

Curriculum Vitae of

Dr. Imad Barsoum

Associate Professor in Mechanical Engineering



Personal Information

Date of birth: 1978-01-28
Nationality: Swedish
Address: Department of Mechanical Engineering
The Petroleum Institute
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(h-index = 11, Citations = 827, Date: 2017-01-03)
Language Skills: Swedish, English

Employments

- Associate Professor, The Petroleum Institute, Dept. of Mech. Eng., UAE (2015-now)
- Affiliated Professor, KTH - Royal Institute of Technology, Sweden (2014-now)
- Assistant Professor, The Petroleum Institute, Dept. of Mech. Eng., UAE (2010-2015)
- Research Engineer, R&D Gear Technology Division, Scania CV AB, Sweden (2007-2010)
- Technical Consultant, Barsoum Engineering Consulting AB, Sweden (2008-2010)
- Research Assistant, Dept. of Metallurgical Engineering, University of Utah, USA (1999-2002)
- TA in Mechanics I (5C1130), KTH - Royal Institute of Technology, Stockholm (1999-1999)

Academic Degrees

- Ph.D. in Solid Mechanics, KTH - Royal Institute of Technology, Stockholm, Sweden (2008)
- Tech. Lic. in Solid Mechanics, KTH - Royal Institute of Technology, Stockholm, Sweden (2006)
- M.Sc. in Metallurgical Engineering, University of Utah, USA (2002)

Journal Publications

1. M. Khurshid, Z. Barsoum, **I. Barsoum** and T. Däuwel, "The multiaxial weld root fatigue of butt welded joints subjected to uniaxial loading", *Fatigue & Fracture of Engineering Materials & Structures*, article in press, 2016.
2. D. Yurindatama and **I. Barsoum**, "Constitutive Model and Failure Locus of a Polypropylene Grade Used in Offshore Intake Pipes", *Polymer Testing*, under review, 2016.
3. **I. Barsoum**, J. Dymock and R. Walters, "Interaction between a Kevlar Reinforced Flexible Composite Liner and a Carbon Steel Pipeline Containing Corrosion Defects", *Journal of Pressure Vessel Technology*, under review, 2016.
4. **I. Barsoum**, J. Dymock, R. Walters and A. Seibi, "Finite Element Analysis of the Installation Process of a Novel Corrosion Protective Kevlar Reinforced Liner", *Journal of Pipeline Systems - Engineering and Practice*, under review, 2016.

