

Osama T. Al Meanazel, Ph.D.
Associate Professor, Industrial Engineering Department

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Education

Ph.D., Industrial & Systems Engineering, SUNY at Binghamton, New York, USA	May 2013
M.S., Engineering Management, University of Sunderland, Sunderland, UK	January 2008
B.S., Industrial Engineering, University of Jordan, Amman, Jordan	February 2006

Academic Experience

Associate Professor (Sep. '24 – Present)	Department of Industrial Engineering, Al Yamamah University, Al Khobar, KSA
Associate Professor (Oct. '21 – Present)	Department of Industrial Engineering, The Hashemite University, Al Zarqa, Jordan
Visiting Professor (Sep. '22 – Sep. '23)	Department of Mechanical and Industrial Engineering, Applied Science Private University, Amman, Jordan
Member of Board of Trustees (Nov. '20 – Present)	Queen Noor Civil Aviation Technical College, Amman, Jordan
Assistant Professor (Sep. '13 – Oct. '21)	Department of Industrial Engineering, The Hashemite University, Al Zarqa, Jordan
Department Chair (Sep. '20 – Oct. '21)	Chairman of Engineer Aid Science Department, The Hashemite University, Al Zarqa, Jordan
CSCCS Director (June '17 – Sep. '19)	Director of Center for Studies, Consultations and Community Service (CSCCS), The Hashemite University, Al Zarqa, Jordan
Assistant Editor (Sep. '13 – Sep. '14)	Jordan Journal of Mechanical and Industrial Engineering (JJMIE)
Research Associate (Jan. '11 - Aug. '11)	Graduate Research Associate, Upstate University Hospital (Syracuse, NY), Watson Institute for Systems Excellence at Binghamton University, NY, USA
Teaching Assistant (Feb. '10 - May '13)	Department of Systems Science & Industrial Engineering, Binghamton University, NY, USA
Lab Instructor (Aug. '10 - Dec. '10)	Human Factors Engineering Laboratory, Department of Systems Science & Industrial Engineering, Binghamton University, NY, USA
Instructor (Sep. '09 - Jan. '10)	Industrial Engineering Department, University of Jordan, Amman, Jordan

Awards and Honors

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- **Best Graduation Project in 2022 at Jordan Engineering Association**
Title: Reengineering Water Flow to Manage Water Consumption in Zalatimo Brothers for Sweets
 - **Teaching Excellence Award,** The 10th Annual Conference on Industrial Engineering and Operations Management, Dubai, United Arab Emirates, March 10-12, 2020.
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- **Regional Winner Outstanding Faculty Advisor**, Institute of Industrial & Systems Engineering for year of 2018.
- **Best Track Paper Award**, The Third North American International Conference on Industrial Engineering and Operation Management, Washington DC, USA, September 27-29, 2018.
Title: Ergonomic Assessment of Snow Shovels Using Digital Human Modeling
- **Best Graduation Project in 2016 at Jordan Engineering Association**
Title: Increasing the Production Efficiency During the Milling Season at Al-Alia'a Company
- **Award for Service to the Department** of System Science and Industrial Engineering at the State University of New York at Binghamton. May 18, 2013

Contracts and Grants

May '14 – Dec. '20 (\$48,000)	Al Meanazel, O.T. (Principal Investigator), Obeidat S., Obeidat M., “ <i>Ergonomic Physical Assessment of Manual Wheelchair</i> ” Submitted to the Ministry of Higher Education Science Research Fund, Jordan
July '19 – July '23 (\$46,000)	Al Meanazel, O.T. (Principal Investigator), Smadi Y., “ <i>New technologies to increase the endurance of firefighters.</i> ” Submitted to the Ministry of Higher Education Science Research Fund, Jordan
Feb '24 – Feb '27 (\$38,000)	Al Meanazel, O.T. (Principal Investigator), Hesham A. Al Momani, and Ahmad Qamar., “Kinematic Assessment of Dentists Postures and Movements Using Advanced Motion Capture Systems .” Submitted to the Ministry of Higher Education Science Research Fund, Jordan

Grants (Not Accepted)

Al Meanazel, O.T. (Principal Investigator), Smadi, Y., “Physical workload in neck, shoulder, back, and wrists in Jordanian dental hygienists”, Science Research Foundation in Ministry of Higher Education, Expected Budget (\$100,000)

