

# Abdenour Seibi, Ph.D., SFHEA

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## Information

Associate Professor  
Department of Engineering  
College of Engineering and Technology  
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**Citation:** h-Index: 20, i10-index: 44.

**Publications:** **73 Journal** Articles, **71 Conference** papers, **30 Technical** reports, and **two Invention** Disclosure.

**Research Grants:** **\$4.3+ million**

## Education Background

Ph.D., Engineering Science & Mechanics (Specialized in Applied Mechanics)  
Pennsylvania State University, University Park, 1993

M.S., Engineering Science & Mechanics (Specialized in Fracture Mechanics & Fatigue)  
Pennsylvania State University, University Park, 1988

B.S., Mechanical Engineering (Specialized in Thermo-Fluids) with minor in Math  
Pennsylvania State University, University Park, 1985

## Teaching Experience (not including Fall 2021)

<b>Associate Professor</b> , Utah Valley University	Fall 2019 – Present
ENGR2030 Engineering Dynamics	(1 time, average SRI = <b>4.52</b> )
ENGR2140 Mechanics of Materials	(3 times, average SRI = <b>4.68</b> )
ME 4410 Computer Aided Engineering	(3 times, average SRI = <b>4.34</b> )
ME 3210 Manufacturing Engineering	(1 time, SRI = <b>4.64</b> )
ME 490R Materials Selection & Design	(2 times, average SRI = <b>4.63</b> )
ME 3140 Machine Design	(2 times, average SRI = <b>4.82</b> )

**Average Class Student Evaluations at UVU: 4.61/5.0**

**Associate Professor**, University of Louisiana at Lafayette (ULL) Fall 2015 – Spring 2019

*Petroleum Engineering Department*  
ENGR 218 Statics & Strength of Materials (7 times)

PETE 211 Drilling Fluids (1 time)  
PETE 491 Drilling Engineering (3 times)  
PETE 493 Drilling Engineering Lab (1 times)

**Average Class Student Evaluations at ULL: 4.65/5.0**

**Professor of Practice**, University of Louisiana at Lafayette

Fall 2013 – Spring 2015

*Petroleum Engineering Department*

ENGR 218 Statics & Strength of Materials

PETE 211 Drilling Fluids

PETE 211 Drilling Fluids Laboratory

PETE 491 Drilling Engineering

PETE 493 Drilling Engineering Lab

PETE 321 Phase Behavior of Hydrocarbon Systems

PETE 500 Graduate Seminar

**Associate Professor**, Petroleum Institute, Abu Dhabi, UAE

Fall 2004 – Spring 2011

Engineering Statics

Engineering Dynamics

Strength of Materials

Machine Design

Machine Dynamics

Applied Finite Element Method

Capstone Design I

Capstone Design II

**Graduate Courses:**

Computer Aided Engineering (FEA and CFD)

Advanced Math for Engineers

Design of Pressure Vessels & Applications

**Associate Professor**, Sultan Qaboos University, Oman

Fall 1999 – Spring 2004

**Assistant Professor**, Sultan Qaboos University, Oman

Fall 1993 – Spring 1999

Engineering Statics

Engineering Dynamics

Basic Mechanics

Machine Design

Applied Finite Element Method

Applied Math for Engineers

Capstone Design I

Capstone Design II

**Graduate Courses:**

Advanced Mechanics of Materials

Advanced Math for Engineers

Theory of Elasticity & Applications

**Teaching Assistant**, Penn State University

Fall 1985 – Spring 1988

Engineering Statics

Engineering Dynamics

Strength of Materials

## Other Work Experience

### **Mechanical Engineering Program Coordinator,**

Utah Valley University

Fall 2020 – Present

### **Petroleum Engineering Dept., Associate Head**

Univ. of Louisiana Lafayette

Fall 2017 – Spring 2019

### **Mechanical Engineering Dept., Acting Chair,**

Petroleum Institute, UAE

Fall 2006 – Fall 2007

### **Visiting Scholar,**

Institut National des Sciences Appliquees, France

June-July 2003

- Research collaboration with Prof. Lakhdar Taleb on martensitic transformation and plasticity deformation at laboratoire mecanique.

### **Visiting Scholar,**

RWTH Aachen University, Germany *DAAD scholarship*

June 2001

- Research collaboration with Prof. Dieter Weichert on plastic deformation of tubular expansion at the general mechanics lab.

### **Post Doc.,**

Federal Highway Administration, McLean, VA, USA

January – August 1993

- Developed a viscoplastic model for flexible pavements Under Dynamic Loadings

### **Research Fellow,**

Federal Highway Admin., McLean, VA, USA

Fall 1990 – Fall 1992

- Studied truck dynamics under various road profiles and dynamic forces.
- Characterization of Hot Mix Asphalt Concrete Under Dynamic Loadings.

### **Research Assistant,**

Applied Research Lab at PSU, USA

Fall 1988 – Spring 1990

- Designed Ceramic Matrix Composite Tubes for Ballistic Applications

## Student Supervision

- 5 PhD students including four co-supervisions (graduated).
- 1 Post-doc.
- 12 MS by research and course work (graduated).
- 54 BS capstone design projects (graduated).

## Publications and Creative Works (73 Including 21 since 2016; 6 with UVU Affiliation)

### Patents:

1. **A. C. Seibi**, W. Chalgham, “Device and method for detecting leaks and healing pipelines using twin balls technology,” US Patent App. 16/133,155, 2019.
2. **A. C. Seibi**, N. Krogue, B. Ashbocker, D. Andrew Butler, N. Pollock, “Accelerated Pavement Surface Testing Device,” US Patent App. 63/143,674, 1/29/21.

### Peer-Reviewed Journal Publications:

1. A. Chodankar, **A. C. Seibi**, “Numerical Controller Approach: Effects of Length, Drillstring Rotation, and Borehole Clearance on Lateral Drillstring Vibrations,” accepted International Journal of Mechanical Engineering and Applications, 2021.
2. L. Yeo, Y. Feng, **A. Seibi**, A. Temani, N. Liu, “Optimization of hole cleaning in horizontal and inclined wellbores: A study with computational fluid dynamics,” J. Petroleum Science and Engineering, 205, pp: 1 – 13, 2021.
3. H. Trabelsi, **A. Seibi**, N. Liu, F. Boukadi, R. Trabelsi, “Bridge plug drillouts cleaning practices – an overview,” Natural Resources 12 (2), pp: 19 – 33, 2021.
4. A. Karrech, M. R. Azadi, M. Elchalakani, M. A. Shain, **A. C. Seibi**, “A review on methods for liberating lithium from pegmatites,” Minerals Engineering Vol. 145, pp: 1 – 10, 2020.
5. M. Chaari, J. Ben Hamida, **A. C. Seibi**, A. Fekih, “An Integrated Genetic-Algorithm/Artificial-Neural-Network Approach for Steady-State Modeling of Two-Phase Pressure Drop in Pipes,” SPE J. Production & Operations 35 (03): 628–640, 2020.
6. M. Chaari, A. Fekih, **A. C. Seibi**, J. Ben Hamida, “A Generalized Reduced-Order Dynamic Model for Two-Phase Flow in Pipes,” ASME J. Fluids Engineering, 141(10), pp: 1- 18, 2019.
7. F. Nath, P. E. Salvati, M. Mokhtari, **A. C. Seibi**, A. Hayatdavoudi, “Laboratory investigation of dynamic strain development in sandstone and carbonate rocks under diametral compression using digital image correlation,” SPE Journal 24 (01), 254-273, SPE-187515-PA, <https://doi.org/10.2118/187515-PA>, 2019.
8. X. Dong, A. Karrech, H. Basarir, M. Elchalakani, **A. C. Seibi**, "Energy dissipation and storage in underground mining operations", Rock Mechanics and Rock Engineering, 52(1), pp: 229 – 245, 2019.
9. I. Barsoum, J. Dymock, R. Walters, **A. C. Seibi**, “Finite Element Analysis of a Novel Corrosive Protective Kevlar Reinforced Liner,” ASCE Journal of Pipeline Systems Engineering & Practice, Vol. 9, 4, pp: 1 – 9, 2018.

