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Google Scholar - A. S. AL Yahmedi
http://scholar.google.com/citations?user=hoUrtjIAAAAJ&hl=en

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EDUCATION

Ph. D.	Mechanical Engineering, University of California, Davis, California, USA, 2001
M. Sc.	Faculty of Technology, Control System Center, UMIST, Manchester, UK, 1993
B. Eng.	Mechanical Engineering, Sultan Qaboos University, Oman,1991

ACADEMIC EXPERIENCE

Period	Institution	Position
1991-1992	Sultan Qaboos University	Demonstrator
1993-1995	Sultan Qaboos University	Lecturer
1995-2001	University of California, Davis	Worked in different times during my PhD at UCD as a TA
2001-2015	Sultan Qaboos University	Assistant Professor
2015 - todate	Sultan Qaboos University	Associate Professor
2017 – 2018	Sultan Qaboos University	Assistant Head of Department
April/2018- Sept/2021	Sultan Qaboos University	Head of QA & Accreditation Office of College of Engineering
April, 2023	Sultan Qaboos University	Graduate of the Faculty Fellows Program from the Center for Excellence in Teaching and Learning @ SQU

OTHER

Period	Institution	Position
15-27 , June/2003	KAIST, Korea Institute of Science & Technology	Visiting Scholar, in the Robotics Intelligence Technology Lab with Professor Jong-Hwan Kim
July/2004 – Sept/2004	APS GmbH - European Centre for Mechatronics (APS-ECM), Aachen, Germany	Visiting researcher
June/2007 – Sept/2007	UC, Davis, USA	Visiting researcher in the Advanced Highway Maintenance & Construction Technology Research Center,

Sept, 2009 – Aug, 2010	Sibley School of Mechanical and Aerospace Engineering, Cornell University, NY, USA	Visiting Scholar in the Biorobotics & Locomotion Lab
June/2021 - to date	ABET, EAC, Baltimore, Maryland	Program Evaluator (PEV)
Feb,2024-Dec, 2024	University of Portsmouth	Visiting scholar in the Faculty of Technology, School of Energy & Electronic Engineering

NON-ACADEMIC EXPERIENCE

Petroleum Development Oman (PDO), Summer Internship, summer of 1989

Schlumberger Limited, Summer Internship, summer of 1990

PROFESSIONAL REGISTRATIONS

OSE, Oman Society of Engineers, Consulting Engineer

PROFESSIONAL MEMBERSHIP

IEEE, Institute of Electrical and Electronics Engineers
ASME, The American Society of Mechanical Engineers

HONORS AND AWARDS

- June/2007 – Sept/2007 Fulbright scholarship in the Advanced Highway Maintenance & Construction Technology Research Center, UC, Davis, USA
- July/2004 – Sept/2004 received DAAD (German Academic Exchange Services) scholarship in the European Center for Mechatronics, Aachen, Germany
- 1995-2001 A scholarship from SQU to pursue PhD at the University of California, Davis
- 1992-1993 A scholarship from SQU to pursue MSc at UMIST, Manchester, UK

TEACHING

Taught different courses since 2001 at Sultan Qaboos University for both undergraduate and graduate students.

Undergraduate courses:

MEIE5127	Analysis and Design of Control Systems
MCTE1000	Edutainment with Robotics(University Elective)
MCTE4150/MCTE5133	Modelling and Simulation
MEIE4183	Numerical Methods,
MEIE5122	Applied MultiBody Dynamics
MEIE3121	Dynamics,
MEIE5121	Modelling & Simulation of Engineering Systems,
MEIE2129	Basic Mechanics,
MEIE4122/MECH4171	Engineering System and Control,
MEIE5190	Special Topics,
MEIE2102	Statics,
MEIE5101	Engineering Vibration,
MECH5044/MEIE5044	Robotics,
MEIE3102	Solid Mechanics

Graduate Courses:

MEIE6109	System Modelling & Simulation,
MEIE6108	Advanced Vibrations

In the last five years the courses taught were as follows:

Course Title/Code	Year/Semester in which Course was offered
MEIE4122, Engineering System and Control,	SP21, F21,F22,SP23
MEIE5127, Analysis and Design of Control Systems	F21
MCTE4150, MCTE 5133 Modeling and Simulation	FL20, FL19
MCTE1000 Edutainment with Robotics	SP18
MEIE5121, Modeling & Simulation of Engineering Systems	FL19, FL18
MEIE3121, Dynamics	SP19, SP18

