

Mohammad R. Irshidat, PhD

Associate Professor of Civil engineering
Research Associate Professor
Center for Advanced Materials (CAM)
Qatar University, Qatar
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Personal Information

- Nationality: Jordanian
- Date of birth: December 24th, 1981
- Marital status: Married
- Number of children: Three (Nada: 7 years, Hashem: 5 years, and Nour: 3 year)

Research Interests

Construction engineering, Sustainable construction materials, nano-cementitious materials, polymer nanocomposites applications, rehabilitation and repair of concrete structures; geopolymer concrete, 3-D printing concrete, finite element analysis of concrete structures, blast and impact resistant of structural elements.

Taught Courses

- **Qatar University:**
 - ✓ **Undergraduate Courses:** Statics
 - ✓ **Graduate Courses:** Advanced Topic in Civil Engineering.
- **Jordan University of Science and Technology:**
 - ✓ **Undergraduate Courses:** Statics, Strength of Materials, Structural Analysis I, Structural Analysis II, Numerical Methods, Applied Engineering Practices, Special Topics in Structural Engineering (Introduction to Finite Element)
 - ✓ **Graduate Courses:** Finite Element Methods, Seminar in Civil Engineering.

Education

- Ph.D. (2007-2010)
 - ✓ University of Mississippi, Oxford, Mississippi, USA
 - ✓ Civil Engineering-Structural Division
 - ✓ 4.0 GPA
 - ✓ Dissertation: “*Physics-Based Simulation and Experiment on Blast Protection of Infill Walls and Sandwich Composites Using New Generation of Nano Particle Reinforced Materials*”

- M.Sc. (2004-2006)
 - ✓ Jordan University of Science and Technology (JUST), Irbid, Jordan
 - ✓ Civil Engineering-Structural Division
 - ✓ Ranked 1st
 - ✓ Thesis: *“Vibration Analysis and Modeling of RCC Dams Using Finite Element Method”*
- B.Sc. (1999-2004)
 - ✓ Jordan University of Science and Technology (JUST), Irbid, Jordan
 - ✓ Civil Engineering-Structural Division
 - ✓ Ranked 1st
 - ✓ Project: *“Structural Design for Proposed Project of Irbid Mall”*

Professional Experiences

❖ Administration Experience:

- **Assistant Dean of Research**, Jordan University of Science and Technology, Irbid, Jordan. (September 2014- September 2017)
- **Technology Transfer Officer**, Jordan University of Science and Technology, Irbid, Jordan. (September 2014- September 2016)

❖ Academic Experience:

- **August 2018-present:** Research Associate Professor, Center for Advanced Materials (CAM), Qatar University, Qatar.
- **September 2016-present:** Associate Professor, Civil Engineering Department, Jordan University of Science and Technology, Irbid, Jordan (On leave).
- **September 2011- September 2016:** Assistant Professor, Civil Engineering Department, Jordan University of Science and Technology, Irbid, Jordan.
- **August 2010 to August 2011:** Postdoctoral Research Associate, Nano Infrastructure Research Group, Department of Civil Engineering, University of Mississippi, USA:
 - ✓ Department of Home Land Security Project: *“Nano-Enhanced and Bio-Inspired Composite Materials for Mitigation and Protection of TIH Railcars and Stationary Tanks against High Power Impact”*.
 - ✓ Department of Home Land Security Project: *“Structural, Material and Geotechnical Solutions to Levee & Floodwall Construction & Retrofitting”*.
- **January 2007 to July 2010:** Research Assistant, Composite Structures and Nano Engineering Research Group, Department of Civil Engineering, University of Mississippi, USA:
 - ✓ Department of Home Land Security Project: *“Nano Particle Reinforced Composites for Critical Infrastructure Protection”*:
 - ❖ Established new design tools for using nano-composites to protect panels against blast loading.
 - ❖ Developed a computationally-efficient model to replicate the behavior of CMU wall subjected to blast loads using finite element software.
 - ❖ Developed an analytically-efficient model (SDOF) to replicate the behavior of CMU wall subjected to blast loads.