Training Packages

- **Engineering Safety:** Prepare an Engineering Safety Training Package focusing on risk assessment, compliance with safety regulations, emergency procedures, and the use of protective equipment. Gained expertise in ergonomic practices, chemical and electrical safety, incident reporting, and continuous safety improvement processes.
- **Industrial Quality:** Prepare Industrial Quality Management, covering ISO standards, quality control techniques, and root cause analysis. Acquired skills in maintaining high-quality standards through continuous process improvement and rigorous quality assurance practices.
- **Engineering Maintenance:** Prepare Maintenance Management, focusing on preventive and predictive maintenance strategies, asset management, and reliability-centered maintenance. Developed competencies in optimizing equipment life cycles and ensuring operational efficiency.

Significant Industrial Project

- Layout Evaluation, Design, and Planning in Jordan Light Vehicle Manufacturing (2014).
 - Developing OHSAS Standards in Nabil Food Industry, Nabil Company (2014).
 - Statistical Quality Control of JOPETROL Engine Lubricant Production Line (2015).
 - Increasing Production Efficiency and Regaining losses Of Al-Alia'a Company (2015).
 - Time and Motion Study in Garment Industry (2016)
 - Lean Six Sigma at Jordan Steel Company (2016)
 - Demand Forecasting Optimization for Teeba Factory (2017).
 - Hazard Identification and Risk Assessment in Aircraft Maintenance Workshop (2017).
 - Performance Assessment for JOPETROL Engine Lubricant Production Line (2018).
 - Reducing the Breakdowns in ARAL Extrusion Line Through TPM Program Implementation (2018).
 - Analyze and Reduce Waiting Time of Customer Service at Ministry of Industry, Trade and Supply (2018)
 - Business Support Program – Export product to Netherlands (2020)
 - Reengineering Water Flow to Manage Water Consumption in Zalatimo Brothers for Sweets (2021)
 - Reducing Trim Loss by Adjusting Dryer Rolling Machine in Lina Hygienic Paper Co. (2021)
 - Export Marketing Strategy for Tahina Product in Saudi Arabia Market (2022)
 - Process Analysis and Improvement, Al Jazy Shipping and Forwarding Company (2023)
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- Evaluate Health Accreditation Standards on Patient-Centered Care in Jordan: Case Study in Al Bashir Hospitals (2023)
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Publications

Journal Publications (Published)

1. **Almeanazel, O.T.**, "Total Productive Maintenance Review and Overall Equipment Effectiveness Measurement," Jordan Journal of Mechanical and Industrial Engineering, 4(4), 517-522, 2010.
2. Aqlan, F., Hamasha, M.M., **Almeanazel, O.T.**, and Khasawneh, M.T., "Stochastic Analysis of Pull Production Systems", Journal of Management and Engineering Integration, 4 (1), 36-44, 2011.
3. **Almeanazel, O.T.**, Hamasha, M.M., Aqlan, F., and Khasawneh, M.T., "A study on the Effect of Smoking, Gender, and Hand Dominancy on Hand Grip Endurance Limit," International Journal on Intelligent Technologies and Engineering Systems, 1(1), 67-73, 2011.
4. Hamash, M.M., Alazam, A.R., Hamasha, S., Aqlan, F., **Almeanazel, O.T.**, Khasawneh, M.T., "Multimachine Flexible Manufacturing Cell Analysis Using a Markov Chain-Based Approach," Component, Packaging and Manufacturing Technology, IEEE Transaction, 5(3), 439-446, 2015.
5. Mazin H Obaidat, **Al Meanazel, O.T.**, Mohammad A Gharaibeh, Hesham A Almomani, "Pad Cratering: Reliability of Assembly Level and Joint Level," Jordan Journal of Mechanical and Industrial Engineering, 10(4), 271-277, 2016.
6. Hesham Al-Momani, Mazen Obaidat, Atif Khazaleh, **Osama Muneizel**, Nour M Afyouni, Sayel M Fayyad, "Review of medical waste management in Jordanian health care organisations," British Journal of Healthcare Management, 25(8), 1-8, 2019.
7. Qamar, A.M., **Al Meanazel, O.T.**, Alalawin, A.H. et al. "Optimization of Plant Layout in Jordan Light Vehicle Manufacturing Company", Journal of The Institution of Engineers (India): Series, 1-8, 2020.
8. **Al Meanazel, O.T.**, Ahmad Saad, and Hesham H. Almomani "Fuzzy logic Model for Selecting Optimum Maintenance Strategies: Case Study in the Jordanian Food Industry", Journal of Engineering Research and Application, 10(4), 38-44, 2020.
9. Al-Momani, Hesham, **Osama T. Al Meanazel**, Ehsan Kwaldeh, Abdallah Alaween, Atif Khasaleh, and Ahmad Qamar "The efficiency of using a tailored inventory management system in the military aviation industry." Heliyon 6(7), 2020.
10. **Al Meanazel, O.T.**, Al-Shudiefat, A.A-R.S., Al-Momani, H.A. and Aqlan, F. "Factors affecting spine loading in a box lifting task: a digital human modelling study", Int. J. Industrial and Systems Engineering, 37(2), 168-178, 2021.
11. Hadidi A. M., Maher R. A., **Al Meanazel, O.T.**, "Optimal Geometric Allocation for Cost Management of Vehicle Maintenance." Civil engineering and architecture, 9(3), 605-610, 2021.
12. **Al Meanazel, O.T.**, Haetham Doweire, and Hesham A. Almomani "Patient Safety Culture in Al Zarqa Public Hospital: Case Study" Int. J. Industrial and Systems Engineering, 41(3), 336-348, 2022
13. Mohammad Hamasha, Sa'd Hamasha, Faisal Aqlan, **Osama Almeanazel** "Markovian analysis of unreliable multi-machine flexible manufacturing cell." Plos one, 17(2), 2022