5. M. Khurshid, Z. Barsoum, **I. Barsoum** and T. Däuwel, “Root fatigue strength assessment of fillet welded tube-to-plate joints subjected to multi-axial stress state using stress based local methods”, *International Journal of Fatigue*, under review, 2016.
6. M.A. Al-Khaled and **I. Barsoum**, “New Ring Specimen Geometries for Determining the Ductile Failure Locus of Tubular Steels”, *International Journal of Pressure Vessels and Piping*, under review, 2016.
7. **I. Barsoum** and K.F. Al Ali, “A procedure to determine the tangential true stress-strain behavior of pipes”, *Journal of Pressure Vessels and Piping*, Vol. 128, pp.59-68, 2015.
8. **I. Barsoum** and A.M. Khalaf, “Evaluation of a pipe-flange connection method based on cold work”, *Journal of Pressure Vessel Technology*, Vol. 137, pp. 1-8, 2015.
9. A. Bhatti, Z. Barsoum, H. Murakawa and **I. Barsoum**, “Influence of thermo-mechanical material properties of different steel grades on welding residual stresses and angular distortion”, *Materials and Design*, Vol. 65, pp. 878-889. 2015.
10. M. Khurshid, Z. Barsoum and **I. Barsoum**, “Load Carrying Capacities of Butt Welded Joints in High Strength Steels”, *Journal of Engineering Materials and Technology*, Vol. 137, pp.1-9, 2015.
11. **I. Barsoum**, F. Khan and Z. Barsoum, “Analysis of the Torsional Strength of Hardened Splined Shafts”, *Materials and Design*, Vol. 54, pp. 130–136, 2014.
12. **I. Barsoum**, F. Khan, A. Molki and A. Seibi, “Modeling of Ductile Crack Propagation in Expanded Thin-Walled Tubes of Aluminum 6063-T5”, *International Journal of Mechanical Sciences*, Vol. 80, 2014, pp. 160-168.
13. J. Faleskog and **I. Barsoum**, “Tension-Torsion Fracture Experiments—Part I: Experiments and a Procedure to Evaluate the Equivalent Plastic Strain”, *International Journal of Solids and Structures* Vol. 50, Issue 25, 2013, pp. 4241-4257.
14. L. Mhamdi, A.C. Seibi, A. Karrech, S. El-Borgi and **I. Barsoum**, “Stress Concentration Factor of Expanded Aluminum Tubes Using Finite Element Modeling”, *The Journal of Engineering Research*, Vol. 10, No. 1, 2013, pp. 88-96.
15. **I. Barsoum**, J. Faleskog and S. Pingle, “The effect of stress state on ductility in the moderate stress triaxiality regime of medium and high strength steels”. *International Journal of Mechanical Sciences*, Volume 65, 2012, Pages 203–212.
16. **I. Barsoum** and F. Barsoum, “Structural Analysis of a New Generation of Guyed Telecom Mast with a Wind Turbine”, *International Journal of Engineering and Technology* Volume 2 No. 9, September, 2012.
17. Z. Barsoum, M. Khurshid and **I. Barsoum**, “Fatigue strength evaluation of friction stir welded aluminium joints using the nominal and notch stress concepts”, *Materials and Design*, Volume 41, 2012, Pages 231–238.
18. **I. Barsoum** and F. Khan, “Strength Optimization of Induction Hardened Splined Shaft – Material and Geometric Aspects”, *International Journal of Mechanical and Aerospace Engineering*, Volume 6, 2012, Pages 377-380.
19. **I. Barsoum** and J. Faleskog, “Micromechanical Analysis on the Influence of the Lode Parameter on Void Growth and Coalescence”. *International Journal of Solids and Structures*, Volume 48, 2011, Pages 925-938.
20. Z. Barsoum and **I. Barsoum**, “Residual Stress Effects on Fatigue Life of Welded Structures Using LEFM ”, *Engineering Failure Analysis*, Volume 16, Issue 1, 2009, Pages 449-467.
21. **I. Barsoum** and J. Faleskog, “Rupture Mechanisms in Combined Tension and Shear - Micromechanics”, *International Journal of Solids and Structures*, Vol. 44, 2007, Pages 5481-5498.
22. **I. Barsoum** and J. Faleskog, “Rupture Mechanisms in Combined Tension and Shear - Experiments”, *International Journal of Solids and Structures*, Volume 44, 2007, Pages 1768-1786.
23. **I. Barsoum** and J. Faleskog, “Micromechanics of Rupture in Combined Tension and Shear”, *Key Engineering Materials*, Volumes 345-346, 2007, Pages 681-684.

24. **I. Barsoum** and K.S. Ravi Chandran, "Stress Intensity Factor Solutions for Cracks in Finite-width Three Layer Laminates with and without Residual Stress Effect", *Engineering Fracture Mechanics*, Volume 70, Issue 15, 2003, Pages 2015-2031.
25. K.S. Ravi Chandran and **I. Barsoum**, "Stress Intensity Factor Solutions for Cracks in Finite-width Functionally Graded Materials", *International Journal of Fracture*, Volume 121, Number 3-4, 2003, Pages 183-203.