- ❖ Performed static testing using Material Testing and Simulation (MTS) machine for various nano-composites.
- ❖ Studied the strain rate sensitivity of nano-composites and nano-reinforced polymers.
- ✓ Office of Naval Research Project: “Blast and Impact Resistant of Composite Structures for Navy Ships”:
 - ❖ Developed a computationally-efficient model to replicate the behavior of sandwich composites structures subjected to blast loads using finite element software.
- ✓ Mississippi Department of Transportation Project: “Inputs of Portland Cement Concrete; Effect of Moisture on Thermal Coefficient of Expansion”
 - ❖ Tested and evaluated concrete properties and CTE of concrete used by MDOT
 - ❖ Prepared final report.
- **2004 to 2005:** Research Assistant, Department of Civil Engineering, Jordan University of Science and Technology, Irbid, Jordan:
 - ✓ Performing structural analysis for AL-Wehdah Dam, Jordan using finite element software for both dynamic and static case.
 - ✓ Monitoring of the stability of AL-ADASIYA western landslide on Amman-Na’ur-Dead sea highway using inclinometer instruments.

❖ Practical engineering experience:

- **2005 to 2006:** Site Engineer, Penta-group for engineering and construction
- **2006 to 2007:** Project Engineer, Ministry of Public Works and Housing, Jordan

Publications

❖ Referred journal papers:

➤ Published papers

1. **Mohammad R. Irshidat**, Nasser Al-Nuaimi, Mohamed Rabie. “Hybrid effect of carbon nanotubes and polypropylene microfibers on fire resistance, thermal characteristics and microstructure of cementitious composites”. *Construction and Building Materials*, 266 (2021) 121154.
2. **Mohammad R. Irshidat**, Nasser Al-Nuaimi. “Industrial Waste Utilization of Carbon Dust in Sustainable Cementitious Composites Production”. *Materials* 2020, 13(15), 3295.
3. **Mohammad R. Irshidat**, Nasser Al-Nuaimi, Mohamed Rabie. “The Role of Polypropylene Microfibers in Thermal Properties and Post-Heating Behavior of Cementitious Composites”. *Materials* 2020, 13(12), 2676.
4. **Mohammad R. Irshidat**. “Improved bond behavior between FRP reinforcing bars and concrete with carbon nanotubes”. *Construction and Building Materials*, 257, 2020.
5. **Mohammad R. Irshidat**, Nasser Al-Nuaimi, Soheb Salim, Mohamed Rabie. “Carbon Nanotubes Dosage Optimization for Strength Enhancement of Cementitious Composites”. *Procedia Manufacturing*, 44, 366–370, 2020.