Conference Papers

1. **Al Meanazel, O.T.**, Hamasha, M.M., Irshaidat, F., Halaweh, M., and Khasawneh, M.T., "Effect of Color and Gender on Reaction Time in Cognitive Tasks", Proceedings of the International Conference on Manufacturing and Engineering Systems (ICMES 2010), at Southern Taiwan University, Tainan, Taiwan, December 16-18, 2010.
 2. **Al Meanazel, O.T.**, Hamasha, M.M., Halaweh, M., Lu, S., and Khasawneh, M.T., "The Effect of Smoking, Gender, and Hand Dominancy on Hand Grip Endurance Limit", Proceedings of the International Conference on Manufacturing and Engineering Systems (ICMES 2010), at Southern Taiwan University, Tainan, Taiwan, December 16-18, 2010.
 3. Aqlan, F., Hamasha, M.M., **Al Meanazel, O.T.**, and Khasawneh, M.T., "Analysis of Pull Production Systems using Markov Chains" Presented at Industry, Engineering, and Management Systems Conference, March 27-30, 2011, Cocoa Beach, Florida, USA.
 4. **Al Meanazel, O.T.**, Hamasha, M.M., Aqlan, F., Irshaidat, F., and Khasawneh, M.T., "Estimation of Performance Time for Tasks Requiring Hand Grip Strength Using Artificial Neural Networks" Presented at Industry, Engineering, and Management Systems Conference, March 27-30, 2011, Cocoa Beach, Florida, USA.
 5. Hamasha, M.M., Aqlan, F., **Al Meanazel, O.T.**, Khasawneh, M.T., and Srihari, K., "Analysis of Hybrid Production Systems using Markov Chains" Presented at Industry, Engineering, and Management Systems Conference, March 27-30, 2011, Cocoa Beach, Florida, USA.
 6. **Al Meanazel, O.T.**, Cao, W., Weiss, J., Khasawneh, M.T., and Chase, C., "Ergonomic Evaluation of Cathode Assembly for the MK 80 MPS WEP ROLL COATER Using Digital Human Modeling" Presented at Industry, Engineering, and Management Systems Conference, March 25-28, 2012, Cocoa Beach, Florida, USA.
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7. Cao, W., **Al Meanazel, O.T.**, and Khasawneh, M.T., “*Universal Accessibility Assessment of Vending Machine Design Using Digital Human Modeling*”, Presented at Industry, Engineering, and Management Systems Conference, March 25-28, 2012, Cocoa Beach, Florida, USA.
 8. Irshaidat, F., **Al Meanazel, O.T.**, Yoon S.W., Khasawneh, M.T., and Srihari, K., “*Assessment of Space and Electrical Outlets Utilization in Operating Rooms*” Presented at Industry, Engineering, and Management Systems Conference, March 25-28, 2012, Cocoa Beach, Florida, USA.
 9. DeGennaro, D., **Al Meanazel, O.T.**, Khasawneh, M.T., and Srihari, K., “*Digital Human Modeling Evaluation for Lifting Obese Patients*,” Proceeding of the Society for Industrial and System Engineering (SISE), Washington, D.C., September 16-18, 2012.