Conference Publications

1. **I. Barsoum** and K.F. Al Ali, "Development of a Method to Determine the Transverse Stress-Strain Behavior of Pipes", 14th International Conference on Pressure Vessel Technology (ICPVT14), Shanghai, China, 2015, ICPVT-14-P0140.
2. **I. Barsoum** and A.M. Khalaf, "Evaluation of a Pipe-Flange Connection Replacing Fusion Welding", 14th International Conference on Pressure Vessel Technology (ICPVT14), Shanghai, China, 2015, ICPVT-14-P0023.
3. M. Khurshid, Z. Barsoum and **I. Barsoum**, "Fatigue strength assessment of butt welded joints subjected to proportional multi-axial stress state", 68th IIW Annual Assembly & International Conference, 28th June – 3rd July 2015, Helsinki, Finland.
4. M. Khurshid, Z. Barsoum and **I. Barsoum**, "Load Carrying Capacities of Butt Welded Joints in High Strength Steels", 68th IIW Annual Assembly & International Conference, 28th June – 3rd July 2015, Helsinki, Finland
5. **I. Barsoum**, F. Khan, A. Molki and A. Seibi, "Ductile Failure Modeling of Expanded Aluminium Tubes With Embedded Circular Holes", ASME Pressure Vessels & Piping Conference, Paris, France, July 14-18, 2013.
6. **I. Barsoum**, J. Faleskog and S. Pingle, "The Influence of the Lode Parameter on Ductile Failure Strain in Steel", *Procedia Engineering*, Volume 10, 2011, Pages 69-75.
7. A.C. Seibi, **I. Barsoum** and A. Molki, "Experimental and Numerical Study of Expanded Aluminum and Steel Tubes", *Procedia Engineering*, Volume 10, 2011, Pages 3057-3063.
8. Z. Barsoum and **I. Barsoum**, "Residual stress effects on fatigue life of welded structures using LEFM", IIW Doc. No. XIII-2266-09, International Institute of Welding, 62nd Annual Assembly, Singapore, 2009.
9. **I. Barsoum** and J. Faleskog, "Inverkan av Lode-parametern vid Duktigt Brott" (in Swedish), Swedish Mechanics Days, Luleå, Sweden, June 13-15, 2007.
10. Z. Barsoum and **I. Barsoum**, "Residual stress effects on fatigue life of welded components using LEFM", 8th International Conference on Residual Stresses, Denver, Colorado, USA, 2008.
11. **I. Barsoum** and J. Faleskog, "Micromechanical Modeling of Rupture in Combined Tension and Shear", In Proceedings of the 19th Nordic Seminar on Computational Mechanics, Lund, Sweden, October 20-21, 2006.
12. **I. Barsoum** and J. Faleskog, "Micromechanical Analysis of Rupture Mechanisms in Mixed Mode Ductile Fracture". In Proceedings of the 16th European Conference of Fracture, Alexandroupolis, Greece, July 3-7, 2006.
13. K.S. Ravi Chandran and **I. Barsoum**, "Fracture Mechanics of Functionally Graded Materials: Stress Intensity Factor Solutions and the Nature of Crack Arrest", *Mechanisms and Mechanics of Fracture: Symposium in Honor of Prof. J.F. Knott*, 2003.

Scientific Monographs

1. I. Barsoum, "Stress Intensity Factor Solutions for Cracks in Layered and Functionally Graded Materials", M.Sc. Thesis, Dept. of Metallurgical Engineering, University of Utah, USA, 2002
2. I. Barsoum, "Ductile Mixed Mode Fracture – a literature review", Report 334, Dept. of Solid Mechanics, KTH, ISSN 1104-6813, 2003.

3. I. Barsoum, “Ductile Failure and Rupture Mechanisms in Combined Tension and Shear”, Licentiate thesis no. 96, Dept. of Solid Mechanics, KTH, ISSN 1654-1472 0407, 2006.
4. I. Barsoum, “The Effect of Stress State in Ductile Failure”, Doctoral thesis no. 69, Dept. of Solid Mechanics, KTH, ISSN 1654 – 1472 0443, 2008.