6. **Mohammad R. Irshidat**, Ammar Al-Shannaq. "Bond strength evaluation between textiles reinforced mortar with carbon nanotubes and concrete substrate". Latin American Journal of Solids and Structures 16 (9), 2019.
7. Nasser Al-Nuaimi, **Mohammad R. Irshidat**, Soheb Salim. "Effect of initial and final curing on performance of concrete in hot and arid climates ". Structural Concrete, PP 1-13, 2019.
8. Nisrin R. Abdelal, **Mohammad R. Irshidat**. "Utilizing vacuum bagging process to enhance bond behavior between fibers reinforced polymer composites and concrete". Structural engineering and Mechanics 72 (3), 305-312, 2019.
9. **Mohammad R. Irshidat**, Ammar Al-Shannaq. "Using textile reinforced mortar modified with carbon nano tubes to improve flexural performance of RC beams". Composite Structures (2018) 127-134.
10. **Mohammad R. Irshidat**, Yahia A. Abdel-Jawad, Rami Al-Sughayer. "Feasibility of producing sustainable geopolymer composites made of locally available natural pozzolan". Journal of Material Cycles and Waste Management. (2018) DOI: 10.1007/s10163-018-0742-5
11. **Mohammad R. Irshidat**, Mohammed H. Al-Saleh. "Influence of nanoclay on the mechanical properties and morphology of cement mortar". KSCE Journal of Civil Engineering (2018). DOI: 10.1007/s12205-018-1642-x
12. **Mohammad R. Irshidat**, Mohammed H. Al-Saleh. "Thermal Performance and Fire Resistance of Nanoclay Modified Cementitious Materials". Construction and Building Materials 159, 213-219, 2018
13. **Mohammad R. Irshidat**, Mohammed H. Al-Saleh. "Repair of heat-damaged RC columns using carbon nanotubes modified CFRP". Materials and Structures 50(2), 2017.
14. **Mohammad R. Irshidat**, Mohammed H. Al-Saleh. "Flexural strength recovery of heat-damaged RC beams using carbon nanotubes modified CFRP". Construction and Building Materials 145: 474-482, 2017.
15. Nisrin R. Abdelal, Mohammed H. Al-Saleh, **Mohammad R. Irshidat**. "Utilizing vacuum bagging process to prepare carbon fiber/CNT-modified-epoxy composites with improved mechanical properties". Polymer-Plastics Technology and Engineering, April 2017, doi: 10.1080/03602559.2017.1315644
16. **Mohammad R. Irshidat**, Mohammed H. Al-Saleh. "Effect of using carbon nanotube modified epoxy on bond-slip behavior between concrete and FRP sheets", Construction and Building Materials, 105 (2016) 511-518.
17. **Mohammad R. Irshidat**, Mohammed H. Al-Saleh, Hashem Almashagbeh. "Effect of carbon nanotubes on strengthening of RC beams retrofitted with carbon fiber/epoxy composites", Materials and Design 89 (2016) 225-234.
18. Mohammed H. Al-Saleh, **Mohammad R. Irshidat**. "Effect of viscosity reducing agent on the properties of CNT/epoxy nanocomposites", Journal of Polymer Engineering, Vol. 36, No. 4 (2016) 407-412.
19. K.A. Bani-Hani, **M.R. Irshidat**, R.K.A. Al-Rub, N.A. Al-Nuaimi, A.T. Talleh, "Strength optimization of mortar with CNTs and nanoclays", Proc. Inst. Civ. Eng. - Struct. Build. Vol.169, No.5, (2016) 340-356.
20. **Mohammad R. Irshidat**, Mohammed H. Al-Saleh, Sura Sanad. "Effect of nanoclay on the expansive potential of cement mortar due to alkali silica reaction", ACI Materials Journal 112 (2015) 801-808.
21. **Mohammad R. Irshidat**, Mohammed H. Al-Saleh, Mahmoud Al-Shoubaki. "Using carbon nanotubes to improve strengthening efficiency of carbon fiber/epoxy composites confined

RC columns”, *Composite Structures* 134 (2015) 523–532.

22. **Mohammad R. Irshidat**, Rami H. Haddad and Hanadi Almahmoud. “Post-heating behavior of concrete beams reinforced with fiber reinforced polymer bars”, *Structural Engineering and Mechanics*, Vol. 53, No. 6 (2015) 1253-1269.
23. **M. Irshidat**, A. Al-Ostaz, and A.H.-D. Cheng, “Correlating Micro/Nano Structure Morphology to High-Strain Rate Performance of Nano-Particle Reinforced Polymeric Materials”, *ASCE Journal of Nanomechanics and Micromechanics*. (2012) 2:4 (55-64).
24. **M. Irshidat**, A. Al-Ostaz, A.H.-D. Cheng, and C. Mullen, “Nano-Particle Reinforced Polymer for Blast Protection of Unreinforced Masonry Wall: Laboratory Blast Load Simulation and Design Models”, *ASCE Journal of Structural Engineering*. (2011) 137:10 (1193-1204).
25. A. Al-Ostaz, **M. Irshidat**, B. Tenkhoff and P. Ponnappalli, “Deterioration of Bond Integrity between Repair Material and Concrete due to Thermal and Mechanical Incompatibilities”, *ASCE Journal of Materials in Civil Engineering*. (2010) 22:2 (136).