10. A. Guedez, M. Mokhtari, **A. C. Seibi**, A. Mitra, “Developing Correlations for Velocity Models in Vertical Transverse Isotropic Media: Bakken Case Study,” *J. of Natural Gas Science & Engineering*, Vol. 54, pp:175-188, 2018.
11. A. Karrech, M. Attar, **A. C. Seibi**, M. Elchalakani, F. Abbassi, H. Basarir, “Lattice Finite Strain Theory for Non-hydrostatically Compressed Natural Materials,” *J. Rock Mechanics and Rock Engineering*, <https://doi.org/10.1007/s00603-018-1455-8>, 2018.
12. A. Karrech, J. Eksteem, M. Attar, E. Oraby, M. Elchalakani, **A. C. Seibi**, “Modeling of Multi-component Reactive Transport in Finite Columns -- Application to Gold Recovery using Iodide Ligands,” *Hydrometallurgy*, Vol. 138, pp:43-53, 2018.
13. M. Chaari, A. Fekih, **A. C. Seibi**, “A Frequency Domain Approach to improve ANNs Generalization Quality via Proper Initialization,” *Neural Networks*, Vol. 104, pp:26-39, 2018.
14. M. Chaari, **A. C. Seibi**, J. Ben Hmida, A. Fekih, “An Optimized GA-ANN Unifying Model for Steady State Liquid Holdup Estimation In Two-Phase Gas–Liquid Flow,” *ASME Journal of Fluids Engineering*, <https://doi:10.1115/1.4039710>, Vol. 140, 2018.
15. R. Trabelsi, F. Boukadi, **A. C. Seibi**, D. Allen, F. Sebring, T. Mannon, H. Trabelsi, “Transient Pressure Behavior of a Well Located Between a Constant-Pressure Boundary and a Sealing Fault,” *Natural Resources Journal*, (8), pp: 646 – 656, 2017.
16. R. Trabelsi, F. Boukadi, J. Lee, B. Boukadi, **A. C. Seibi**, H. Trabelsi. “Type Curves Relating Spacing and Heterogeneity to Oil Recovery in Water Flooded Reservoir,” *Natural Resources Journal*, 8, pp: 632 – 645, 2017.
17. R. Trabelsi, **A. C. Seibi**, F. Boukadi, W. Chalgham, H. Trabelsi, “Numerical Investigation of Overpressure Causes in Eugene Island P1-Sand – Part II,” *Int. J. Engineering Research and Science* Vol. 3, Issue 7, pp: 30-40, 2017.
18. R. Trabelsi, **A. C. Seibi**, F. Boukadi, W. Chalgham, H. Trabelsi, “Temperature Distribution and Heat Transfer in Block 276-P1-Sand-Part I,” *Int. J. Engineering Research and Science*, Vol. 3, Issue 7, pp: 41-52, 2017.
19. H. Trabelsi, R. Trabelsi, F. Boukadi, **A. C. Seibi**, “Water and Surfactant Flooding Experimental Study for Bayou Choktaw Oilfield,” *Int. J. Emerging Technology & Advanced Engineering*, Vol. 7, Issue 6 pp: 11 – 19, 2017.
20. A. Karrech, M. Elchalakani, M. Attar, **A. C. Seibi**, “Buckling and post-buckling analysis of Geometrically Nonlinear Composite Plates Exhibiting Large Initial Imperfections,” *Composites & Structures*, doi: <http://dx.doi.org/10.1016/j.compstruct.2017.04.029>, 2017.
21. **A. C. Seibi**, T. Pervez<sup>2</sup>, M. Al-Khozaimi<sup>3</sup>, R. Trabelsi<sup>1</sup>, F. Boukadi<sup>1</sup>, “Development of Operating Envelopes for Drillpipes Running Through Medium to High Curvature Wells,” *International J. of Engineering Research & Technology*, Vol. 6, Issue 3, pp: 466 – 478, 2017.
22. **A. C. Seibi**, I. Kalfat, A. Molki, T. Webb, “Shape Factor For Glass Reinforced Plastic Pipes With Noncircular Shapes Under Diametral Loading – An Experimental Study,” *ASTM Experimental Techniques*, Vol. 39, Issue 4, pp: 64 – 69, 2015.

23. I. Barsoum, F. Khan, A. Molki, **A. C. Seibi**, "Modeling of ductile crack propagation in expanded thin-walled 6063-T5 aluminum tubes," *International Journal of Mechanical Sciences* (80), pp: 160–168, 2014.
24. L. Mhamdi, **A. C. Seibi**, A. Karrech, S. El-Borgi, and I. Barsoum, "Stress Concentration Factor of Expanded Aluminum Tubes Using Finite Element Modeling," *J. Engineering Research*, Vol. 10, No.1, pp: 88 – 95, 2013.
25. Li, H. Zhu, X. Kong, **A. C. Seibi**, "Combined Effect of Temperature and Soil load on Buried HDPE pipe," *Advanced Materials Research*, Vols. 452-453, pp: 1169-1173, 2012.
26. Z. Li, H. Zhu, P. Qiu, **A. C. Seibi**, "Analytical Method for Temperature Distribution in Buried HDPE Pipe," *Advanced Materials Research*, Vols. 452-453 pp: 1205-1209, 2012.
27. **A. C. Seibi**, P. Rostron, A. Elramady, B. Mishra, O. Al-Nazer, S. Al Ameri, "Effect Of Radial Expansion Of Cr-Mo Steel Tubes On Their Corrosion Behavior In Sea Water," *Materials Science and Applications*, Vol. 3, No. 9, pp: 587 - 595, 2012.
28. T. Pervez, S. A. Al-Hiddabi, A. Al-Yahmadi, **A. C. Seibi**, "Dynamic Analysis and Vibration of a Beam inside Annulus for Ultra Short-Radius Water Jet Drilling," *J. Engineering Research*, Vol. 9, No. 1, pp: 55 – 63, 2012.
29. A. Karrech, T. Pervez, **A. C. Seibi**, "Coupling and Damping Effects on The Dynamics of Submerged Expanded Tubes in Borehole Wells," *The Journal of Engineering Research*, Vol. 10, No. 1, pp: 11 – 24, 2012.
30. R. Zhang, R. Snieder, L. Gargaba, **A. C. Seibi**, "Modeling of seismic wave motion in high-rise buildings," *Probabilistic Engineering Mechanics*, Vol. 26, pp: 520–527, 2011.
31. A. M. Khalaf, **A. C. Seibi**, "Failure Analysis of Lube Oil Feed Tube of a Gas Turbine Operating in Oil Fields," *Engineering Failure Analysis*, Volume 18, Issue 5, pp: 1341-1350, 2011.
32. A. Karrech, **A. C. Seibi**, D. Duhamel, "Finite element modeling of rate-dependent ratcheting in granular materials," *Computers and Geotechnics*. 38(2), pp: 105 – 112, 2011.
33. **A. C. Seibi**, "Experimental Study of Expanded T5-6063 Aluminum Tubes with transverse Holes," *J. of Experimental Techniques*, Vol. 35, Issue 6, pp: 57 – 60, 2011.
34. **A. C. Seibi**, I. Barsoum, A. Molki, "Experimental and Numerical Study of Expanded Aluminum and Steel Tubes," *Physics Engineering*, Vol. 10, pp: 3049–3055, 2011.
35. M. Nuhi, T. Abu Seer, A. M. Al Tamimi, M. Modarres, **A. C. Seibi**, "Reliability Analysis for Degradation Effects of Pitting Corrosion in Carbon Steel Pipes," *Engineering Procedia*, Vol. 10, pp: 1930–1935, 2011.
36. **A. C. Seibi**, T. Pervez, X. Qu, A. Khalaf, "Field Layout of Glass Reinforced Epoxy Pipeline – A Practical Approach," *Key Engineering Materials*, Vols. 471-472, pp: 285-290, 2011.
37. I. K. Ismail, **A. C. Seibi**, "Shape Factor for Irregular Glass Reinforced Plastic Pipe Shapes – An analytical and Numerical Approach," *Key Engineering materials*, Vols. 471-472, pp: 279-284. Trans Tech Publications, Switzerland, 2011.