Funded Research Projects

- Micromechanical Modeling of Mixed Mode Ductile Fracture
Co-investigator (doctoral project), funding through the Swedish Research Council (Vetenskapsrådet) under the grant 621-2004-5121, 2002-2007
- Numerical Modeling of Ductile Failure in Sheet Metal Forming
Co-investigator (doctoral project), funding through MERA-Vinnova and SAAB Automobile, 2009
- Manganese Phosphating for Increased Contact Fatigue of Gears
Member of the technical reference group, financed by FFI-VINNOVA and Scania CV AB, 2009-2013
- Contact Fatigue of Gears - Modelling and Four Square Rig Testing
Member of the technical reference group, financed by Scania CV AB, 2008-2012
- Simulation Model for Local Flank Load-Carrying Capacity of Helical Gears
Principal initiator, financed by WZL-RWTH in Aachen, Scania CV AB and industrial members of the Gear Research Circle (consortium), 2008-2012
- Innovative Design and Mechanical Integrity of Expandable Tubulars
Principal investigator, funding through Abu Dhabi National Oil Company (ADNOC) and the Petroleum Institute (PI) in Abu Dhabi, UAE under the grant RAGS-11011-2011 (Budget: 49,000 \$ for 2011)
- Development of a Tubular Expansion Test Rig for Well Rehabilitation
Co-investigator, funding through Abu Dhabi National Oil Company (ADNOC) and the Petroleum Institute (PI) in Abu Dhabi, UAE under the grant RAGS-2010 (Budget: 81,000 \$ for 2010)
- Development of a Method to Determine the Transverse Mechanical Properties of Pipes
Principal investigator, funding through Abu Dhabi National Oil Company (ADNOC) and the Petroleum Institute (PI) in Abu Dhabi, UAE under the grant RIFP-14326-2014.
- Determining the Failure Envelopes of Solid Expandable Tubulars and Pressure Vessels
Principal investigator, funding through Abu Dhabi National Oil Company (ADNOC) and the Petroleum Institute (PI) in Abu Dhabi, UAE under the grant RIFP- 15328-2015.
- Constitutive Behavior of Polypropylene Pipes used in the Oil and Gas Industry
Principal investigator, funding through Abu Dhabi National Oil Company (ADNOC) and the Petroleum Institute (PI) in Abu Dhabi, UAE under the grant RIFP- 15328-2016.
- Tensile and Flexural Tests on BorEco BA212E Polypropylene
Principal investigator, funding through Union Pipes Industry (UPI) in Abu Dhabi, UAE

Consultancy Services

- Structural Analysis of a New Generation of Guyed Telecom Mast with a Wind Turbine
Flexenclosure AB (telecom), Sweden, 2008.
- FE Analysis of Induction Hardened Splined Shafts in GRS-902 Gearbox to Optimize Strength
Scania CV AB (automotive), Sweden, 2009.
- Finite Element Simulation of the Induction Hardened Process of Ring Gears to Minimize Distortions
Scania CV AB (automotive), Sweden, 2009.
- Optimization of the Fatigue Strength of Helical Gears through Finite Element Analysis
Scania CV AB (automotive), Sweden, 2010.
- Simulation of the Installation Process of a Corrosion Protective Kevlar-Reinforced Composite Liner
APS (oil and gas) Dubai, UAE, 2012.

- FEA of Installation of an Articulated Concrete Block Mattress of Large Diameter Intake Plastic Pipeline *Takreer (oil and gas), Abu Dhabi, UAE, 2013.*
- Design of a Pressure Vessel Nozzle Outlet for a Gas Phase Reactor as per ASME-BPVC, Sec. VIII. *Borouge (oil and gas), Abu Dhabi, UAE, 2014.*
- Finite Element Analysis of an Offshore PP-pipe for the Takreer Ruwais Refinery Expansion Project *Union Pipe Industry (oil and gas) in Abu Dhabi, UAE, 2013.*
- Determining the Ring Stiffness of Spirally Concrete Reinforced Polypropylene Pipes *Union Pipe Industry (oil and gas) in Abu Dhabi, UAE, 2013.*
- Finite Element Modeling of Impact Damage of Composite Pipes *The Petroleum Institute (oil and gas) in Abu Dhabi, UAE, 2013.*
- Design of a Pressure Vessel Nozzle Outlet for a Gas Phase Reactor *Borouge-ADNOC (oil and gas) in Abu Dhabi, UAE, 2014.*
- FEA of Installation of an Articulated Concrete Block Mattress for Takreer 5th Seawater Intake Pipeline *Union Pipe Industry/Takreer (oil and gas) in Abu Dhabi, UAE, 2014.*
- Finite Element Analysis of Failed the Knife Gate Valve *Mott-MacDonalds/Borouge (oil and gas) in Abu Dhabi, UAE, 2014.*
- Finite Element Analysis of Buried Corrugated HDPE pipes *Kuwait International Advanced Industries - KAI (oil and gas) in Kuwait, 2014.*
- Finite Element Analysis of Failure in a Salt Water Intake Polypropylene Line at Borouge 3 *Union Pipe Industry (oil and gas) in Abu Dhabi, UAE, 2015.*
- FEA of Pressure Transfer Between a Tight Fit Kevlar Liner and its Host Pipe with Corrosion Defects *APS (oil and gas) Dubai, UAE, 2016.*
- FEA of Buried Large Diameter Polypropylene Gravity Pipe with Manhole *Dhafir Technologies, (oil and gas) Abu Dhabi, UAE, 2016.*