➤ **Submitted journal papers:**

26. **Mohammad R. Irshidat**, Nasser Al-Nuaimi, Mohamed Rabie. “Microstructure and mechanical behavior of cementitious composites with multi-scale additives”.
27. **Mohammad R. Irshidat**, Nasser Al-Nuaimi, Mohamed Rabie. “Influence of carbon nanotubes on phase composition, thermal and post-heating behavior of cementitious composites”.
28. **Mohammad R. Irshidat**, Rami Al-husban. “Capability of different bond models to predict the CNTs effect on beams strengthened with CFRP”.
29. **Mohammad R. Irshidat**, Rami Al-husban. “Effect of bond enhancement using carbon nanotubes on flexural behavior of RC beams strengthened with externally bonded CFRP sheets”.
30. **Mohammad R. Irshidat**. “Bond strength evaluation between steel rebars and carbon nanotubes modified concrete”.
31. Wasim S. Barham, **Mohammad R. Irshidat**, and Abdelrahman Awawdeh. “Repair of heat damaged reinforced concrete beams using micro-concrete modified with carbon nanotubes”.
32. Mohamed Rabie, **Mohammad R. Irshidat**, Nasser Al-Nuaimi. “Effect of curing conditions and synthesis parameters on compressive strength, flowability, and microstructure of class F fly ash-based geopolymer composites”.
33. **Mohammad R. Irshidat**, Rami H. Haddad, Feda Al-Amarat. “*Effect of heating level on the contribution of CFRP bars in the axial load carrying capacity of RC columns*”.

❖ **Referred conference papers:**

34. **Mohammad R. Irshidat**, Nasser Al-Nuaimi, Soheb Salim, Mohamed Rabie. Dosage Optimization of Polypropylene Fiber for Strength Enhancement of Cementitious Composites, *Proceedings of the International Conference on Civil Infrastructure and Construction (CIC 2020)*, Doha, Qatar, 2020.

35. Mohamed Rabie, **Mohammad R. Irshidat**, Nasser Al-Nuaimi. N. Effect of Alkaline Activators on the Mechanical Properties of Geopolymer Mortar, Proceedings of the International Conference on Civil Infrastructure and Construction (CIC 2020), Doha, Qatar, 2020.
36. Mohamed Rabie ,Fayyad, E.M., **Mohammad R. Irshidat**, Nasser Al-Nuaimi, Hassan, M.K. Evaluation of Bond Strength Between Carbon Fiber Reinforced Polymer (CFRP) Composites with Modified Epoxy Resins and Concrete, Proceedings of the International Conference on Civil Infrastructure and Construction (CIC 2020), Doha, Qatar, 2020.
37. **Mohammad R. Irshidat**, Mohammed H. Al-Saleh. "Effect of elevated temperatures on mechanical performance of cement mortar with nanoclay". MATEC Web of Conferences 120:02005 · January 2017. DOI: 10.1051/mateconf/201712002005.
38. **Mohammad R. Irshidat**, Mohammed H. Al-Saleh, Mahmoud Al-Shoubaki. " Strengthening of RC columns Using carbon fiber reinforced epoxy composites modified with carbon nanotubes", International Journal of Civil, Structural, Construction, and Architectural Engineering. Dubai, UAE. January, 2015.
39. **Mohammad R. Irshidat**, Rami H. Haddad, Hanadi Almahmoud. "Flexural Behavior of Heat-Damaged Concrete Beams Reinforced with Fiber Reinforced Polymer (FRP) Bars", Proceeding of the International Conference on Composite Materials. Dubai, UAE. January, 2014.
40. **M.R. Irshidat** and M.H. Al-Saleh, "Effect of Nanoclay Addition on Mechanical Properties of Portland Cement Mortars". Proceeding of the International Conference on Nanoscience and Nanotechnology. Istanbul, Turkey. June 20-21, 2013.
41. **M. Irshidat**, A. Al-Ostaz, A. Cheng, and C. Mullen, "Blast Vulnerability Evaluation of Concrete Masonry Unit Infill Walls Retrofitted With Nano Particle Reinforced Polyurea: Modelling and Parametric Evaluation". Proceeding of the 2011 Structures Congress. Las Vegas, Nevada. April 14-16, 2011.
42. **M. Irshidat**, A. Al-Ostaz, A. Cheng, and C. Mullen, "Nano-Particle Reinforced Polymer for Blast Protection of Unreinforced Masonry Wall: Laboratory Blast Load Simulation and Design Models". Proceeding of the 2010 Engineering Mechanics Institute Conference. Los Angeles, California. August 8-11, 2010.
43. **M. Irshidat**, A. Al-Ostaz, C. Mullen and A. Cheng, "Blast Resistance of Unreinforced Masonry (URM) Walls Retrofitted With Nano Reinforced Elastomeric Materials". Proceeding of the Structures Congress 09. Austin, Texas. April 29- May 2, 2009.