SUPERVISION OF MSC THESIS AND PROJECTS:

Supervised and Co-Supervised a number of PhD/MSc project/thesis

Thesis Title	Student name	Status
STD ID: 96494 Nouh Al Busaidi Cohort: 2021(title not specified yet) Co-supervisor	Nouh Al Busaidi	
Optimization Based Prediction of Human gait(PhD)	Sarra Abbasher Mahmoud Gism ElSeed	Completed 2023
Design and Development of an In-Pipe Inspection Robot(Msc)	Nassr Al Badi	Completed 2023
Design, Optimization, and Testing of a Battery-Powered In-Pipe Inspection Robot(MSc)	Ahmed Ibrahim Husseini Zeid	Completed 2023
Lateral Rotor-dynamic Analysis Of A Depletion Centrifugal Compressor For Identification Of Critical Speeds(MSc)	Nasser Sulaiman Nasser Al Khangari	Completed In 2022
Computational Synthesis of Biomechanical Leg and Simulator Design for Foot-Drop Problem (PhD)	Omer Eldirderi	Completed (2020)
Optimization Based Prediction of Human gait (MSc)	Sarra Abbasher Mahmoud Gism ElSeed	Completed (2018)
Modeling & Control of a 5 DOF Two Wheeled Robotic Machine for Industrial Application(MSc)	Sheikha Ahmed Al Hatmi	Completed in 2014
Design of an Oscillatory Neural Network with Fes to Assist Paraplegic Walking of Patient with Motor Neuron Disease(MSc)	Asia M. AL Busaidi	Completed in 2012
Optimal Control of an Industrial Beam Pump	Said A. Al Harrasi	Completed 2012
Reduction of Automotive Brake System Squeal Based on Finite Element Analysis and design of Experimental Technique(Msc)	Mutasem Rashid Faddah	Completed 2011
Multistage Flash Desalination Troubleshooting using Fuzzy Logic Based Expert System(MSc)	Mohammed A. AL Weshahi	Completed in 2005

External Examiner & Member of MSc thesis assessment examination

Served as external examiner and member of project/thesis assessment examination for a number of projects including:

- MSc Project title, “Robust 3D Dynamic Region Reaching with Obstacle Avoidance For Quadrotor-type UAV”, Basel Gomaa, ID: 136088, 2023
- PhD Thesis title: "Intelligent Control Design for Grid-Connected Inverter", Myada Shadoul Mohamed Farah, ID # 109069, PhD student in the ECE Department, at Sultan Qaboos University,2023
- MSc project entitled, “Pressure Drop Prediction in Multiphase Flow for Horizontal and Near Horizontal Pipes Using Adaptive Neuro Fuzzy Inference System”, Abdulmajeed Malallah Alwahaibi, Student ID:132379, 2022
- MSc project entitled, “A Hybrid Piezoelectric and Electromagnetic Wind Energy Harvester”, mechanical Engineering, 2022
- MSc project entitled, “Design of load frequency control of Time-Delay Multi-Area Interconnected Power Systems”, Khalfan Mohammed Al Kharusi, 2013

- MSc project entitled, "Pressure Falloff Testing In an Omani Oil Field", by Mr. Badr Hilal AL Amri, 2008
- MSc project entitled, "Modeling and Simulation of al Hail Reverse Osmosis Plant", by Saif Farooq Al Mawali, 2006

External UG/MSc students supervision

I served unofficially as a Co-advisor for a number of students who came and worked with me as RAs in a number of projects, namely

- "Energy Optimization of Biped Robots", A senior UG project with Sayari M. Amine from Mechanical Engineering Department , National Engineering School of Sfax during the period 2012-2013

- "Remotely Operated Vehicle", an MSc project with Fatmi M. Anis from National engineering School of Sfax, Tunisia, in 2006

Undergraduate Senior Projects (Final Year Projects-FYP) supervision

Each year I supervise about 1-3 Final Year Projects (FYP) for both Mechanical and Mechatronics students. Below is the list of projects supervised during the period 2010-2021