38. T. Pervez, K. F. S. Al-Jahwary, **A. C. Seibi**, "Vibration Analysis of Thick Arbitrarily Laminated Plates of Various Shapes and Edge Conditions," *Key Engineering Materials*, Vols. 471-472, pp: 1177-1183, 2011.
39. R. Zhang, L. Olson, **A. C. Seibi**, A. Helal, A. Khalil and M. Rahim, "Improved impact-echo approach for non-destructive testing and evaluation," *Advances in Sensors, Signals and Materials* (O. Frazao, ed.), ISBN: 978-960-474-248-6, WSEAS Press, 39-144, 2010,
40. A. Karrech, **A. C. Seibi**, "Analytical Model for the Expansion of Tubes under Tension," *Journal of Materials Processing Technology*, Vol. 210, pp: 356 – 362, 2010.
41. R. Zhang, **A. C. Seibi**, "Impact-Echo Nondestructive Testing and Evaluation with Hilbert-Huang Transform," *International Journal of Mechanics*, Issue 4, Vol. 4, pp: 105 – 112, 2010.
42. L. Khezzar, **A. C. Seibi**, A. Goharzadeh, "Water Sloshing in Rectangular Tanks – An Experimental Investigation & Numerical Simulation," *International Journal of Engineering*, Vol. 3, Issue 3, pp: 1 – 11, 2009.
43. **A. C. Seibi**, A. Karrech, F. Boukadi, and T. Pervez, "Measurements While Drilling Techniques: A Comparative Study and Suggestions for Improvements," *Journal of Energy Sources, Part A, Recovery, Utilization, and Environmental Effects*, Volume 31 Issue 14, pp: 1205 – 1216, 2009.
44. **A. C. Seibi**, A. Al-Yahmadi, S. Al-Hiddabi, T. Pervez, A. Karrech, A. Al-Shabibi, "Dynamic Effects of Mandrel/Tubular Interaction on Downhole Solid Tubular Expansion in Well Engineering," *J. of Energy Resources Technology*, ASME transaction, Vol. 131, Issue 1, pp: 1 – 7, 2009.
45. F.H. Boukadi, M. Sahraoui, **A. C. Seibi**, A. Barhoumi, "A Mathematical Model to Simulate Gas-Oil Gravity Drainage in Naturally-Fractured Oil-Wet Reservoir," *Journal of Porous Media*, Vol. 12, Issue 6, pp: 585 – 592, 2009.
46. T. Pervez, S. Z. Qamar, **A. C. Seibi**, F. K. Al-Jahwari, "Use of SET in Cased and Open Holes: Comparison between Aluminum and Steel," *Journal of Materials and Design*, Vol. 29, Issue 4, pp: 811 – 817, 2008.
47. **A. C. Seibi**, T. Pervez, A. Gastli, "Finite Element Modeling of Above-Ground Wavy Pipelines – A Practical Approach," *ASCE J. of transportation*, Vol. 134, No. 8, pp: 319 – 326, 2008.
48. **A. C. Seibi**, B. Boukadi, S. Salmi, A. Bemani, "Mathematical Model for Estimating Perforation Penetration Depth," *J. of the Petroleum Science and Technology*, Vol. 26, No. 15, pp: 1786-1795, 2008.
49. **A. C. Seibi**, T. Pervez, "Strain Measurements in Baffles of High-Density Polyethylene Mobile Water Tanks," *J. of Experimental Mechanics*, Vol. 31, issue 5, pp: 37 – 41, 2007.
50. A. Karrech, **A. C. Seibi**, T. Pervez, "Damping Effect on Mechanical Waves in an Elastic Solid Expanded Tubular," *Journal of Pressure Vessels Technology*, ASME Transaction, Vol. 129, pp: 698 – 712, 2007.

51. **A. C. Seibi**, A. Karrech, T. Pervez, "Post-Expansion Tube Response under Mechanical and Hydraulic Expansion – A comparative Study," ASME Transaction, J. of Pressure Vessels Technology, Vol. 129, pp: 118-124, 2007.
52. T. Pervez, **A. C. Seibi**, A. Karrech, "Analytical Solution for Wave Propagation due to Pop-out Phenomenon in a Solid Expandable Tubular System," Journal of Petroleum Science & Technology, 24 (8), pp: 923-942, 2006.
53. K. S. Al-Jabri, **A. C. Seibi**, and A. Karrech, "Modeling of un-stiffened Flash end-plate Bolted Connections in Fire," Journal of Constructional Steel Research, 62, pp: 151-159, 2006.
54. **A. C. Seibi**, T. Pervez, A. Karrech, S. Al-Hiddabi, "Coupled Stress and Pressure Waves Propagation in an Elastic Solid Tube Submerged in Fluids," ASME Transaction, Journal of Energy Resources Technology, Vol. 128, pp. 247-256, 2006.
55. T. Pervez, **A. C. Seibi**, F. K. S. Al-Jahwary, "Analysis of thick Orthotropic Laminated Composite Plates Based on Higher Order Shear Deformation Theory," J. of Composite Structures, 71, pp: 414 – 422, 2005.
56. **A. C. Seibi**, S. Al-Hiddabi, T. Pervez, "Structural Behavior of a Solid Tubular Under large Plastic Radial Expansion," Technical Brief, ASME Journal of Energy Resources & Technology, Vol. 127, pp: 323 – 326, 2005.
57. T. Pervez, **A. C. Seibi**, A. Karrech, "Simulation of Solid Tubular Expansion in Well Drilling Using Finite Element Method," Journal of Petroleum Science & Technology, Vol. 23 (7), pp: 775-794, 2005.
58. **A. C. Seibi**, S. Y. Zamrik, "Fatigue Crack Initiation & Propagation of Rhombic Plates Under Biaxial Loading," Journal of Pressure Vessels Technology, ASME Transaction, pp. 65-70, ISSN: 0094-9930, 2003.
59. S. Al-Hiddabi, B. Samanta and **A. C. Seibi**, "Nonlinear Control of Torsional and bending Vibrations of Oilwell Drillstrings," Journal of Sound and Vibration, pp: 401-415, 2003.
60. **A. C. Seibi**, N. Sawaqed, "Design of Fiberglass/Copper Moulds for Manufacturing of Customized Items Using Linear Programming Optimization and Finite Element Analysis," Journal of Composites Part A: applied science and manufacturing, Vol. 33/12 pp: 1689 – 1695, 2002.
61. **A. C. Seibi**, A. Gastli, A. Al-Shabibi, and H. Abdullah, "Running Forces in High Curvature Well Bores using Finite Element Analysis and Artificial Neural Networks," Journal of Petroleum Science & Technology, Vol. 19 (5&6), pp: 521-534, 2001.
62. **A. C. Seibi**, "Running Force in Medium to High Curvature Wellbores: An Experimental Study and Numerical Simulation of laboratory and Field Cases," Journal of Energy Resources Technology, Transactions of the ASME, pp: 133-137, 2001.
63. **A. C. Seibi**, M. G. Sharma, G. Ali and W. Kenis, "Constitutive Relations for Asphalt Concrete under High Rates of Loading," Journal of Transportation Research Board No. 1767, Asphalt Mixtures – Materials & construction, pp: 111-119, 2001.
64. **A. C. Seibi**, "Running Force Measurement in High Curvature Wellbores," Journal of Experimental Techniques, Vol. 24, No. 2, pp: 31-35, 2000.



65. L. Khezzar, **A. C. Seibi**, "Production System Modeling, Calibration and Optimization in Practice," *Journal of Petroleum Science & Technology*, Vol. 18, issues 5-6, pp: 565-585, 2000.
66. H. A. Abdullah, C. R. Chatwin, and **A. C. Seibi**, "Process Optimization Controller for Robotic Laser Machining," *Journal of Laser Applications*, Vol. 11, No. 6, pp: 263-267, 1999.
67. **A. C. Seibi** and S. M. Al-Alawi, "Experimental Investigation and Failure Analysis of Fastened GRP Under Bending Using Finite Element Method and Artificial Neural Networks," *Journal of Science & Technology*, Vol. 4, pp. 71-78, 1999.
68. **A. C. Seibi** and A. Al Shabibi, "Pipe Bending and Running Forces in Medium to High Curvature Wells Using Finite Element Analysis", *Journal of Energy Resources Technology, Transactions of the ASME*, Vol. 120, No. 4, pp. 263-267, 1998.
69. **A. C. Seibi**, and M. F. Amateau, "Finite Element Modeling and Optimization for Controlling the Residual Thermal Stresses of Laminated Composite tubes," *Journal of Composite Structures*, Vol. 41, pp. 151-157, 1998.
70. K. Al-Asmi and **A. C. Seibi**, "Failure Analysis of an Impulse Line", *Journal of Engineering Failure Analysis*, Vol. 5, No. 3, pp. 195-204, 1998.
71. **A. C. Seibi**, S. M. Al Alawi, "Prediction of Fracture Toughness Using Artificial Neural Networks (ANN)", *Engineering Fracture Mechanics* Vol. 56, No. 3, pp. 311-319, 1997.
72. S. K. Al-Oraimi, **A. C. Seibi**, "Mechanical Characterization & Impact Behavior of Concrete Reinforced with Natural Fibers", *Composite Structures* 32, pp. 165-171, 1995.
73. S. Y. Zamrik, **A. C. Seibi**, D. C. Davis, "Mixed Mode Fracture Crack Initiation & Growth in Plate Materials Under Biaxial Bending," *Fatigue Under Biaxial & Multiaxial Loading, ESIS10, Mechanical Engineering Publications, London*, pp: 223-238, 1991.

### **Conference Proceedings Publications: (71 Including 21 since 2016, 8 with UVU Affiliation)**

1. **A. C. Seibi**, I. Jaafar, S. Tolman, A. Amin, "Introducing Engineering Codes and Standards Throughout the Curriculum of a Newly Established Mechanical Engineering Program," IMECE2021-70013, ASME IMECE 2021 Virtual Conference, Nov. 1 – 5, 2021.
2. A. Amin, I. Jaafar, **A. Seibi**, "Writing-Enriched Engineering Courses," ASEE Virtual Conference, July 2021.
3. **A. C. Seibi**, S. Tolman, M. Jensen, A. Amin, A. Bordelon, T. Hales, "Toward the Development of Capstone Design Guidelines in Newly Established Engineering Programs," I-ETC conference, UVU, 2020.
4. W. Chalgham, **A. C. Seibi**, J. Lee, "Reducing the Relative error between the Experimental and Numerical Results of a Pipeline Leak Flowrate Using Six-Sigma Based Approach," I-ETC conference, UVU, 2020.
5. **A. C. Seibi**, B. Salazar, J. Ben Hamida, G. Guillory, "Experimental Investigation and Data Analytics of Annular Cutting Velocity in Inclined and Horizontal Pipes," IMECE2020-

24203, Proceedings of ASME 2020 International Mechanical Engineering Congress Exposition IMECE-2020 November 11-14, Portland, OR, 2020.