Participation in Conferences, Symposiums and Invited Talks

Conferences and Symposiums

- 14th International Conference on Pressure Vessel Technology (ICPVT14), Shanghai, China, 2015, ICPVT-14-P0140 (presenter)
- American Society of Mechanical Engineers Pressure Vessels & Piping Conference (ASME-PVP2013), Paris, France, July 14-18, 2013 (presenter)
- International Conference on Mechanical and Materials Engineering (ICMME 2012), Kuala Lumpur, Malaysia, February 19-21, 2012 (presenter)
- SPE Applied Technology Workshop: Pipeline Integrity Management - The Practical Approach, Millenium Hotel in Abu Dhabi, U.A.E, October 24-26, 2011 (session chair)
- 11th International Conference on the Mechanical Behavior of Materials (ICM11), Como, Italy, June 5-9, 2011 (presenter)
- Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC 2012), Abu Dhabi, U.A.E, November 11-14, 2012 (participant)
- Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC 2010), Abu Dhabi, U.A.E, November 1-4, 2010 (participant)
- 51st Conference on Gear and Transmission Research, RWTH-WZL in Aachen, Germany, May 19-20, 2010 (participant)
- The Swedish Fatigue Network meeting (UTMIS), Atlas Copco Rock Drills, Örebro, Sweden, May 25-26, 2010 (participant)
- 10th International Conference on the Mechanical Behavior of Materials (ICM10), Busan, South Korea, May 27-31, 2007 (presenter)

Invited Talks

- Title: “Modeling of ductile rupture mechanisms in high strength steels”, Swedish Society for Metallurgy and Materials (SFMT), KTH – Royal Institute of Technology, Stockholm, Sweden, 2007
- Title: “Simulations driven strength optimization of induction hardened splined shafts”, Scania R&D Division, Materials Technology Meeting, Södertälje, Sweden, 2010
- Title: “Simulation of the installation process of a corrosion protective composite liner for the transport of crude oil”, Graduate Seminar Series, the Petroleum Institute, Abu Dhabi, UAE, 2013
- Title: “Application of the Finite Element Method in the Plastic Pipes Industry”, Gulf Plastic Pipe Academy Spring Conference, Kuwait on 3rd June, 2015.
- Title: “Application of the Finite Element Method in the Plastic Pipes Industry”, Gulf Plastic Pipe Academy International Annual Conference, Dubai on 25th November, 2015.

Awards and Recognitions

- Department of Mechanical Engineering Education Excellence Award 2013
- [The Petroleum Institute Teaching Award for Junior Faculty 2012-2013](#)
- Top most cited article in International Journal of Solids and Structures (2007-Now)
- [Innovative Mobile Global Award 2012, part of a design team that developed a clean-tech telecom mast solution E-Site which won the award.](#)
- ABET accreditation while at the Petroleum Institute
- The Royal Swedish Academy of Science Doctoral Student Award 2007, Sweden
- Dean’s Honors List 2000-2002, University of Utah, USA.
- Graduate Research Stipend 2000, University of Utah, USA.
- Studying Abroad Grant 1999, Royal Institute of Technology, Sweden.

Membership in Professional Organizations

- The Swedish Fatigue Network (UTMIS), 2008-2010.
- Society of Petroleum Engineers (SPE), 2010-present
- American Society of Mechanical Engineers (ASME), 2011-present

Referee Assignments in International Journals

- International Journal of Pressure Vessels and Piping (Elsevier)
- International Journal of Fatigue (Elsevier)
- Engineering Failure Analysis (Elsevier)
- Engineering Fracture Mechanics (Elsevier)
- International Journal of Fracture (Springer)
- Journal of Mechanical Science and Technology (Springer)
- Engineering Structures (Elsevier)
- Materials and Design (Elsevier)
- Marine Structures (Elsevier)