Principle supervisor

Project Title	Academic Year	Number of students
Design of A magnetic climbing Robot For Marine Applications	2020-2021	3
Designing a Fitness Equipment for Home Usage	2019-2020	3
Developing a kinematic Model for Tracking Trunk Motion During Walking	2018-2019	4
Design and Development of 3D House Printer (prototype)	2018-2019	3
Motion Capture in Sport(Golf)	2017-2018	2
Soccer Playing Robots	2017-2018	2
Path Planning & Navigation for a Soccer Playing Robot	2016-2017	2
A Robot for Rust Removal & Spray Painting of Ships	2016-2017	2
Developing a MATLAB based system for extracting and Processing experimental motion capture data for Gait Analysis	2015-2016	3
Design of a Crawler Robot for tank Inspection	2014-2015	3
Design of a CPM Machine for knee Rehabilitation for Athletics after ACL Injury	2013-2014	2
Design of a CPM Machine : Rehabilitation Machine for Post Total Knee Replacement Surgery	2013-2014	2
Design of a Crawler Robot for Tank Inspection	2013-2014	3
Design of a Tank Climbing Crawler For Inspection	2012-2013	4
Two Wheeled Inverted Pendulum	2012-2013	4
Design, Modeling and Control of an Educational Kit Set up	2011-2012	3
Optimal Control of a Beam Pump Prototype	2011-2012	3
Design of an Experimental Overhead Crane	2010-2011	4

CURRICULUM DEVELOPMENT & TEACHING

- Chairing the modernization of the Mechanical MSc program task force, 2022-2023

- Member of the committee working on establishing an MSc in Robotics and Artificial Intelligence, 2022-todate
- Chairing the Dynamics & Control focus group for both ME and MCE programs for several years and developed a number of courses, led the assessment and evaluation of the courses belonging to that group. Developed and overseen Labs. Including Mechanical Systems Lab, Control Lab, Instrumentation and Measurement Lab., and the future Robotics & Automation Laboratory (purchasing of equipments which are currently housed in both the control Lab and the Instrumentation and Measurement Lab).
- A member of the College Undergraduate Studies and Curriculum Committee,
- A member of a committee that was responsible for establishing the mechatronics program at SQU, during the process I helped developed the degree plan and helped in establishing the labs for the program.
- Developed a number of courses for both mechanical and mechatronics programs like MCTE4150-Modelling and Simulation, MEIE5122-Applied MultiBody Dynamics MEIE5121-Modelling & Simulation of Engineering Systems , MECH5044/MEIE5044-Robotics , MEIE6109-System Modelling & Simulation
- An active member of the ME Program Assessment & Evaluation Committee and will lead the team for the upcoming ABET evaluation.
- As part of my work in the ME Program Assessment & Evaluation Committee I developed an excel file, namely, Student Performance Indicator Assessment (SPIA) currently used in the ABET evaluation and assessment for the ME, IE and MCE programs.
- Worked as an active member of College of Engineering Academic Advising Committee
- I am a member in the Mechatronics Program Steering Committee since its establishment in 2002
- Served as a member in the Pre-specialization Academic Advising Unit(PAAU)

SCHOLARLY ACHIEVEMENTS IN EDUCATION

I worked on using robotic as a platform of learning. Robotics, being a multifaceted representation of modern science and technology provides an effective platform for learning by experimenting and playing. The work I did outlines a framework through which robotics can be used to promote interest in engineering profession amongst school kids aged 10-18 years as well as to provide a vehicle for project based learning to introduce design, technology and problem solving skills to the high school curriculum.

- **AlYahmadi** A., and Abdo J., "On Edutainment Using Robotic Kits," 3rd Symposium on Scientific Research and Technological Development Outlook in the Arab World, in Riyadh, KSA, 11-14/April/2004.
- **A. S. AlYahmadi** , M. Al Mugheiry , and S. Al Kitani, "Robotic Kits as a Platform of Learning" 3rd Annual Conference for Middle East Teachers of Science, Mathematics and Computing, METSMaC 2007, 17-19 March 2007, Abu Dhabi, United Arab Emirates.