6. A. Chodankar, **A. C. Seibi**, “Effects of Axial Compression Load, Borehole Clearance, And Contact Force Using Axial-Lateral Fluid Coupled Drill String Vibration Model,” Proceedings of ASME 2019 International Mechanical Engineering Congress Exposition IMECE-2019, Salt Lake City, Utah, USA, November 11-14, 2019.
7. W. Chalgham, M. Diaconeasa, R. Gottumukkala, **A. C. Seibi**, “A Numerical and Experimental Study Supporting a Methodology for Live Monitoring, Leak Detection and Automatic Response in Water Pipelines,” Proceedings of ASME 2019 International Mechanical Engineering Congress Exposition IMECE-2019, Salt Lake City, Utah, USA, November 11-14, 2019.
8. W. Chalgham, K. Elgazzar, **A. C. Seibi**, “A Smart Pipeline Monitoring And Emergency Response System Using Web Services,” Proceedings of ASME 2019 International Mechanical Engineering Congress Exposition IMECE-2019, Salt Lake City, Utah, USA, November 11-14, 2019.
9. M. Chaari, A. Fekih, **A. C. Seibi**, “Current State of Wind Turbine's Health Monitoring,” IEEE Green Technologies Conference (GreenTech), pp. 1-6, 2019.
10. A. Chodankar, **A. C. Seibi**, “A Comprehensive Fluid Coupled Lateral Drill String Vibration Model Based on Classical Vibration Theories,” Proceedings of ASME 2018 Dynamic Systems and Control Conference DSCC, Atlanta, Georgia, USA. September 30-October 3, 2018.
11. A. Karrech M. Attar, M. Elchalakani, F. Abbassi, H. Basarir, **A. C. Seibi**, “The Poromechanics of Massive Fluid Injection in Natural Environments,” First International Conference on Advances in Rock Mechanics, Hammamet, Tunisia. Paper Number: ISRM-TUNIROCK-2018-02, 29-30 March 2018.
12. F. Nath, P. Salvati, M. Mokhtari, **A. C. Seibi**, A. Hayatdavoudi, “Observation of Fracture Growth in Laminated Sandstone and Carbonate Rock Samples under Brazilian Testing Conditions Using Digital Image Correlation Technique,” SPE-187515-MS, Eastern Regional Meeting, Lexington, KY, 4 – 6 October 2017.
13. **A. C. Seibi**, M. Chaari, A. Temani, M. Mokhtari, C. Taylor, “Design of a New Testing Fixture for Tangential Stress Measurements in Pipes,” IMECE2017-72490, ASME IMECE, Tampa, Florida. Nov, 5 – 11, 2017.
14. M. Chaari, **A. C. Seibi**, J. Ben Hmida, A. Fekih, “Steady State Pressure Drop for Two-Phase Flow in Pipelines: An Integrated Genetic Algorithm- Artificial Neural Networks Approach,” IMECE2017-71854, ASME IMECE, Tampa, Florida, Nov. 5 – 11, 2017.
15. A. Temani, **A. C. Seibi**, M. Chaari, “Failure Analysis of a Bellow at the Exhaust of a Diesel Engine at on Board of an FPSO,” IMECE2017-72284, ASME IMECE, Tampa, Florida, Nov. 5 – 11, 2017.
16. W. R. Chalgham, **A. C. Seibi**, F. Boukadi, “Simulation of Leak Noise Propagation and Detection Using COMSOL Multiphysics,” ASME2016-68163, Proceedings of the International Mechanical Engineering Congress & Exposition, Phoenix, Arizona, USA, Nov. 11 – 17, 2016.

17. I. Barsoum, **A. C. Seibi**, "Finite Element Analysis of the Installation Process of a Corrosive protective Kevlar Reinforced Liner," SPE183377, ADIPEC, Abu Dhabi, UAE, 7 – 10 November 2016.
18. W. R. Chalgham, **A. C. Seibi**, M. Lomas, "Leak Detection and Self-Healing Pipelines Using Twin Balls Technology," SPE-181553-MS, SPE ATCE, Dubai, UAE, 26 – 28 September 2016.
19. W. R. Chalgham, **A. C. Seibi**, M. Mokhtari, "Simulation of Sound Wave Propagation inside a Spherical Ball Submerged in a Pipeline," COMSOL Multiphysics Conference, Boston, USA, October 4-6, 2016.
20. Chalgham, W. R., and **Seibi, A. C.**, "Design of a Self-Recharging Untethered Mobile Inspection Tool inside a Pipeline," COMSOL Multiphysics Conference, Boston, USA, October 4-6, 2016.
21. S. A. Madani, M. Mokhtari, **A. C. Seibi**, "CFD Simulation of Pore Pressure Oscillation Method for the Measurement of Permeability in Tight Porous-Media", COMSOL Multiphysics Conference, Boston, USA, October 4-6, 2016.
22. A. Elramady, B. Mishra, D. L. Olson, **A. Seibi**, A. H. Al-Shawaf, "Susceptibility of Cold-Worked Medium Carbon Steel to Stress Corrosion Cracking in Synthetic Formation Water and CO<sub>2</sub> Environment Using the Slow Strain Rate Method," NACE Conf., Dallas, TX, March 2015.
23. M. Fadden, A. Hayatdavoudi, **A. C. Seibi**, "High Performance Surface Coatings for Bolted Slip-Critical Connections," Structures Congress, Portland, Oregon, April 23 – 25, 2015.
24. A. Elramady, F. M. Alabbas, B. Mishra, D. L. Olson, **A. Seibi**, "The Effect of Plastic Deformation on the Corrosion Susceptibility of Casing and Tubing Steels in Synthetic Formation Water and Sweet Environment," Corrosion Conference, San Antonio, TX, March 2014.
25. **A. C. Seibi**, A. Khalaf, "High Vibration of a Centrifugal Pump Operating in the Off-Design Region – A Field Case Study," ADRAC Conf. 2014, January 15, 2014.
26. **A. C. Seibi**, R. Lawrence, "New Developments in Fabricated Tees – A Quality Assurance Design Guideline," Arab Water Week, Amman, Jordan, 27 – 31 January 2013.
27. **A. C. Seibi**, R. Lawrence, R. Jepson, Z. Tarik, "Stress Analysis of Elbows And Tees Of Plastic Pipes Using Finite Element Analysis," XVI International Plastic Pipes Conference, Barcelona, Spain, September 24 – 26, 2012.
28. **A. C. Seibi**, "Stress analysis of plastic pipes using finite element analysis - case studies," International conference on the applications, markets and technology for plastic pipes, Dubai, UAE, 15 – 16 May 2012.
29. I. Kalfat Ismail, **A. C. Seibi**, M. Neifar, "Stress Analysis of an Elliptic Composite Pipe Under Diametral Loading," Int. Conf. on Applied Mechanics and Manufacturing, Muscat, Oman, Dec. 13 – 15, 2010.
30. N. Kharoua, A. Molki, **A. C. Seibi**, L. Khezzar, "Experimental Investigation and Computational Fluid Dynamics of Wind Flow Around Hemispherical Flow," 2<sup>nd</sup> Int. Conf. On Energy Conversion and Conservation, Hammamet, Tunisia, April 22–25, 2010.