Conferences and Workshops

❖ **Conference Presentations:**

- International Conference on Civil Infrastructure and Construction (CIC 2020), Doha, Qatar, February, 2020
- International Conference on Optimization-Driven Architectural Design (OPTARCH2019). Amman, Jordan. November 5-7, 2019.
- The International Conference on Advances in Sustainable Construction Materials & Civil Engineering Systems (ASCMCES-17). Al-Sharjah, UAE. April 18-20, 2017.
- 17th International Conference on Composite Materials "ICCM 2015". Dubai, UAE. January 30-31, 2015
- 16th International Conference on Composite Materials "ICCM 2014". Dubai, UAE. January 30-31, 2014
- International Conference on Nanoscience and Nanotechnology "ICNN 2013". Istanbul, Turkey. June 20-21, 2013.

- Mid-South Annual Engineering and Sciences Conference “MAESC 2011”. Memphis, TN, USA. May 3, 2011.
- Structures Congress 2011. Las Vegas, Nevada, USA. April 14-16, 2011.
- 2010 Engineering Mechanics Institute Conference “EMI 2011”. Los Angeles, California, USA. August 8-11, 2010.
- 2009 Joint ASCE-ASME-SES Conference on Mechanics and Materials. Blacksburg, Virginia, USA. June 24-27, 2009.
- Structures Congress 2009. Austin, Texas, USA. April 29- May 2, 2009.
- First American Academy of Mechanics Conference. New Orleans, Louisiana, USA. June 17-20, 2008.
- American Society for Composites 23rd Technical Conference, Memphis, Tennessee, USA. September 9-11, 2008.
- Inaugural International Conference of the Engineering Mechanics Institute. Minnesota, USA. May 18-21, 2008.
- Mid-South Area Engineering and Sciences Conference. Oxford, Mississippi, USA. May 17-18, 2008.

❖ ***Workshops and Training:***

- Annual Research Forum & Exhibition 2019, Qatar University, Doha, Qatar, April 23-24, 2019.
- 10th Annual Materials Science and Engineering Symposium 2019. Doha, Qatar, February 26th, 2019.
- Waste Management & Waste to Energy Workshop in Qatar. Doha, Qatar, February 25th, 2019.
- MED-SPRING Training on Innovation. Naples, Italy. November 25-27, 2015.
- WIPO Seminar on the PCT: The system for worldwide filing of Patent Applications, Amman, Jordan. May 27-28, 2015.
- Workshop on: Statistical Package for Social Sciences. Jordan University of Science and Technology, Irbid, Jordan. January 14-15, 2014.
- Workshop on: Modern University Instructional Methods. Jordan University of Science and Technology, Irbid, Jordan. January 6-7, 2013.
- Scientific Day of Faculty of Engineering. Jordan University of Science and Technology. Irbid, Jordan. April 30th 2013.
- Second International Workshop in Civil engineering. Jordan University of Science and Technology. Irbid, Jordan. June 20-21, 2012.
- Third Annual Department of Homeland Security (DHS) University Network Summit and Student Day. Washington D.C. March 17th – 19th, 2009.
- FLAC3D Training Course given by Itasca Consulting Group, Inc. Oxford, MS, USA. January 23-24, 2009.
- ANSYS AUTODYN Training Course. San Francisco, California, USA. August 20–25, 2007.
- Workshop on: Roller Compacted Concrete Dams. Munich, Germany. July 1- August 1, 2005.
- Workshop on: Development of Scientific Research in Jordan, Hashemite University, Zarqa, Jordan. March 16, 2004.