SCHOLARLY ACHIEVMENTS

JOURNAL ARTICLES

[J1] Ahmed Zeid, **Amur Al-Yahmedi**, Riadh Zaier, Issam Bahadur,"Multi-objective design optimization of an in-pipe inspection robot", Franklin Open, Volume 6, 2024, 100071, ISSN 2773-1863,https://doi.org/10.1016/j.fraope.2024.100071. (https://www.sciencedirect.com/science/article/pii/S2773186324000021)- MSc Student

[J2] S Gismelseed, **A Al-Yahmedi**, R Zaier, H Ouakad, I Bahadur, "Predicting Sit-to-Stand Body Adaptation Using a Simple Model", Axioms 12 (6), 559, 2023- PhD Student

[J3] Sarra Gismelseed, Amur Al-Yahmedi, Riadh Zaier,"A biped model to predict a wide range of gait and posture results", Franklin Open,Volume 3,2023,100020,ISSN 2773-1863,https://doi.org/10.1016/j.fraope.2023.100020. - PhD Student (https://www.sciencedirect.com/science/article/pii/S2773186323000142)

[J4] Omer Eldirdiry, Riadh Zaier, **Amur Al-Yahmedi**, Issam Bahadur, Fady Alnajjar,, "Modeling of a biped robot for investigating foot drop using MATLAB/Simulink, Simulation Modelling Practice and Theory, Volume 98, 2020, 101972, ISSN 1569-190X, https://doi.org/10.1016/j.simpat.2019.101972, (http://www.sciencedirect.com/science/article/pii/S1569190X19301054) - PhD Student

[J5] Ghodsi, Mojtaba and Ziaiefar, Hamidreza and Mohammadzaheri, Morteza and **Al-Yahmedi, Amur** , "Modeling and characterization of permendur cantilever beam for energy harvesting},Energy, V176, Page 561-569, 2019

[J6] M.S. Sarebandia, M. Ghodsi, Y. Hojjat, H. Sadeghian, H. Ziaiefar, M. Mohammadzaheri and **A. Al-Yahmedi**, "Investigation of Effective Parameters of Drop-on-Demand Droplet Generator", The Journal of Engineering Research (TJER), Vol. 14, No. 2 (2017), Pages182-190

[J7] O. ElDirdiry, R. Zaier and **A. AlYahmedi**, "Design of Biomechanical Legs with a Passive Toe Joint for Enhanced Human-like Walking", The Journal of Engineering Research (TJER), Vol. 14, No. 2 (2017) , Pages 166-181- PhD Student

[J8] Mojtaba Ghodsi, Nasser Hosseinzadeh, Abdullah Ozer,Hamid Rajabzadeh Dizaj, Yousef Hojjat, Nader Garjasi Varzeghani, Mohammad Reza Sheykholeslami, Soheil Talebian, Mohammad Hadi Ghodsi, and **Amer Al-Yahmadi,** Development of Gasoline Direct Injector Using Giant Magnetostrictive Materials", IEEE Transactions on Industry Applications (Volume: 53, Issue: 1, Jan.-Feb. 2017), Pages 521 – 529

[J9] Feng, Shuai , **Al Yahmadi Amur, S.** and Sun, ZengQi, "Biped walking on level ground with torso using only one actuator", Science China Information Sciences Journal, Nov. 2013, Vol. 56 , Issue 11, Pages 1-9 , http://dx.doi.org/10.1007/s11432-013-5009-0

[J10] Lipeng YUAN, **Amur AL Yahmedi** and Liming Yuan, " Virtual Coupling Control Method for Robotic Gait", Applied Mechanics and Materials, 2013, Vols. 278-280, Pages 629-632, Trans Tech Publications, Switzerland, doi:10.4028/www.scientific.net/AMM.278-280.629

[J11] Lipeng, YUAN, **Amur Al Yahmedi**, and Liming Yuan. "Optimized Passive Coupling Control for Biped Robot." , TELKOMNIKA Indonesian Journal of Electrical Engineering, 2013, Vol. 11, No. 6 , Pages 3044-3052, e-ISSN:2087-278X

[J12] **Al Yahmadi, A.S**,.Shuai, F. and Zengqi, S. , "Torso swaying and walking of a biped robot", Int. J. Vehicle Noise and Vibration, 2012, Vol. 8, No. 1, Pages 95–113.

[J13] T. Pervez, S. A. Al-Hiddabi, **A. AlYahmadi** and A. C. Seibi,"Dynamic Analysis and Vibration of Beam Inside Annulus for Ultra Short-Radius Water Jet Drilling", The Journal of Engineering Research, 2012, Vol. 9, No. 1, Pages 57-65.