Assignments as Examiner

M.Sc. Thesis, Graduate Advisory Committee Member

- Title: “Effect of Welding Parameters in Dissimilar Friction Stir Welding of Aluminum AA2024 and Magnesium AZ31 Alloys”, Mr. Marvene Xavier Fernandes, Dept. of Mechanical Engineering, the Petroleum Institute, 2016 (in progress)
- Title: “An Experimental-Numerical Study of the Superplastic Forming of AZ31B Magnesium Alloy”, Mr. Li Zemin, Dept. of Mechanical Engineering, the Petroleum Institute, 2016 (in progress)
- Title: “Trigonometric Collocation for Computation of Steady State Response of Cracked Structures”, Mr. Bakeer Bakeer, Dept. of Mechanical Engineering, the Petroleum Institute, 2014.
- Title: “Effect of edge trimming on tensile strength of carbon fiber reinforced polymer (CFRP)”, Mr. Abdul Hamid Shahid, Thesis No.: PIMEMS-12-02, Dept. of Mechanical Engineering, the Petroleum Institute, January 2012.

M.Sc. Thesis, Defense Examiner and Coordinator

- Title: “Pressure Behavior of Vertical Wells in Low Permeability Reservoirs with Threshold Pressure Gradient”, Mr. Fu Dai, Thesis No.: PIPEETS-16-01, Dept. of Petroleum Engineering, the Petroleum Institute, April 2016
- Title: “Oil well flow assurance through static electric potential: a feasibility study”, Mr. Muhammad Hashmi, Thesis No.: PIPEER-10-01, Dept. of Petroleum Engineering, the Petroleum Institute, Jan 2012
- Title: “Robust nonlinear controller design to improve the stability of a large scale photovoltaic system”, Mr. Gazi Md. Saeedul Islam, Thesis No.: PIPEER-12-08, Dept. of Electrical Engineering, the Petroleum Institute, May 2012

University Level Courses Taught

UG = Under-graduate; GR = Graduate

SN	Course title	Level	Credits
1	MEEG 324 - Engineering Dynamics	UG	3
2	MEEG 344 - Mechanics of Materials	UG	3
3	MEEG 374 - Machine Design	UG	3
4	MEEG 397 - Summer Internship Projects	UG	3
5	MEEG 404 – Introduction to Finite Element Analysis	UG	3
6	MEEG 493 - Fracture & Failure of Engineering Materials	UG	3
7	MEEG 544 – Advanced Mechanics of Materials	GR	3
8	MEEG 593 - Fracture & Failure of Engineering Materials	GR	3

Supervision of Undergraduate Projects

B.Sc. Senior Design Projects

- K. Safetli, T. Jallad, M. Herzallah, M. Shehhi (Graduated 2011)
Project topic: Design of Tubular Expansion Test Rig
Dept. of Mechanical Engineering, the Petroleum Institute, Abu Dhabi, U.A.E
- K. Yousef, A. Saeed, A. Mohammed (Graduated 2012)
Project topic: Design of Gear Tooth Bending Fatigue Testing Fixture
Dept. of Mechanical Engineering, the Petroleum Institute, Abu Dhabi, U.A.E
- S. Solaiman, E. Alatrash, R. Rehman, A. Saeed (Graduated 2015)
Project topic: Design of High Rise Window Cleaner
Dept. of Mechanical Engineering, the Petroleum Institute, Abu Dhabi, U.A.E
- M. Alyammahi, M. Almheiri, A. Alshabibi, A. Almehairi (Graduated 2016)
Project topic: Design of a Testing Fixture for Determining Delamination Strength in Plastic Pipes
Dept. of Mechanical Engineering, the Petroleum Institute, Abu Dhabi, U.A.E
- M. Ahmed, N. Alhosani, S. Fadel, H. Alsanadi, S. Alhammadi (In progress)
Project topic: Design of an Experimental Setup for Determining the Burst Pressure of Corroded Pipes
Dept. of Mechanical Engineering, the Petroleum Institute, Abu Dhabi, U.A.E

SAE Baja Project

- Mentoring a student team in the SAE Baja project at the Petroleum Institute, which is a series of competitions intended to provide students with realistic engineering challenges. The objective is to

design and build an off-road vehicle that will have to perform and survive in several competitive events and races over tough terrain.