31. F. Boukadi, **A. C. Seibi**, A. Ghalambor, F.O. Iluore, "A New Mathematical Model for Estimating Perforation Penetration Length," SPE 126721, Lafayette, Louisiana, USA, 10 – 12 February 2010.
32. H. Al-Hashimi, **A. C. Seibi**, A. Molki, "Experimental Study and Numerical Simulation of Domes under Wind Load," ASME PVP Division Conference, *Students Paper Award*, Prague, Czech Republic, July 26 – 30, 2009.
33. A. Khalaf, Y. Al-Tartoor, **A. C. Seibi**, A. Karrech, "GRE Pipeline Installation Procedures – A Field Case Study," ASME PVP Division Conference, Prague, Czech Republic, July 26 – 30, 2009.
34. A. Al-Raisi, M. Al-Hammadi, **A. C. Seibi**, L. Khezzar, "Water Sloshing In Rectangular Tanks – An Experimental Investigation & Numerical Simulation," Fourth International Conference on Thermal Engineering: Theory and Applications, Abu Dhabi, UAE, January 12-14, 2009.
35. A. Karrech, **A. C. Seibi**, D. Duhamel, "Continuum Modeling of Cyclically Loaded Rate Dependent Granular Materials," 4th International Conference on Advances in Mechanical Engineering and Mechanics ICAMEM2008, Sousse, Tunisia, 16 – 18 December 2008.
36. L. Mhamdi, **A. C. Seibi**, A. Karrech, S. El-Borgi, "Stress Concentration Factor in Expanded Aluminum Tubes Using Finite Element Method," International Conference on Advances in Mechanical Engineering and Mechanics, Sousse, Tunisia, December 16 – 18, 2008.
37. A. Al-Hajri, **A. C. Seibi**, "Radial Expansion of 6063 Aluminum Tubes – An Experimental Investigation," ASME PVP Division Conference, *Students Paper Award*, Chicago, Illinois, July 22 – 27, 2008.
38. M. Chooka, M. Nuhi, M. Modarres, **A. C. Seibi**, "structuring a probabilistic model for reliability evaluation of refinery pipelines subject to corrosion-fatigue degradation," ANS PSA 2008 Topical Meeting - Challenges to PSA during the nuclear renaissance, Knoxville, Tennessee, September 7–11, 2008.
39. M. Chooka, M. Nuhi, M. Modarres, **A. C. Seibi**, "Development of a Probabilistic Model for Mechanistic Evaluation of Reliability of Oil Pipelines Subject to Corrosion-Fatigue Cracking," Paper# DETC2008-50079, ASME International Design Engineering Technical Conferences and Computers and Information in Engineering, New York City, NY, August 3 – 6, 2008.
40. L. Khezzar, A. Goharzadeh, **A. C. Seibi**, "Liquid Sloshing In a Moving Rectangular Container Subjected To Sudden Impact," Costantine, Algeria, 2007.
41. T. Pervez, **A. C. Seibi**, S. A. Al-Hiddabi, F. K. Al-Jahwari, S. Z. Qamar, F. Marketz, "Solid Tubular Expansion in Horizontal Wells," 15<sup>th</sup> SPE Middle East Oil & gas Show, Bahrain, SPE105704, 11-14 March 2007.
42. F. H. Boukadi, M. Sahraoui, **A. Seibi**, A. Barhoumi, "A Mathematical Model to Simulate Gas-Oil Gravity Drainage in a Naturally-fractured Oil-wet Reservoir, 2<sup>nd</sup> International Conference on Modeling, Simulation, and Applied Optimization, Petroleum Institute, Abu Dhabi, UAE, March 24 – 27, 2007.

43. **A. C. Seibi**, T. Pervez, F. Boukadi, "Development of Operating Envelopes for Casings in Deviated Wells Using A User-Friendly Computer Program," 2<sup>nd</sup> International Conference on Modeling, Simulation, and Applied Optimization, Petroleum Institute, Abu Dhabi, UAE, March 24 – 27, 2007.
44. F. Boukadi, M. Sehraoui, **A. C. Seibi**, A. Barhoumi, "TAGOD Simulation," The Third International Conference on Advances in Mechanical Engineering and Mechanics, Hammamet, Tunisia, Dec. 17-19, 2006.
45. **A. C. Seibi**, T. Pervez, "Design of Mobile HDPE Water Tanks – A Practical Design Exercise for Senior Students in Mechanical Engineering, ASME PVP Division Conference, Vancouver, CA, July 23-27, 2006.
46. A. Karrech, **A. Seibi**, T. Pervez, K. Sab, "Dynamics of Submerged Expandable Tubes in Borehole Wells", ASME PVP Division Conference, *Student Paper Award*, Colorado, USA, July 17-21, 2005.
47. **A. C. Seibi**, S.K. Al-Oraimi, and F. Al-Jahwary, "Finite Element Modeling and Experimental Study on GRP/Concrete under Bending," International Conf. on Composites Science & Technology (ICCST/5), American University of Sharjah, April 2005.
48. T. Pervez, **A. C. Seibi**, F.K.S. Al-Jahwari, "Finite Element Analysis of Thick Anisotropic Laminated Composite Plates Using Higher Order Shear Deformation Theory," International Conf. on Composites Science & Technology (ICCST/5), American University of Sharjah, April 2005.
49. **A. C. Seibi**, T. Pervez, S. Al-Hiddabi, A. Karrech, "Finite Element Modeling of a Solid Tubular Expansion – A Typical Well Engineering Application," SPE Technical paper, SPE84943, 2005.
50. **A. C. Seibi**, T. Pervez, "A Need For The Establishment Of A GCC Accreditation Body In Engineering Education," Proc. of Int. Mech. Engng Conf., Kuwait, IMEC2004-DS086-CP, Dec. 5–8, 2004.
51. T. Pervez, **A. C. Seibi**, A. Karrech, "Effects of Viscous Damping on Wave Propagation due to Pop-out Phenomenon in Solid Expandable Tubular," Proc. of Int. Mech. Engng Conf., Kuwait, IMEC2004-DS086-CP, Dec. 5–8, 2004.
52. A. Karrech, **A. C. Seibi**, T. Pervez, S. Al-Hiddabi, "Stress/Fluid Pressure waves in Radially Expanded Solid Tubular" 12<sup>th</sup> Annual *Student Paper Award*, ASME/JSME Pressure Vessels and Piping Division Conference, San Diego, California, July 25-29, 2004.
53. K. Jabri, **A. C. Seibi**, A. Karrech, "3-D finite element modeling of flush end-plate bare-Steel connections at elevated-temperatures", SEMC 2004 Second International Conference on Structural Engineering, Mechanics and Computation, South Africa, 5-7 July 2004.
54. **A. C. Seibi**, T. Pervez, S. Al-Hiddabi, A. Karrech, "Finite element modeling of solid tubular expansion – A typical well engineering application," SPE Conf. Proceeds., 2004.
55. **A. C. Seibi**, A. Karrech, T. Pervez, S. Al-Hiddabi, "Finite Element Analysis of Solid Tubular Expansion in Well Engineering," TSSICAME Sousse, Tunisia March 24-26, 2004.

56. S. A. Al-Hiddabi, **A. C. Seibi**, T. Pervez, "Structural Analysis of Casings Expansion/Post-Expansion: Theoretical Approach," ESDA2002/APM-92, ASME 6<sup>th</sup> Biennial Conference Engineering Systems Design and Analysis, Istanbul, Turkey, July 8-12, 2002.
57. T. Pervez, **A. C. Seibi**, and S. A. Al-Hiddabi, "Vibration Analysis of Glass Reinforced Epoxy Piping System and its Fatigue Characteristics under Cyclic Loading," ESDA2002/ADM-27, ASME 6<sup>th</sup> Biennial Conference Engineering Systems Design and Analysis, Istanbul, Turkey, July 8-12, 2002.
58. **A. C. Seibi**, T. Pervez, S. A. Al-Hiddabi, "Structural Performance of Zigzag Pipeline Using Finite Element Analysis," ESDA2002/APM-90, ASME 6<sup>th</sup> Biennial Conference Engineering Systems Design and Analysis, Istanbul, Turkey, July 8-12, 2002.
59. **A. C. Seibi**, "Experimental Investigation of Pull-Out Forces In High Curvature Well bores," TSSICAME, Hammamet, Tunisia, March 18-20, 2002.
60. T. Corcoran, **A. C. Seibi**, S. Al-Alawi, "Resistance of Glass-Reinforced Epoxy Pipe to Hydrochloric and Hydrofluoric Acids," International Conference on Chemistry in Industry, Manama, Bahrain, October 2002.
61. **A. C. Seibi**, L. Khezzar, "Analysis and Optimization of an Oil Field Production Network," ETCE 2000 Petroleum Production Technology Symposium in New Orleans, February 14-16, 2000.
62. Al-Nadabi and **A. C. Seibi**, "Experimental Investigation of Pipes Running through Curved Holes," ASME Pressure Vessel & Piping Conference Student Paper Competition, Boston, MA, PVP-Vol. 395, pp. 255-262, *Student Paper Award*, August 1-5, 1999.
63. **A. C. Seibi**, "Effects of Crude Oil on the Thermo-Mechanical Properties of High Density Polyethylene," ASME Pressure Vessel & Piping Conference, Boston, MA, PVP-Vol.392, pp. 37-44, August 1-5, 1999.
64. **A. C. Seibi** and S. Y. Zamrik, "Biaxial Fatigue Crack Propagation Under Anticlastic Bending", ASME/JSME Pressure Vessel & Piping Conference, San Diego (USA), PVP-Vol. 374, pp. 99-104, July 26-30, 1998.
65. M. Al Hashmi and **A. C. Seibi**, "Effects of Pipe/Formation Interaction on the Running Force In High-Curvature Well Bores", ASME/JSME Pressure Vessel & Piping Conference, San Diego (USA), PVP-Vol. 375, pp.89-94, *Student Paper Award*, July 26-30, 1998.
66. **A. C. Seibi**, and M. F. Amateau, "Finite Element Modeling and Optimization for Controlling the Residual Thermal Stresses of Laminated Composite tubes," Second Int. Conf. on Composite Science & Technology, Durban (South Africa), June 1998.
67. **A. C. Seibi**, and S. Y. Zamrik, "Prediction of Crack Initiation Direction for Surface Flaws Under Biaxial Loading", Proc. of the 5th Int. Conf. on Biaxial/Multiaxial Fatigue & Fracture, Cracow (Poland), pp. 611-622, Sept. 8-12, 1997.
68. **A. C. Seibi** and S. K. Al Orami, "Finite Element Modeling of Flexible Pavement Response Under Moving Loads", Proc. of the 2nd Int. Conf. in Civil Engng. On Computer Applications, Research and Practice, Vol. 2, Manama (Bahrain), pp. 723-730, April 1996.