[J14] L. Khriji, F. Touati K. Benhmed and **A. Al-Yahmadi**, "Mobile robot Navigation Based on Q-Learning Technique", International Journal of Advanced Robotic Systems, 2011, Vol. 8, No. 1 , ISSN 1729-8806, Pages 45-51, http://www.intechweb.org/

[J15] Seibi, A.C. , Karrech, A. , Pervez, T. , Al-Hiddabi, S. , **Al-Yahmadi, A.S** , Al-Shabibi, A., "Dynamic effects of mandrel/tubular interaction on downhole solid tubular expansion in well engineering", Journal of Energy Resources Technology, Transactions of the ASME, March 2009, Vol. 131, Issue 1, , Pages 0131011-0131017 .

[J16] Jamil Abdo and **Amer Al-Yahmadi**,"The effect of controlled frequency and amplitude on vibration on friction " , Solid State Phenomena, 2009, Vol. 147, Pages 380-385

[J17] Abdul-Wahab S.A., Elkamel A., Al-Weshahi M.A., and **AlYahmadi A.S**., "Troubleshooting for MSF Plant Using a Fuzzy Logic-Based Expert System", Desalination, 2007, vol. 217, Pages 100-117.

[J18] **A.S. Al-Yahmadi**, T.C. Hsia, and J. Abdo, "Modeling & Control of Two Manipulators handling a Flexible Object ", The Journal of the Franklin Institute ,August 2007, Vol. 344, Issue 5, Pages 349-361 (http://dx.doi.org/10.1016/j.jfranklin.2006.01.002).

[J19] F. Mnif**; A S Yahmadi**, "Recursive backstepping stabilization of a wheeled mobile robot ," Proceedings of the I MECH E Part I Journal of Systems & Control Engineering, Oct. 2005, Vol. 219 , No.6, Pages 419-429 .

[J20] M. K. Rashid, and **A. S. Al-Yahmadi** "Dynamic Simulation for error attenuation in smart toolpost" IMech E J Eng Manufact, 2005, Vol. 219, No.8 , Pages 611–622.

[J21] M. K. Rashid, and **A. S. Al-Yahmadi** "Integrated model for error attenuation in smart toolpost" Mechatronics, June, 2005, Vol. 16, Issue 3, Pages 821-836.

[J22] Abdo J. and **AL-Yahmadi A. S.**, "A Wear Model for Rough Surfaces Based on the Ultimate-Stress Asperity Concept, "International Journal of Applied Mechanics and Engineering," , 2004, Vol. 9, Pages 11-19.

BOOK CHAPTERS

[BC1] **Amur S. Al Yahmedi** and Muhammed A. Fatmi (2011). "Fuzzy Logic Based Navigation of Mobile Robots", Recent Advances in Mobile Robotics, Andon Venelinov Topalov (Ed.), ISBN: 978-953-307-909-7, InTech, Pages 287-310.

CONFERENCE PROCEEDINGS ARTICLES

[C1] Gultekin, H., Zaier, R., **Al-Yahmedi, A.** (2025). Scheduling Parallel Machine Robotic Cells with Energy Consumption Objective. In: Mansour, Y., Subramaniam, U., Mustaffa, Z., Abdelhadi, A., Al-Atroush, M., Abowardah, E. (eds) Proceedings of the ICSDI 2024 Volume 3. ICSDI 2024. Lecture Notes in Civil Engineering, vol 558. Springer, Singapore. https://doi.org/10.1007/978-981-97-8345-8_25

[C2] A. Zeid, **A. Al-Yahmedi**, R. Zaier and I. Bahadur, "Design and Control of a Diameter-Adaptable In-Pipe Inspection Robot," 2023 IEEE 4th International Multidisciplinary Conference on Engineering Technology (IMCET), Beirut, Lebanon, 2023, pp. 27-31, doi: 10.1109/IMCET59736.2023.10368241. - MSc Student

[C3] Gismelseed, Sarra A.; **Al Yahmedi, Amur S.**; Zaier, Riadh; Ouakad, Hassen M.; Bahadur, Issam "An Efficient Discrete Model of a Simple Biped with a Torso", ECCOMAS Thematic Conference on Multibody Dynamics, December 12- 15, 2021, Budapest, Hungary, pages 6-15 - PhD Student

[C4] Eldirdiry, Omer and Zaier, Riadh and Bahadur, Issam and **Al-Yahmedi, Amur** and Boudaka, Ammar "Towards Foot-Drop Correction using a Simulation of Bio-inspired Robotic Legs",