 10. **Al Meanazel, O.T.**, Gervacio, T.A., Bijur R.M., Chan B.S., and Khasawneh M.T., “*Predicting Static Arm Lifting Capacity Using Artificial Neural Network and Digital Human Modeling*” Presented at Industry, Engineering, and Management Systems Conference, March 25-27, 2013, Cocoa Beach, Florida, USA.
 11. Dwyer, C., Khamsehi, S., Pittman, R., **Al Meanazel, O.T.**, and Khasawneh, M.T., “*The Effect of Vehicle Modifications on Driver Visibility While Backing*” Presented at Industry, Engineering, and Management Systems Conference, March 25-27, 2013, Cocoa Beach, Florida, USA.
 12. Faisal Aqlan, Yuan-Han Huang, and **Osama T. Al Meanazel**, “*Enhancing Ergonomic Design Skills among Undergraduate Students by Integrating Computer-Aided Design and Digital Human Modeling*” 2017 ASEE Annual Conference & Exposition, June 25-28, 2017, Columbus, Ohio, USA.
 13. Carly Wolkiewicz, Katherine Collins, Faisal Aqlan, and **Osama T. Al Meanazel**, “*Ergonomic Assessment of Snow Shovels Using Digital Human Modeling*” 2018 International Conference on Industrial Engineering and Operations Management, September 27-29, Washington DC, USA.
 14. Hesham A. Almomani, Atif Khazaleh, Adnan Bashir, Mohammad Hamasha, Mohamad Aljarah **Osama Mnaizel**, “*A Psychophysical Approach for Predicting Maximum Voluntary Contraction in Jordanian Cancer Patients at King Hussein Cancer Foundation Center*” 2018 Conference: Proceedings of the 7th Annual World Conference of the Society for Industrial and Systems Engineering, October 11-12, 2018, Binghamton NY, USA
 15. **Al Meanazel O.T.**, et al, “*The Important Criteria to Select the Optimum Maintenance Strategy in Jordanian Food Industry*”, The 10th Annual Conference on Industrial Engineering and Operations Management, Dubai, United Arab Emirates, March 10-12, 2020.
 16. **Osama T. Al Meanazel**, Mazen H. Obeidat, Sulieman Obeidat, Hesham Ahmad Al-Momani and Mohammad M. Hamasha, “*Wrist Deviation influence on Initial Hand Force before Wheelchair propulsion Using Digital Human Modeling.*” Proceedings of the 5th European International Conference on Industrial Engineering and Operations Management Rome, Italy, July 26-28, 2022
 17. **Osama T. Al Meanazel**, Mazin H. Obeidat, Hesham A. Al Momani, Roua N. Alomosh and Qamar Ui Islam, “*Assessment and Musculoskeletal Disorder Risks Among Dentists During Dental Treatment in Jordan: A Comparative Ergonomic Study.*” Proceedings Computers and Industrial Engineering. International Conference, 50th 2023, Sharjah, UAE, 30 October - 2 November 2023