69. **A. C. Seibi** and G. A. Ali, "Finite Element Analysis of Flexible Pavement Under Hot Climate Conditions", Proc. of the 2nd Int. Conf. in Civil Engng. On Computer Applications, Research and Practice, Vol. 2, Manama (Bahrain), pp. 731-737, April 1996.
70. S. M. Alawi, **A. C. Seibi**, & S. K. Al Orami, "Prediction of Failure Mechanisms & Mechanical Properties of Fastened GRP Under Bending Using Artificial Neural Networks", Proc. of the 1st Int. Conf. on Composite Science & Technology, Durban (South Africa), pp. 7-12, June 1996.
71. A. C. Seibi, S. K. Al Orami, & S. M. Al Alawi, "Effects of Joint Geometry on the Flexural Behavior of Glass Reinforced Plastics," Proc. of the 1st Int. Conf. on Composite Science & Technology, Durban (South Africa), pp. 471- 476, June 1996.

### Submitted Papers:

1. F. Abbassi, A. Karrech, **A. C. Seibi**, "Poro-mechanics of fractured/faulted reservoirs during fluid injection based on continuum damage modelling and machine learning," Geomechanics for Energy and the Environment.

### Technical Reports Publications:

1. **A. C. Seibi**, "Assessment of downhole cleaning practice during drill-outs," Emeraldsurf Sciences, Shreveport, LA, July 2019.
2. **A. C. Seibi**, "Evaluation of long-term performance of Polyethylene Tee junctions under harsh environment, Hyundai, South Korea., July 2015.
3. **A. C. Seibi**, "Finite Element Analysis of a Large Size Polypropylene Pipe Submerged in an Offshore Shallow Sea," Union Pipes Industry, May 2013.
4. **A. C. Seibi**, "Stress Analysis of Tee Reducer of HDPE Pipes using Finite Element Modeling," Union Pipes Industry, Mussaffah, Abu Dhabi, February 2012.
5. **A. C. Seibi**, "Finite Element Analysis of Buried GRP Pipes of Irregular Shapes," Anticorrosion Protective Systems LLC, Dubai, February 2010.
6. **A. C. Seibi**, "Finite Element Analysis of Composite Pipes with Irregular Shapes under Compression," Anticorrosion Protective Systems LLC, Dubai, December 2009.
7. **A. C. Seibi**, "Finite Element Analysis: Borouge 2 Project – Sea Water Cooling System (Glass Reinforced Epoxy pipes)," Technica Reunidas, Spain, August 2008.
8. **A. C. Seibi**, A. Karrech, "Finite Element Analysis: Borouge 2 Project – Sea Water Cooling System (HDPE pipes)," Union Pipes Industry, Musaffah, Abu Dhabi, March 2008.
9. **A. C. Seibi**, A. Karrech, "Design of a Solid Expandable Tubular Set-up," Petroleum Institute, Work order: PI/00026/WSO, July 2006.
10. **A. C. Seibi**, A. Karrech, "Does Bending Moment Accurately Estimate Well Path?" Petroleum Institute, Work order: PI/10328/WSO, July 2005.
11. T. Pervez, **A. C. Seibi**, F. Al-Jahwary, "Design of an Expandable Tubular Testing facility, Petroleum Development Oman, Project No CR/ENG/MIED/01/23, Phase IV, July 2005.

12. **A. Seibi**, S. Al-Hiddabi, T. Pervez, A. Karrech , A. Al-Yahmadi, A. Al-Shabibi, “Simulation of Pop-Out Phenomena in Wellbore Expandable Tubular”, Petroleum Development Oman, Project No CR/ENG/MIED/01/23, Phase III, July 2003.
13. **A. Seibi**, S. Al-Hiddabi, T. Pervez, A. Karrech , A. Al-Yahmadi, A. Al-Shabibi, “Effect of Stick-Slip Phenomenon on Solid Tubular Expansion”, Petroleum Development Oman, Project No CR/ENG/MIED/01/23, Phase II, January 2003.
14. **A. C. Seibi**, S. Al-Hiddabi, T. Pervez, A. Karrech, “Solid Tubular Expansion in Horizontal Wells,” Petroleum Development Oman, November 2003.
15. **A. Seibi**, S. Al-Hiddabi, T. Pervez, A. Karrech , “Finite Element Modeling of Liner Hanger Expansion”, Petroleum Development Oman, Project No CR/ENG/MIED/01/23, Phase I, May 2002.
16. S. Al-Hiddabi, A. Al-Yahmadi, **A. C. Seibi**, T. Pervez, “Dynamics & Control of Water Jet drilling in Horizontal Wells,” Final report, Petroleum Development Oman, September 2002.
17. G. A. Ali, **A. C. Seibi**, R. Taha, A. Al-Rawas, “Characterization of Asphalt Pavement Layer Materials for Response Prediction, Design, and Evaluation of Flexible Pavements in Hot Climate,” Sultan Qaboos University, May 2002.
18. S. Al-Hiddabi, A. Al-Yahmadi, **A. C. Seibi**, T. Pervez, “Literature Review of Water Jetting in Horizontal Drilling, Phase I” Petroleum Development Oman, May 2001.
19. S. Al-Hiddabi, A. Al-Yahmadi, **A. C. Seibi**, T. Pervez, “Mathematical Modeling of Water Jetting in Horizontal Drilling: Phase II,” Petroleum Development Oman, January 2002.
20. **A. C. Seibi**, T. Pervez, S. Al-Hiddabi, “Vibration Analysis of Glass Reinforced Epoxy Piping System and its Fatigue Characteristics under Cyclic Loading,” Minor Contract No. MN10278, Petroleum Development Oman, June 2001.
21. **A. C. Seibi**, S. Al-Hiddabi, S. Al-Alawi, “A Mathematical Model of Expansion/Post Expansion of Casings – Phase I of Contract No. 8303 IXXDRDE, Petroleum Development Oman, December 2000.
22. **A. C. Seibi**, S. Al-Alawi, T. Corcoran, “Resistance of GRE to Various Acid Solutions and their Effect on its Mechanical Properties, Final Report to Petroleum Development Oman, June 2000.
23. **A. C. Seibi**, A. Al-Harthi, “Experimental Investigation and Numerical Simulation of Pipes Running Through Curved Holes,” Final Report of Contract No. C854022, Petroleum Development Oman, November 1999.
24. L. Khezzer, **A. C. Seibi**, and J. Browne, “Al-Huwaisah Production System Modeling,” Petroleum Development Oman & Simulation Sciences, May 1999.
25. **A. C. Seibi**, A. Al-Harthi, “Experimental Investigation and Numerical Simulation of Pipes Running Through Curved Holes,” Phase I of Contract No. C854022, Petroleum Development Oman, December 1998.



26. **A. C. Seibi** and A. Al Shabibi, “Finite Element Analysis of Running Casing Through Curved Holes in Horizontal Drilling”, Phase II of Contract No. C654007, Petroleum Development Oman, September 1997.
27. **A. C. Seibi**, A. Al Shabibi, and H. Abdullah, “Finite Element Analysis of Running Casing Through Curved Holes in Horizontal Drilling”, Phase I of Contract No. C654007, Petroleum Development Oman, February 1997.
28. **A. C. Seibi** and H. A. Abdullah, “Finite Element Analysis of Amal-Karim West Pipeline”, Minor Contract No. 601177, Petroleum Development Oman, September 1996.
29. R. A. Siddiqui, H. A. Abdullah, and **A. C. Seibi**, “Failure Analysis of Sahma Impulse Line”, Minor Contract No. 601274, Petroleum Development Oman, November 1996.
30. K. Al Asmi, **A. C. Seibi**, B. Samanta, & R. Siddiqui, “Investigation into the Failure of Pressure Transmitter Impulse Line, Sahma Booster Station”, Petroleum Development Oman, July 1995.