Editorial work

❖ **Member of the editorial board of the following Journal:**

1. Computations and Materials in Civil Engineering, Spiral Publishing, January 2016-now

❖ **Reviewer for the following international journals**

1. ASCE Journal of Materials in Civil Engineering
2. ACI Materials Journal
3. Composite Structures
4. Construction and Building Materials
5. Materials and Design
6. Engineering Structures
7. Cement and Concrete Research
8. Journal of Building engineering
9. Structural Concrete
10. Structural Engineering and Mechanics
11. Structures
12. Case Studies in Construction Materials
13. Archives of Civil and Mechanical Engineering
14. Smart Structures and Systems
15. Journal of Traffic and Transportation Engineering
16. Computations and Materials in Civil Engineering
17. International Journal of Concrete Structures and Materials
18. Jordan Journal of Civil Engineering
19. Journal of Material Cycles and Waste Management
20. Computers and Concrete

Research Grants

1. **Project Title:** Qatar Robotic Printing (QRP).
Role: Principal Investigator (PI)
Funding Agency: Qatar Foundation, Doha, Qatar
Amount of Fund: \$ 549,300
2. **Project Title:** Effect of carbon dust generated as industrial byproducts on chemical reactions and hydration products of cementitious materials.
Role: Lead Principal Investigator (LPI)
Funding Agency: Qatar University, Doha, Qatar
Amount of Fund: 285,000 QR (\$ 78,000)
3. **Project Title:** Using different nano additives to improve fire resistance and thermal performance of cementitious materials.
Role: LPI
Funding Agency: Qatar University, Doha, Qatar
Amount of Fund: 20,000 QR (\$ 5,500)
4. **Project Title:** Effect of using carbon nanotubes (CNTs) on bond strength between concrete and basalt FRP bars.
Role: PI
Funding Agency: Qatar University, Doha, Qatar
Amount of Fund: 20,000 QR (\$ 5,500)

- 5. Project Title:** Strengthening, repair, and rehabilitation of new and existing reinforced concrete structures using nanocomposites.
Role: LPI
Funding Agency: Scientific Research Support Fund, Amman, Jordan
Amount of Fund: 60,000 JD (\$ 90,000)
- 6. Project Title:** Performance evaluation of asphalt mixtures modified using nano-materials.
Role: PI
Funding Agency: Scientific Research Support Fund, Amman, Jordan
Amount of Fund: 97,700 JD (\$ 140,000)
- 7. Project Title:** Flexural strengthening of RC beams using fiber reinforced nano cementitious materials.
Role: LPI
Funding Agency: Deanship of Scientific Research – JUST
Amount of Fund: 10,000 JD (\$ 15,000)
- 8. Project Title:** Influence of nanofilaments on the mechanical properties, workability, and durability of cement-based materials.
Role: LPI
Funding Agency: Deanship of Scientific Research – JUST
Amount of Fund: 6,000 JD (\$ 9,000)
- 9. Project Title:** Structural behavior investigation and durability study of concrete elements reinforced with fiber reinforced polymer (FRP) bars
Role: LPI
Funding Agency: Deanship of Scientific Research – JUST
Amount of Fund: 9,000 JD (\$ 13,500)
- 10. Project Title:** The use of nano particles in production of concrete waterproofing and strengthening materials
Role: PI
Funding Agency: Deanship of Scientific Research – JUST
Amount of Fund: 19,700 JD (\$ 28,000)
- 11. Project Title:** Bond strength between steel rebars and geopolymers concrete
Role: LPI
Funding Agency: Deanship of Scientific Research – JUST
Amount of Fund: 9,900 JD (\$ 14,000)
- 12. Project Title:** Epoxy/Thermoplastic Blends Reinforced with Carbon Nanotubes
Role: PI
Funding Agency: Deanship of Scientific Research – JUST
Amount of Fund: 5,950 JD (\$ 8,500)