Supervision of Graduate Projects

M.Sc. Theses

- Mr. Shivnandan M. Pingle (co-supervisor) (Graduated 2007)
Thesis topic: Influence of Lode Parameter on Ductile Fracture
Dept. of Solid Mechanics, KTH – Royal Institute of Technology, Stockholm, Sweden
- Mr. Farhat Khan (main supervisor) (Graduated 2012)
Thesis topic: Failure Modeling of the Tubular Expansion Process
Dept. of Mechanical Engineering, the Petroleum Institute, Abu Dhabi, U.A.E
- Mr. Adel M. Khalaf (main supervisor) (Graduated 2014)
Thesis topic: Design of a Novel Pipe Flange Connection based on the Cold Work Process
Dept. of Mechanical Engineering, the Petroleum Institute, Abu Dhabi, U.A.E
- Mr. Khaled Al Ali (main supervisor) (Graduated 2014)
Thesis topic: Development of a method to determine the tangential stress-strain behavior of pipes
Dept. of Mechanical Engineering, the Petroleum Institute, Abu Dhabi, U.A.E
- Mr. Mohammed Al Khaled (main supervisor) (Graduated 2016)
Thesis topic: The Effect of Stress State on the Ductile Failure Locus of Pressure Vessel Steels
Dept. of Mechanical Engineering, the Petroleum Institute, Abu Dhabi, U.A.E
- Mr. Danar Tri Yurindatama (main supervisor) (Graduated 2016)
Thesis topic: Constitutive Behavior of a Polypropylene Grade Used in Offshore Gravity Pipe
Dept. of Mechanical Engineering, the Petroleum Institute, Abu Dhabi, U.A.E`
- Mr. Sadiq Adewale Lawal (main supervisor) (In progress)
Thesis topic: Finite Element Analysis of a Pressure Vessel Subjected to Blast Loading
Dept. of Mechanical Engineering, the Petroleum Institute, Abu Dhabi, U.A.E
- Mr. Melad Fahed (main supervisor) (In progress)
Thesis topic: Assessment of the Integrity of Kevlar Composite Liners in Corroded Pipes
Dept. of Mechanical Engineering, the Petroleum Institute, Abu Dhabi, U.A.E

Ph.D. Theses

- Mr. Ayjwat Awais Bhatti (co-supervisor) (Graduated 2015)
Thesis topic: Residual stresses due to welding and high frequency peening and effect on the fatigue life
Dept. of Lightweight Structures, the KTH – Royal Institute of Technology, Stockholm, Sweden
- Mr. Mansoor Khurshid (co-supervisor) (In progress)
Thesis topic: Fatigue and ultimate strength of high strength steel welds under complex loading
Dept. of Lightweight Structures, the KTH – Royal Institute of Technology, Stockholm, Sweden

Involvement in Industrial Short-courses

- International Welded Structures Designer (3 days), Module 2, Weld on Sweden AB (Jan-2014)
- International Welded Structures Designer (3 days), Module 2, Weld on Sweden AB (Jan-2013)

Professional Courses Attended

- ASME PD448: Boiler & Pressure Vessel Code, Section VIII, Div. 2 (4 days) (May-2014)

Administrative Assignments in Education

- Graduate & Research Committee member, Dept. of ME, PI 2010-2011
- Academic advisement of under graduate students, Dept. of ME, PI 2010-now
- Female Student Activities Committee, PI 2011

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- Male Student Activities Committee, PI 2012
 - ME Department Webpage Committee, PI 2013
 - ME Research Lab Committee, PI 2014
 - Baja SAE automotive students project, Dept. of ME, PI 2013-now
 - Faculty Affairs Committee, Dept. of ME, PI 2015-now
 - Community Engagement and Outreach Committee, PI 2015-now
 - Dept. of Chemical Engineering Recruitment Committee, PI 2015-now
 - Institutional Research Strategic Plan Committee, PI 2016-now

Appendices (provided upon request)

- Appendix A – Copies of degrees
- Appendix B – Previous expert assessment (KTH)
- Appendix C – Teaching awards
- Appendix D – ABET certificate
- Appendix E – Endorsed course evaluation summary
- Appendix F – Teaching statement
- Appendix G – Research recognition
- Appendix H – Invited talks certificates
- Appendix I – Affiliated faculty certificate KTH
- Appendix J – Research statement
- Appendix K – Recommendation letters

References (provided upon request)