### **Presentations:**

1. Mentoring Undergraduate/Graduate Students: Challenges & Rewards, SCULPT Mentoring Academy, UVU, April 23, 2021.
2. “Viscoelastic Response of Cement/Rubber Composites,” American Association of Drilling Engineers, Houston, TX, April 2018.
3. “Deploying Lean Six Sigma in Indirect Tensile Testing Using Digital Image Correlation Technique,” 21st Annual Gulf of Mexico Deepwater Technical Symposium, New Orleans, LA, USA, 21-23 August 2017.
4. “Cement/rubber composites: A new approach to overcome downhole cementing challenges in HPHT Deep Water Wells,” Louisiana Energy Research & Development Forum – Petroleum R&D, November 2017.
5. “Water Sloshing in Rectangular tanks,” Energy 2030, Abu Dhabi, UAE, November 4 - 6, 2008.
6. Benefits of Expandable Tubular in the Petroleum Industry, Energy 2020, Abu Dhabi, UAE, November 2-3, 2006.
7. Research Experience at Sultan Qaboos University – Way Forward, Tunisia, l’École Polytechnique de Marsa, January 2003.
8. “Simulation of Liner Hanger Tubular Expansion – Field Cases”, Abu Dhabi Company for Onshore Oil Operations (ADCO), June 2002.
9. “Simulation of Liner Hanger Tubular Expansion – Field Cases”, Petroleum Development Oman (PDO), May 2002.
10. Conducted a workshop on the Establishment of a Solid Tubular Expansion Research Center at SQU,” Shell Research Center, SEPTAR, The Hague, Netherlands, January 2001.
11. “Research Experience at Sultan Qaboos University – Way Forward”, University of Petroleum, East China, May 2001.
12. “Tubular Expansion Technology,” University of Petroleum, East China, May 2001.

13. "Drillstring Dynamics and Control," University of Petroleum, East China, May 2001.
14. "Experimental Investigation and Numerical Simulation of Casing Running Through Curved Sections," University of Petroleum, East China, May 2001.
15. "Research Experience in Sultan Qaboos University – Way Forward", United Arab Emirates University, April 4 2001.
16. "Research Collaboration Between SQU, PDO and SHELL – Way Forward", SQU-PDO-SHELL Workshop, SQU, January 2001.
17. "Stress Analysis of Casings Expansion/Post-Expansion: Phase I", Sultan Qaboos University-Petroleum Development Oman Workshop, Oman, January 2001.
18. "Glass Reinforced Epoxy Resistance to Acidic Solutions used in PDO", Sultan Qaboos University-Petroleum Development Oman Workshop, Oman, January 2001.
19. "Stress Analysis of Pipes Running Through Curved Hole Sections using Finite Element Analysis", Petroleum Development Oman, Oman, November 1999.
20. "Al-Huwaisah Production System Modeling", Petroleum Development Oman, Oman, May 1999.

## **Creative Works/Research:**

- Device and method for detecting leaks and healing pipelines using twin balls technology," US Patent App. 16/133,155.
  - Designed a twin ball for internal pipeline inspection in difficult locations (elbows, tees, etc...).
  - Built a control system inside both balls to synchronize their relative motion.
  - Used the control system to receive acoustic and location data from the sound and GPS sensors to determine the size and location of the leak.
  - Made sure that the first ball sends signals to the supervisors and to the second ball moving behind it to release the healing gel and close any leaks.
- Accelerated pavement Surface Testing Device, UVU Attorney Docket No.: 6017-0001-PR.
  - Designed a customized accelerated pavement testing (APT) device for snowplowing.
  - The APT provides relevant data of great importance to the transportation departments.
  - APT is designed to supply a force equal to the force of 700-800 pounds that the snowplows place on a 12-foot blade.
  - APT is designed to rotate at a high enough speed to mimic field conditions while staying within a safe operating speed of approximately 30 rpm.
  - APT is designed to apply water or ice to keep the surface wet to recreate conditions the snowplows.

## Grants Written: \$4.3+ million

1. Establishing a Wind Energy Club at UVU to Enter the Department of Energy Annual Collegiate Competition, Grants for Engaged Learning (GEL) Quick, **\$3,000**, 2021, **PI**.
2. Design & Construction of a Portable Multi-Purpose Small Scale Pavement Testing Device, Grants for Engaged Learning (GEL) Seed Carrot, **\$30,000**, 2020 – 2022, **PI**.
3. Entering an SPE International Competition Through the Establishment of a “Drillbotics” Students Club at UVU – A Multidisciplinary Project, Engagement Learning Grant (HIELG), Utah Valley University, **\$28,960**, 2019 – 2020, **PI**.
4. Development of cement/rubber composites for High Pressure/High Temperature Deep Water Wells, Chevron, **\$145,000**, 2018 – 2020, **PI**.
5. Drillbotics: An automated drilling rig - Senior students project, The American Petroleum Institute, **\$15,000**, 2018, **PI**.
6. Cement testing equipment, DoubleRengineering LLC., **\$20,000**, 2018, **PI**.
7. Barrier/Cement Educational and Research Lab, Halliburton, **\$250,000**, 2018, **PI**.
8. Drillbotics: An automated drilling rig - Senior students project, British Petroleum (BP), **\$5,000**, 2017, **PI**.
9. Cement research work at Penn State University, NSF EPSCoR, **\$6,000**, 2017, **PI**.
10. Characterization of Complex Fracture Propagation in Naturally Fractured Formations using Digital Image Correlation (DIC) Technique and Simulation, Board of Regents, Louisiana, **\$613,588**, 2017 – 2020, **Co-PI**.
11. High Performance Slip-Critical Bolted Connections, Board of Regents, Louisiana, **\$10,000**, 2017 – 2018, **Co-PI**.
12. Corrosion behavior of expanded tubes in harsh environments, Abu Dhabi National Oil Co. in collaboration with Colorado School of Mines, **\$471, 452**, 2010 – 2013, **PI**.
13. Damage Diagnosis and Structural Integrity Evaluation of Pipelines and Infrastructural Systems, Abu Dhabi National Oil Co. in collaboration with Colorado School of Mines, **\$460, 803**, 2010 – 2013, **Co-PI**.
14. Development of a Probabilistic Model for Degradation Effects of Corrosion-Fatigue-Cracking in the Oil and Gas Pipelines, Abu Dhabi National Oil Co. in University of Maryland, **\$570, 000**, 2006 -2012, **Co-PI**.
15. Construction of a Tubular Expansion Test Rig, The Petroleum Institute in Abu Dhabi, **\$25,000**, 2006 – 2007, **PI**.
16. Pipe bending Measurements While Drilling, The Petroleum Institute in Abu Dhabi, **\$5,000**, 2005, **PI**.

17. Wellbore Tubular Expansion Research, Shell and The Petroleum Development Oman, **\$1,126,650**, 2001 – 2004, **PI**.
18. Ultra-Short radius Drilling, The Petroleum Development Oman, **\$120,000**, 2001 – 2002, **Co-PI**.
19. Vibration Analysis of GRE Water Cooling Piping Systems and its Fatigue Characteristics Under Cyclic Loading. The Petroleum Development Oman, **\$18,000**, 2001, **PI**.
20. Stress Analysis of Expansion/Post Expansion of Casings Using Finite Element Method, The Petroleum Development Oman, **\$100,000**, 2000 – 2001, **PI**.
21. Resistance of GRE to Various Acid Solutions and their Effect on its Mechanical Properties, The Petroleum Development Oman, **\$54,000**, 2000, **PI**.
22. Al-Huwaisa Production System Modeling, The Petroleum Development Oman, **\$38,900**, 1999, **PI**.
23. Experimental Investigation and Numerical Simulation of Pipes Running Through Curved Holes, The Petroleum Development Oman, **\$81,000**, 1998 – 1999, **PI**.
24. Finite Element Analysis of Casings Running Through Curved Holes in Horizontal Drilling, The Petroleum Development Oman, **\$40,000**, 1996 – 1997, **PI**.

### Submitted Proposals

25. A. Seibi, A. Bordelon, K. Manahiloh, J. Cox, “Optimizing Snowplow Operating Conditions through an Experimental Investigation and Field Measurements,” submitted to UDOT, **\$50,000**, March 2021. Need further data to be accepted. Will be considered for Spring, 2022, **PI**.
26. A. Seibi, A. Bordelon, K. Manahiloh, J. Cox, “Portable In-situ Pavement Surface Testing Device,” submitted to UDOT, **\$60,000**, **PI**, Not accepted.
27. K. Manahiloh, A. Seibi, “Assessing UDOT repository data on Culverts, submitted to UDOT, **\$52,800**, **PI**, Not accepted.
28. Integrating Standards and Codes into the Curriculum of Newly Established Mechanical and Civil Engineering Programs, proposal submitted to National Institute of Standards and Technology (NIST) on June 1, 2021, **\$72,3099**, **PI**, Not accepted

### Consulting

1. Data Analysis and Fluid Flow Measurements of Drilling Cutting in Horizontal Wells – Field case studies, Emerald Surf, Shreveport, LA, **\$12,000**, 2019.
2. Evaluation of long-term performance of Polyethylene Tee junctions under harsh environment, Hyundai, S. Korea, **\$6,500**, 2015.
3. Finite element analysis of 3-m diameter Polypropylene pipes submerged in seawater, Union Pipes Industry in Abu Dhabi, **\$11,000**, 2013.
4. Finite element modeling of composite flexible pipe pulled through multi-curved sections, PETRONAS, Kuala Lumpur, Malaysia, **\$55,000**, 2011.
5. Finite Element Analysis of Composite Pipes with Irregular Shapes under Compression, APS LLC. California sewerage project, **\$23,000**, 2009.