Supervised Graduate Students

1. Hanadi Almahmoud (2012-2013)
Thesis Title: Flexural Behavior of Heat Damaged Concrete Beams Reinforced with Fiber Reinforced Polymer (FRP) Bars
2. Feda Al-Amarat (2012-2014)
Thesis Title: Post-Heating behavior of Concrete Columns Reinforced with Fiber Reinforced Polymer Bars
3. Mahammad Obadi (2012-2014)
Thesis Title: Flexural behaviour of Heat Damaged One-Way Concrete Slabs Reinforced with Fiber Reinforced Polymer (FRP) Bars
4. Sura Sanad (2013-2014)
Thesis Title: Expansive potential of hydrophilic nanoclay reinforced cement mortar due to sulfate attack and alkali-silica reaction
5. Mahmoud Al-Shoubaki (2013-2015)
Thesis Title: Strengthening of Reinforced Concrete Columns Using Nanocomposites-CFRP Hybrid Sheets
6. Hashem Mashagbeh (2013-2015)
Thesis Title: Strengthening of Reinforced Concrete beams Using Nanocomposites-CFRP Hybrid Sheets
7. Alaa Talleh (2012-2014)- Co-advisor
Thesis Title: Modeling and Optimization for Compressive and Tensile Strength of Concrete Mixtures Containing Carbon Nanotubes and Nanoclays Using Neural Networks and Genetic Algorithm Techniques
8. Ammar Al-Shannaq (2015-2016)
Thesis Title: Flexural strengthening of reinforced concrete beams using Fiber Reinforced Nano Modified Cementitious Materials
9. Rami Sughayer (2015-2016)
Thesis Title: Strength optimization and microstructure investigation of geopolymer concrete made of natural Jordanian pozzolan
10. Rami Husban (2015-2016)
Thesis Title: Effect of bond enhancement using carbon nanotube on flexural behavior of concrete beams strengthened with fibrous composites.
11. Abdelrahman Awawdeh (2018-2019)- Co-advisor
Thesis Title: Repair of heavily damaged concrete beams with micro-concrete enhanced with nanotube material
12. Mohamed Rabie (2019-2020)
Thesis Title: Factor influencing the mechanical properties of geopolymer mortar made of fly ash

Honors and Awards

- Best awarded research in the area of nanotechnology, engineering and architecture, Scientific Research Support Fund, Amman, Jordan, 2019.
- 2010 Member of the honor society of Phi Kappa Phi, USA.
- Selected to present a poster at the Third Annual U.S. Department of Homeland Security (DHS) Annual University Network Summit. Washington D.C. march 17th – 19th, 2009.

- University Honor Award for Outstanding Performance Students, Department of Civil Engineering, Jordan University of Science and Technology, 1999-2004.
- College of Engineering Honor Award for Outstanding Performance Students, Department of Civil Engineering, Jordan University of Science and Technology, 1999-2004.
- Ministry of Higher Education Scholarship, Bachelor Degree, Jordan 1999-2004.
- Ministry of Higher Education Scholarship, Master Degree, Jordan 2004-2006.
- PhD scholarship, University of Mississippi, USA, 2007-2010.

Professional Affiliations

- Phi Kappa Phi Honor Society (2010).
- Jordan Engineers Association (JEA).

Technical Skills

❖ **Computer skills:**

- ✓ Finite Element Software (AUTODYN, ANSYS, ABAQUS, SAP2000).
- ✓ Tools (Microsoft office professional).
- ✓ Computer literacy and Internet.
- ✓ MATLAB.

❖ **Communication skills:**

Excellent communication skills (oral & written) and very good in teamwork environment

Services

- ❖ Judge for Poster competition. Annual Research Forum & Exhibition 2019, Qatar University, Doha, Qatar, October 2020.
- ❖ Judge for Poster competition. Annual Research Forum & Exhibition 2019, Qatar University, Doha, Qatar, April 23-24, 2019.
- ❖ Judge for Poster competition. Student Design Projects, Civil engineering Department, Qatar University, 2019.
- ❖ Member of the scientific committee of the 14th Arab Structural Engineering Conference. Irbid, Jordan. April 12th – 15th, 2018.
- ❖ Member of the advisory committee for the project of Enhancing Institutional Capacities to Reduce Disaster Risk and to Integrate Climate Change in Jordan. UNDP, Jordan. 2012-now.
- ❖ Member of the organization committee of the Scientific Day of Faculty of Engineering. Jordan University of Science and Technology. Irbid, Jordan. April 30th 2013.
- ❖ Member of the organization committee of the International Workshop “Water – A crucial Object in the Middle East and North Africa”. Jordan University of Science and Technology. Irbid, Jordan. November 28th – 30th, 2006.
- ❖ Member of the organization committee of the International Conference on Geotechnical Engineering with emphasis on Dams, Highway Material, and Soil Improvement, Geo Jordan 2004. Jordan University of Science and Technology. Irbid, Jordan. July 11th – 13th, 2004.