the *ACI Journals*, *Construction & Building Materials*, *Journal of Composites for Construction* and others. The following are some examples:

- **Technical Editor** of the AJSE theme issue on “Advances in Concrete Technology and Repair”.
- Reviewed the paper titled “Concrete Behavior in Reactor Envelope of Nuclear Power Plant at Temperatures up to 200 °C”, submitted for publication in the *Arabian Journal for Science and Engineering*, March 1998.
- Reviewed the following papers submitted for publication in *The Fifth Saudi Engineering Conference*, held in Makkah, 1999:
 - (1) “Effect of Polypropylene Fibers on Properties of Cement Mortar”.
 - (2) “Effect of Implementing Quality Control System on the Performance of Ready Mix Concrete Plants” (in Arabic).
 - (3) “Production Quality Control System for the Ready Mix Concrete Plants in Saudi Arabia” (Proposal in Arabic).
- Reviewed the paper titled “Use of Rockdust for Enhancing Durability of Concrete” submitted for publication in the *Proceedings of the Symposium: Performance of Concrete Structures in the Arabian Gulf Environment* (sponsored by Civil Engineering Dept., KFUPM).

- Reviewed the following papers submitted for publication *in the Journal of Cement and Concrete Composites*:
 - (1) “Using Polymers to Restrict Chloride Transport through Concrete”.
 - (2) “Natural Marine Exposure Results for Reinforced Concrete Slabs with Corrosion Inhibitors”.

- Reviewed the following papers submitted for publication *in The Sixth Saudi Engineering Conference, 2002*:
 - (1) “Durability of GFRP Rebars in Stressed Concrete Beams at Different Environments”.
 - (2) “Long-term Performance of the New Generation of GFRP Rebars under Severe Environments”.

- Reviewed the paper titled “The Effect of Thiosemicarbazide on Corrosion Resistance of Reinforced Concrete,” submitted for publication in the *Construction and Building Materials*, May 2005.

- Reviewed the paper titled “Compatibility of Repair Concretes in the Aggressive Environment of the South of Iran,” submitted for publication in the theme issue of *the Arabian Journal for Science and Engineering*, September 2005.

- Reviewed the following papers (examples) submitted for publication in the *ACI Journals*:
 - (1) “Analytical Model for Concrete Beams Prestressed and Post-Tensioned with CFRP Tendons,” November 2005.
 - (2) “Controlling the Plastic Hinge Location in RC Structures Using Web-Bonded CFRP Sheets,” January 2006.
 - (3) “Flexural Deflection of FRP Web-Bonded RC Beams for Analysis of Retrofitted Beam-Column Joints,” January 2006.

4.5 Consultation

1. Investigation of Corroded Copper Pipes, conducted for Dewan Al-Madhalem to determine the cause of corrosion of a copper piping system used to handle cold, warm and hot water in King Khaled Hospital and the Medicine College buildings at King Saud University, 1997 (Co-Investigator).
2. Inspection of Precast Concrete Corbels and Marble at Al-Waha Mall for Al-Waha Shopping Mall, 1998 (Principal Investigator).
3. Gypsum Block Testing for Al-Tatweer Factory, Riyadh, Saudi Arabia, February 2000 (Principal Investigator).

5. University, Department And Public Services

5.1 National Committees

- Qiyas Examination (RAM 1) Committee for Wadi-Addwaser Center (Chairman) (2002-03).
- Qiyas Examination (RAM 1) Committee for Wadi-Addwaser Center (Chairman) (2003-04).
- Qiyas Examination (RAM 1) Committee for Mahail Assir Center (Chairman) (2004-05).

5.2 University and College Committees

- Continuing Education and Educational Services Program Committee (Member) (1996-97).
- General Organization & Workshop, Poster/Announcements and Proceedings Committees of the Symposium on “Maintenance Systems & Application of Materials in the Saudi Arabian Environment”, KFUPM/RI, 12-13 November, 1996 (Member).
- Lecturers, Graduate Assistants, and Research Assistants Affairs Committee (1998-2000).
- Subcommittee to prepare brochures for the centers and the sections in the Research Institute (1998-99).
- Traffic Safety Committee (Member) (1999-2000).
- Traffic Safety Committee (Member) (2000-01).
- Admission Examination (RAM 2) Committee for Riyadh Center (Member) (2003-04).
- Library Affairs Committee (Member) (2004-05).
- Alterations Committee (Member) (2004-05).
- Academic Committee (Member) (2005-06).
- Career Day and Open Day Committee (Deputy Chairman) (2005-07).
- Career Day and Open Day Committee (Chairman) (2008-2016).
- Students Advisory Committee (Member) (2005-06).

- Student Procession Subcommittee (Deputy Chairman) (2005-06).

5.3 Department Committees

- Undergraduate Committee in the Civil Engineering Department (Member) (1996-97).
- Textbook Committee in the Civil Engineering Department (Member) (1997-98).
- Textbook Committee in the Civil Engineering Department (Member) (2004-05).

5.4 RI Committees

- Distinguished Awards Committee for the academic year (1996-97) (Member).
- RI Projects Budget Committee (Member) (1997-98).
- RI Equipment Review Committee (Member) (1997-98).
- Ad-hoc promotion committees for the following employees:
- RI Projects Budget Committee (Member) (1999-2000).
- RI Equipment Selection Committee (Deputy Chairman) (2000-01).
- Proposal Evaluation Committee (Member) (2001-02).
- Conferences and Publication Committee (Member) (2002-03).
- RI Distinguished Research Awards Committee (Member) (2004-05).
- RI Projects Budget Committee (Member) (2004-05).
- Ad-hoc Performance Evaluation Subcommittee (Member) (2004-05).

5.5 Public Services

Serving the society is the primary role of an academician. I have contributed to many tasks and events related to education inside and outside KFUPM. Some of these services included the following:

Participation in Short Courses: I participated in several short courses (closed and open) as an instructor. These courses have been well attended and appreciated by the practicing engineers (see Section 2.7 for details of my participation in the short courses).

Organization of Symposia, Technical Meetings and Workshops: I have contributed to the organization of the symposium on “Maintenance Systems and Application of Materials in the Saudi Arabian Environment”, conducted during the period of November 12-13, 1996 at KFUPM-Research Institute.

Public Seminars: Several technical seminars were presented by me in different cities of Saudi Arabia and at KFUPM and I presented technical papers in some local and international symposia and conferences (see Sections 2.8 & 4.1 for details).

Consultation: My research involvement can be considered in part as a consultation activity to resolve/clarify some existing problems in the field (see Section 4.5 for some details).

Societies: Currently, I am the Chairman of the Board Members of the Saudi Society of Civil Engineering (SSCE)-Eastern Region Branch. I am also actively engaged with several organizations to serve the society (See Section 1.5).

Review of Papers: I have been a reviewer to several journals (local and international) and symposia/conferences (see Section 4.4 for details).

5.6 Miscellaneous Activities

- Involved in the training of part-time students from different departments in various laboratories activities.
- Technical Editor, Theme Issue of the Arabian Journal for Science and Engineering (AJSE) 31:1C (June 2006), “Advances in Concrete Technology and Repair”.
- Member of the Saudi ARAMCO-KFUPM Technical Group: Mechanical and Civil Engineering.
- Conducted contacts and meetings with several potential clients to discuss possible research projects, such as Saudi ARAMCO, SABIC, HADEED, and Royal Commission.