2019 IEEE 4th International Conference on Advanced Robotics and Mechatronics (ICARM), pages780--785,2019- PhD Student

[C5] Ghodsi, Mojtaba and Mohammadzaheri, Morteza and Ziaiefar, Hamidreza and **Al-Yahmedi, Amur** and Omar, Farag K , "Effect of Magnetostrictive Properties on the Performance of Velocity-Driven Harvester", 2019 20th International Conference on Research and Education in Mechatronics (REM),Pages 1-6, 2019

[C6] Sarra Gismelseed, **Amur AlYahmedi**, Muhammed Shafiq, Riadh Zaier, "Effect of Various Torso Orientations on Consumed Energy and Kinetic Pattern of A Biped Mode", 2018 IEEE EMBS Conference on Biomedical Engineering and Sciences (IECBES 2018), 3rd - 6th Dec 2018, Borneo Convention Centre Kuching (BCCK), Kuching, Sarawak, Malaysia- MSc Student

[C7] Goher, K., **Al-Yahmadi, A.,** & Bahadur, I. (2017), "Kinematic analysis of the sit-To-stand mechanism of a reconfigurable wheelchair". In IECBES 2016 - IEEE-EMBS Conference on Biomedical Engineering and Sciences (pp. 788-791). [7843558] Institute of Electrical and Electronics Engineers Inc.. DOI: 10.1109/IECBES.2016.7843558

[C8] A Rafiei, M Ghodsi, **A Al-Yahmedi**, "Smart stop-start strategy for SAMAND micro-hybrid based on traffic qualification", Electrical Engineering (ICEE), 2016 24th Iranian Conference on, 1187-1192.

[C9] Mohamed A. Sayari , **Amur Al Yahmedi**, and Neila Masmoudi "Gait and Posture Responses to backpack load", ECCOMAS Thematic Conference on Multibody Dynamics, June 29 -July 2, 2015, Barcelona, Catalonia, Spain

[C10] Mojtaba Ghodsi, Abdullah Ozer, **Amer Al-Yahmadi**, Mehran Nodari Zadegan, Nasser Hosseinzadeh, "Design, Sensitivity Analysis and Fabrication of DC Linear Direct-Drive Motor (LDDM)", 3rd The International Conference on Renewable Energy Research and Applications 19-22 Oct 2014, Milwakuee-USA

[C11] Mojtaba Ghodsi, Abdullah Ozer, **Amer Al-Yahmadi**, Nasser Hosseinzadeh, Hamid Rajabzadeh Dizaj, Nader Garjasi Varzeghani, " Development of Gasoline Direct Injector Using Giant Magnetostrictive Materials", 3rd The International Conference on Renewable Energy Research and Applications 19-22 Oct 2014, Milwakuee-USA

[C12] **Amur S. AlYahmedi**, Mohamed A. Sayari, "Optimal Bipedal Robot Walking on an Inclined Surface ", 17th IASTED International Conference on Robotics Applications, RA2014, June 23-25, 2014, Zurich, Switzerland, Pages 345-350, DOI: 10.2316/P.2014.817-007.

[C13] **Amur S. AlYahmedi**, Mohamed A. Sayari, "Efficient Walking Of A Simple Biped With a Torso", Middle East Conference on Biomedical Engineering, 17-20, February 2014, Doha, Qatar, Pages 382-384.

[C14] K M Goher, M Shafiq and **A Al- Yahmadi**, "Design of a Reconfigurable Wheelchair with a sit-to-stand facility for a disabled kid", CLAWAR 2013, Proceedings of the Sixteenth International Conference on Climbing and Walking Robots, Sydney, Australia, 14 – 17 July 2013.

[C15] Asiya Al-Busaidi, Riadh Zaier, **Amer S. Al-Yahmadi**, "Control of Biped Robot Joints' Angles Using Coordinated Matsuoka Oscillators", 22nd International Conference on Artificial Neural Networks, Lausanne, Switzerland, September 11-14, 2012, Proceedings, Part I ; DOI:10.1007/978-3-642-33269-2_39 ISBN: 9783642332685.

[C16] **Amur S. Al Yahmedi**, and Feng Shuai, "On the Energetic of Walking of a Simple Biped with a Torso", International Conference on Applied Mechanics, Materials, and Manufacturing, ICAMMM 2010, Department of Mechanical and Industrial Engineering, Oman , December 13-15, 2010.

[C17] Fengh Shuai, **Amur Al Yahmedi**, and Sun Zengqi," Gait Transition for a Biped Robot with Torso", International Conference on Applied Mechanics, Materials, and Manufacturing, ICAMMM 2010, Department of Mechanical and Industrial Engineering, Oman , December 13-15, 2010.