Workshop Invited Talks and Posters

1. **Al Meanazel, O.T.**, Cao, W., Khasawneh, M.T., and Chase, C.J., “*Digital Human Modeling for Assessment of Cathode Assembly for the MK 80 MPS Web Roll Coater*”, IMAPS 38th Symposium & Expo, Boxborough, Massachusetts, May 2-4, 2011.
 2. DeGennaro, D., **Al Meanazel, O.T.**, Khasawneh, M.T., and Srihari, K., “*Digital Human Modeling Evaluation for Lifting Obese Patients*,” Proceeding of the Society for Industrial and System Engineering (SISE), Washington, D.C., September 16-18, 2012.
 3. Irshaidat, F., **Al Meanazel, O.T.**, Yoon S.W., Khasawneh, M.T., and Srihari, K., “*Assessment of Space and Electrical Outlets Utilization in Operating Rooms*”, Pursuit of Operational Excellence (OPEX) Conference, Binghamton, New York, October 11-12, 2012.
 4. **Al Meanazel, O.T.**, Gervacio, T.A., Bijur R.M., Chan B.S., and Khasawneh M.T., “*Predicting Static Arm Lifting Capacity Using Artificial Neural Network and Digital Human Modeling*” Presented at Industry, Engineering, and Management Systems Conference, March 25-27, 2013, Cocoa Beach, Florida, USA.
 5. Dwyer, C., Khamsehi, S., Pittman, R., **Al Meanazel, O.T.**, and Khasawneh, M.T., “*The Effect of Vehicle Modifications on Driver Visibility While Backing*” Presented at Industry, Engineering, and Management Systems Conference, March, 25-27, 2013, Cocoa Beach, Florida, USA.
 6. **Osama T. Al Meanazel**, Akram Alsukar, Mariam Omar, Hadeel Al Jamal, Haneen Aba Zaid, Noor Besiso, “*Facility Layout Improvement Using Systematic Layout Planning (SLP): A Case Study in the Furniture Industry*”, Presented at 2nd International Conference on Industrial, Systems & Manufacturing Engineering (ISME'19), Amman, Jordan.
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Invention Disclosures

Chase, C. J., Weiss, J., **Almeanazel, O. T.**, Cao, W., Khasawneh, M. T., “*An Ergonomically Designed Target Loader for the CHA Machine*,” Binghamton University, Invention Disclosure # 379, April 2011

Conference Track Chair

1. Human-Computer Interaction, International Conference on Industry Engineering and Operation Management (IEOM) Conference, March 25-27, 2013, Cocoa Beach, Florida
 2. Manufacturing and Maintenance, The 10th Annual Conference on Industrial Engineering and Operations Management, March 10-12, 2020, Dubai, United Arab Emirates.
 3. The 2nd International Jordanian Forum for Occupational Health and Safety, November 23-25, 2022, Amman, Jordan
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Teaching

Graduate Courses Taught:

1. Quality Management Systems (1601783) – The University of Jordan, Business Department
2. Human Factors Engineering (IE0936705) – The University of Jordan, Industrial Engineering Department
3. Industrial Health and Safety Engineering (IE0906728) – The University of Jordan, IE Department
4. Safety and Environment (403711) – The Hashemite University, IE Department
5. Economy and Costing in Maintenance (403731) – The Hashemite University, IE Department
6. Special Topics in Maintenance Management (403795) – The Hashemite University, IE Department

Undergraduate Courses Taught:

1. Human Factors Engineering (4403311) – The Hashemite University, IE Department
 2. Ethics and Communication Skills (0400203) – The Hashemite University, IE Department
 3. Cost Analysis (403331) – The Hashemite University, IE Department
 4. Human Factors Lab. (403532) – The Hashemite University, IE Department
 5. Time and Motion Study (403536) – The Hashemite University, IE Department
 6. Engineering Safety (0403533)– The Hashemite University, IE Department
 7. Production Planning and Control (IE471)- Applied Science Private University, IE Department
 8. Product Development and Entrepreneurship (IE574)- Applied Science Private University, IE Department
 9. Safety Management System (IE582)- Applied Science Private University, IE Department
 10. Work Measurement (IE334) - Applied Science Private University, IE Department
 11. Human Factors and Safety Engineering (IE457) - Applied Science Private University, IE Department
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Master's Students