6. Failure Analysis of Glass Reinforced Epoxy pipes using Finite Element Analysis: Borouge 2 Project – Sea Water Cooling System, Technica Reunidas, Spain Borouge 2 project, **\$7,200**, 2008.
7. Finite Element Analysis: Borouge 2 Project – Sea Water Cooling System (High Density Polyethylene pipes), Union Pipes Industry, Maussafah, Abu Dhabi, Borouge 2 project, **\$10,000**, 2008.
8. Failure Investigation of Sahma Impulse Line, Petroleum Development Oman, **\$5,200**, 1996
9. Finite Element Analysis of Amal-Karim West Pipeline, Petroleum Development Oman, **\$5,200**, 1996.
10. Design and Fabrication of GRP/Copper Molds Using Finite Element Method, Amiantit Oman, **\$5,000**, 1995 – 1996.
11. Investigations into the Failure of Pressure Transmitter Impulse Line, Sahma Booster Station, Petroleum Development Oman, **\$9,100**, 1995.

## Honors and Awards

- **Senior Fellow of Higher Education Academy (SFHEA)**, August 2021
- **Most Influential Faculty Award** at the Petroleum Institute in Abu Dhabi, 2007.
- **Visiting Research Scientist** – Institut Nationale des Sciences Appliquees, Rouen, France (June-July 2003).
- **Certificate of Appreciation**, Sultan Qaboos University, 2003.
- **Visiting Research Scientist – DAAD scholarship**, Institute of General Mechanics at Aachen University, Germany (2001).
- **Final Year Student Project Award** from the Well Engineering Division in the Petroleum Development Oman (2001).
- **Student Paper Award** in the SPE Competition, Saudi ARAMCO, Middle East section (2001).
- **Student Paper Awards** in the ASME/JSME Pressure Vessels & Piping (**1998, 1999, 2004, 2005, 2008, 2009**).
- **Certificate of Appreciation**, National Highway Institute, Washington D.C, 1993
- **Graduate Research Fellowship**, Federal Highway Administration, 1990-1992.
- **USAID Scholarship** for undergraduate & graduate studies at PSU, USA, 1981 - 1988.

## Professional Certifications

- Wild Well Control – Level 2, Society of Petroleum Engineering, 2014.

## Professional Memberships

- American Society of Mechanical Engineers (ASME)                      2007 – present

- Society of Petroleum Engineers (SPE) 2007 – present
- American Petroleum Institute (API) 2015 – present
- North American Tunisian Engineers Group (NATEG) 2011 - present

## Keynote and Invited Lectures

- Short course on Nonlinear Finite Element Modeling, L' Ecole Polytechnique de Tunis, January 2007.
- Short course on Nonlinear Finite Element Modeling, L' Ecole Polytechnique de Tunis, February 2008.
- Conducted a Workshop on “Joints and Joining Mechanisms”, Al-Mansoori Co., Musaffah, UAE, 2007.
- Invited by Shell Research Centre in The Hague, Netherlands and **E2-Tech** Company in Scotland to present a seminar on “Tubular Expansion Technology Application,” January 2001.
- Invited by the University of Petroleum (East China) and the Chinese National Petroleum Company as a **Distinguished Lecturer** to deliver lectures on “Drilling and Tubular Expansion Technology,” May 2001.

## Service

### University Service:

- Member of the **RTP** Senate review committee, Fall 2019 – Spring 2020.
- Co-Chair, Scholarly & Creative Undergraduate Learning Partnership Team (**SCULPT**) Showcase, Fall 2019 – Present.
- Member of the Utah State of Higher Education (**USHE**) **Mechanical Engineering subcommittee**, Spring 2020 – Present.
- Member of Scholarly & Creative Committee (**SCAC**), Spring 2020 – Present.
- Member of **SCULPT Advisory Board**, Spring 2021 – Present.

### College Service:

- Member of the College of Engineering and Technology (**ETC**) **Scholarship Committee** 2019 - Present.
- **Chair** of ENG 12 session (Construction and Materials Investigation), I-ETC conference on Friday Oct. 2, 2020.
- Member of the **organizing committee of i-ETC conference**, (2019 – Present).
- Member of the College of Engineering **PhD Committee** at University of Louisiana at Lafayette (2016 – 2019).

### Department Service:

- **ABET Coordinator** - UVU Mechanical Engineering BS Degree, (2019 –Present).

- **Program Coordinator**, UVU Mechanical Engineering, (July 2020 –Present).
- Member of the Mechanical Engineering (**ME**) **Curriculum Committee**, 2019 - Present.
- **Chair** of the **ME Lecturer Search Committee**, which resulted in hiring Dr. Brett Stone, Fall 2020.
- Member of the **ME Faculty Search Committee**, which resulted in hiring Dr. Israd Jaafar, Fall 2020.
- Member of the **ME Faculty Search Committee**, which resulted in hiring Dr. Matt Ballard, Fall 2020.
- Member of the **CIVE Faculty Search Committee**, which resulted in hiring Kalehiwot Manahiloh, Fall 2020.
- Member of **Diagnostic Test Committee**, Fall 2019 – Fall 2020.
  - UVU “**Windmill**” Team Faculty Advisor, June 2021 - Present
  - UVU “**Drillbotics**” Team Faculty Advisor, Spring 2020 - Present
- Served as **Associate Chair of the Petroleum Engineering Department** at University of Louisiana at Lafayette (ULL), (2017 – 2019),
- **Lab Coordinator** for the barrier (2018 – 2019), drilling engineering, and fluids labs (2013 – 2019).
- Society of Petroleum Engineers (**SPE**) **Student Chapter Faculty advisor** at ULL, (2015 – 2019).
- **PetroBowl Faculty advisor** at ULL, (2015 – 2019).
- ULL Petroleum Engineering **ABET Co-Chair**, (2018 – 2019).
- ULL Petroleum Engineering **Drillbotics Club Faculty Advisor** (2017 – 2019).

#### Professional Discipline-Related Service:

- Review conference papers of the American Society of Mechanical Engineering (**ASME**)
- Attend meetings and seminars, invited one speaker, Society of Petroleum Engineers (**SPE**) **Salt-Lake City Advisory Board** section (2019 – Present)
- Attend meetings and seminars, invited one speaker, the Society of Petroleum Engineers (**SPE**) **Evangeline Advisory Board** (2015 – 2019)
- Attend meetings and seminars, generate funding for the drillbotics club, the American Petroleum Institute (**API**) **Advisory Board** (2014 – 2019)
- Attend meetings, made a presentation at the Louisiana Gulf Coast Oil Exhibition (**LAGCOE**) **Advisory Board** (2016 – 2019)
- Reviewer of ASME J. of Energy Resources Technology
- Reviewer of J. of Materials Processing Technology
- Reviewer of SEM J. of Experimental Techniques
- Reviewer of ASME J. of Pressure Vessel Technology
- Reviewer of ASCE J. Engineering Mechanics
- Invited as an **external examiner of a PhD** thesis defense, L’ Ecole des Ponts et Chaussees, Paris, France, September 2007.
- Member of the **editorial review board** of Scientific Journals International, 2007 - 2013.
- Chair of Finance and Registration, 2<sup>nd</sup> International Conference on Modeling, Simulation, and Applied Optimization, Petroleum Institute, Abu Dhabi, 2007.

- Member of the Scientific Committee – Tunisian Scientific Society Conference in Advances in Mechanical Engineering, Sousse, Tunisia, December 2006.
- Member of the Scientific Committee – Tunisian Scientific Society Conference in Advances in Mechanical Engineering, Sousse, Tunisia, March 2004.
- Member of the Scientific Committee – Tunisian Scientific Society Conference in Advances in Mechanical Engineering, Hammamet, Tunisia, March 2002.
- Member of the Editorial Board of the Sultan Qaboos University Journal of Scientific Research Science & Technology, 2002.
- Member of the developing committee of the MSc. program between l'Ecole Polytechnique de Marsa in Tunisia and Virginia Polytechnic Institute, Virginia, USA, 2002.
- Member of the Oil & Gas Research Centre Development Committee, 2001.
- Member of the Technical Program Committee of the International Association & drilling Contractors Conference, December 21-23, Muscat, Oman, 2000.