[C18] Lazhar Khriji, Farid Touati, Kamel Benhmed, **Amur Al-Yahmedi**, "Q-Learning Based Mobile robot behaviors Coordination ",International Renewable Energy Congress, November 5-7, 2010, Sousse Tunisia.

[C19] **A.S. Al Yahmadi**, A.B. El-Tahir El-Dirdiri, and T. Pervez "Behavior based Control of a Robotic based Navigation Aid for the Blind", The Eleventh IASTED International Conference on Control and Applications ~CA 2009~ July 13 – 15, 2009 Cambridge, United Kingdom, Pages 161-166.

[C20] **A. S. AlYahmadi** , M. Al Mugheiry , and S. Al Kitani, "Robotic Kits as a Platform of Learning" 3rd Annual Conference for Middle East Teachers of Science, Mathematics and Computing, METSMaC 2007, 17-19 March 2007, Abu Dhabi, United Arab Emirates.

[C21] Abdo J., **AlYahmadi A**., Khalid Zebdeh" Normal and Tangential Contact Stiffness and its Relation to Friction-Induced Noise and Vibration" 1st International Conference on Modeling, Simulation and Applied Optimization at American University of Sharjah, Paper No. 53, Feb 1-3, 2005.

[C22] **AlYahmadi** A., and Abdo J., "On Edutainment Using Robotic Kits," 3rd Symposium on Scientific Research and Technological Development Outlook in the Arab World, in Riyadh, KSA, 11-14/April/2004 (Poster presentation).

[C23] Abdo J. and **AL- Yahmadi A.**, "Investigation of frictional contact parameters on noise and vibration in mechanical system: contact damping," 9th ASCE Specialty Conference on Probabilistic Mechanics and Structural Reliability (PMC2004) Albuquerque, New Mexico, July 26-28,USA, Pages 1-7.

[C24] **Amer S. alYahmadi**, T.C. Hsia, & Rida Farouki, "Sliding Mode Control Of Two Arms Manipulating a Flexible Beam", Proceedings of the 32nd ISR(International Symposium on Robotics), 19-21 April 2001, Seoul, Korea.

[C25] **Amer S. alYahmadi**, T.C. Hsia, "Internal force-based impedance control of dual arm manipulation of flexible objects" Proceedings ICRA2000 Millennium Conference, IEEE International Conference o Robotics & Automation, 24-28 April 2000, Pages 3296-3301.

TECHNICAL REPORTS

[TR1]**Amur AlYahmedi**, Zaier, Riadh , "Optimization Based Prediction of Human Gait A Feasibility Study to Examine the Use of Simple Mathematical Models and devices to Predict and Explain Normal and/or Pathological Gaits", TRC Project completed in 2019

[TR2]Zaier R., **Al Yahmedi A**., and Pervez T. (2013). Machine Learning Approaches to decision making and motion generation of humanoid robots, IG/ENG.MIED/11/02, submitted to Assisting Dean of Postgraduate Studies and Research in the College of Eng.

[TR3]Tasneem Pervez, **Amer S. Al Yahmadi**,"Behavior Based Control of a Robotic Navigation Aid for the Blind", SQU Internally Funded Project(2009)

[TR4]Final Report of an internally funded project entitled "Artificial Intelligence Techniques-Based Autonomous Mobile Robot Navigation" with Dr. Farid Touati , Lazhar Khriji

[TR5] **Amer S. Al Yahmadi**, Lazhar Khriji, Jamil Abdo, Faisal Mnif, Maki Rashi "A Fuzzy Logic Based Navigation Of A Remotely Operated Vehicle", SQU Internally Funded Project(2007)

[TR6]A.C. Seibi, T. Pervez, S.A. Al-Hiddabi, A. Karrech, **A.S. Al-Yahmadi** and A. Al-Shabibi A., "Dynamic Effects on Solid Tubular Expansion – Effect of Mandrel Stick-Slip", May 2004, [For PDO, Oman].

[TR7] Al-Hiddabi Saif A., **Al-Yahmadi Amer S.,** Seibi A.C., and Pervez T., "Ultra-Short Radius Drilling Jetting Systems: Dynamic Analysis: Phase III (Control System Design)", Final report Petroleum Development Oman, October 2002.