1. Ahmad Saad (Fall 2016), “Selection of Optimum Maintenance Strategies Using Fuzzy Logic in Jordanian Food Industry”
 2. Ali Alshriedah (Fall 2017), “Kuwaiti Automobile Maintenance System Optimization Through Application of Six Sigma”
 3. Anas Al-Kandry (Spring 2018), “Appraising of Roads Maintenance Services Through Stratification of Quality Function Deployment (QFD); A Case Study in Kuwait.”
 4. Waleed Al-Daihani (Spring 2018), “Performance Measurements of Maintenance Department Using Balanced Scorecard Approach”
 5. Thamer Ali (Fall 2018), “Improving Sewer Systems’ Equipment Reliability with Computerized Maintenance Management Systems-CMMS (Case Study: Sewer Collection System in Kuwait City)”
 6. Shatti Al-Enezy (Summer 2019), “Evaluating Highway Maintenance Contracts in Kuwait”
 7. Muhammed Ayash (Summer 2019) “Assessing Maintenance Process for Multistage Flash Desalination Unit in Kuwait”
 8. Assel Olimat, (Spring 2020), “A comprehensive fuzzy risk-based maintenance framework for prioritization of medical devices: Case Study at Prince Hashem bin Al-Hussein Military Hospital”
 9. Barrak Al Shamari, (Spring 2020), “Application of Fuzzy Logic and Quality Function Deployment (QFD) to Optimize the Maintenance Process in the Oil Sector, A Case Study in State of Kuwait”
 10. Mohammad Lafi, (Summer 2021) “Achieving Government Building Sustainability through Maintenance Management System and Civil Engineering Principles in Kuwait State”
 11. Naser Abdullah Almutairi, (Summer 2021) “Improving Maintenance operations of streets and bridges using civil Engineering principles by decreasing time, costs and increasing quality in Kuwait City.”
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12. Rawan Al Soub (Spring 2022) “Assessment of the Management for Disaster Risk Reduction in the Jordan”
13. Saad Alhajri (Summer 2023) “Assessing Workplace Health and Safety Strategies in Industry Sector In Kuwait State
14. Farah Al Huniti (Spring 2024) “Cost Management in the Jordanian Healthcare Sector: Evaluation of the Effectiveness of Quality Improvement Programs in Jordanian Hospitals”

Professional

- President of Jordanian Students Organization – SUNY at Binghamton 2011 – 2013
- Ambassador of System Science and Industrial Engineering Department – SUNY at Binghamton 2013
- Faculty Advisor of Institute of Industrial & Systems - Engineers Hashemite University Chapter 2016 – 2020

Engineering Training and Workshops

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| • Total Quality Management (TQM) System | • Decision Maker, Leadership, and Knowledge Management |
| • KAIZEN | • Jordan Quality Mark King Abdullah Second Award for Excellence |
| • ISO9001: 2000 | • TQM and Human Resource Management |
| • HACCP (Hazard Analysis and Critical Control Points) | |

Training Course Taught

1. Advanced Program in Security and Safety	Istanbul, Turkey	26 – 30/ 1/2014	Optimal
2. Production Planning and Control	Amman, Jordan	22/3 – 19/4/2014	Pioneer Academy
3. Improve Technical Skills in English	Amman, Jordan	17 – 21/ 11/2014	Hashemite University
4. Health Safety Engineer	Amman, Jordan	10 – 14/1/2015	Knowledge Kingdome
5. 5S Lean Methodology on Workplace	A Zarqa, Jordan	5-8/7/2022	Hashemite University
6. Human Resource Management	A Zarqa, Jordan	18-29/2/2024	Knowledge Excellence

Computer Skills

Operating Systems	: MS-DOS, Windows XP/Vista/Windows7
General Applications	: Microsoft Office: MS Word, MS Excel & Internet, MS Project
Engineering Applications	: Arena, Jack-Human Performance Modeling Software, Matlab
Statistical Analysis	: SAS, MINITAB
Programing Language	: C++

Scientific and Professional Society Memberships

- Member, Human Factors and Ergonomics Society (HFES)
- Member, Alpha Pi Mu: Industrial Engineering Honor Society
- Member, Institute of Industrial & Systems Engineers (IISE)
- Member, American Society for Quality (ASQ)
- Member, Jordan Engineering Association (JEA)
- Member, Jordanian Society of Occupational Health & Safety Engineering
- Member, Jordanian Industrial Engineering Association,
- Member, Industrial Engineering and Operation Management Society (IEOM)

Teaching Interests

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| • Production Planning and Control | • Project Management and Appraisal |
| • Managing People in Projects | • Engineering Operation Management |
| • Environmental and Safety Engineer | • Designing of Experiments |
| • Human Factors Engineer | • Engineering Maintenance Management |
| • Industrial & Systems Engineering in Health Care | • Cost Analysis |
| • Time and Motion Study | • Technical Writing and Engineering Ethics |

References

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 - **Dr. Yahia M. Al-Smadi**, Assistant Professor at Mechanical Engineering, Jordan University of Science and Technology, Irbid, Jordan
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