GRANTS& CONTRACTS

Investigators	Funding Agency	Status	Amount (USD)	Topics
Zaier R. (PI), **Al Yahmedi A.,**	PDO	Completed	89600	Preliminary Design Concepts of Downhole Robotics (SQU internal code: CR/ENG/MIED/22/01)
Amur Al Yahmedi(PI), R. Zaier, Mojtaba Ghodsi, and Issam Bait Bahadur	TRC	Completed	288,000	Optimization Based Prediction of Human Gait A Feasibility Study to Examine the Use of Simple Mathematical Models and devices to Predict and Explain Normal and/or Pathological Gaits
R. Zaier, Jacob Poovathoor Chacko, **Amur Al-Yahmedi**, Issam Bait Bahadur	TRC	Completed	360,000	Enhanced Prototype Design and Fabrication of a Foot Drop Stimulator Device for Locomotion Control
Zaier R. (PI), Alnajjar F., **Al Yahmedi A**., Adel Al-Jumaily, Bait Bahadur I., Boudaka A**.**	SQU-UAE Collaborative Research	Completed	35,064	Design and Prototype of Stimulator Device to Enhance Locomotion of Human With Foot Drop Problem
Amur Al Yahmedi(PI), R. Zaier	SQU	Completed	26,000	Energy optimal gait generation of a simple biped with a torso
Goher K. M., **A. AL Yahmedi** A., Tokhi M. O. and Zaier R.,	SQU	Completed	25,972	Development of an Environmentally-adapted Wheelchair: Toward more independence for disabled and elderly people in Oman
R. Zaier , **A. Al-Yahmadi**, J. Abdo , Tasneem Pervez	SQU	Completed	10,270	Machine Learning Approaches to Decision Making and Motion Generation of Humanoid Robots
J. Abdo , **A. Al-Yahmadi**	SQU	Completed 2010	15,670	Design and construction of nano and micro scales Pin-on-disc testing machine
T. Pervez, **A. Al-Yahmadi**		Completed 2009	14,900	Behavior Based Control of a Robotic Based Navigation Aid for the Blind
J. Abdo **A. Al-Yahmadi**	SQU	Completed 2008	16,380	Smart wells technology for oil production optimization in Oman
J. Abdo , **A Al-Yahmadi**	SQU	Completed 2008	10,691	Application of friction technology: control of friction in brakes, clutches, bearings and gears
Dr. Farid Touati , Lazhar Khriji, **Amer Al-Yahmadi**	SQU	Completed	11,876	Artificial Intelligence Techniques-Based Autonomous Mobile Robot Navigation
A. AL Yahmedi(PI)	Oman Gas –	2006-2007	2600	SQU Eng for Kids Initiative

	Oman Indian Fertilizer Co.			
A Al-Yahmadi(PI), L. Khriji, J. Abdo , F. Mnif, M. Rashid	SQU	Completed 2006	7,280	A fuzzy logic based navigation of a remotely operated vehicle
Saif Al Hidabi**, Amur AL Yahmedi**	PDO	Completed 2003	46,750	Ultra-Short Radius Drilling Jetting Systems: Dynamic Analysis

SERVICE ACTIVITIES

INSTITUTIONAL SERVICES (DEPARTMENT LEVEL):

Served in a number of departmental committees, like MSc modernization committee, Department Board, Department Accreditation Committee, Department Curriculum and Timetabling Committee, Academic Advising, Continuous Assessment and Evaluation Committee, Industrial Advisory Board, ME Program Accreditation Committee (ME Program Assessment & Evaluation Committee), Web and Publication Committee, Recruitment Committee, Strategic Planning Implementation Committee, Postgraduate Studies & Research Committee, and acted as a short course coordinator.

In particular I am an active member of the Assessment and evaluation committee for both Mechanical and Mechatronics programs. Chaired the Dynamics and Control focus group during the ABET (Accreditation Board for Engineering & Technology) accreditation activities. It was a very demanding and time consuming job especially in the beginning from January 2001 till August 2003. I helped in developing and implementing the process for establishing Program Educational Objectives and Program Outcomes for both Mechanical and Mechatronics programs. I helped in developing various performance indicators (for Student Learning Outcomes) for both programs and ways of assessing them. Developed the Excel file needed to assess and evaluate the student outcomes, and this file is currently used by Mechanical, Industrial and Mechatronics programs.

INSTITUTIONAL SERVICES:

I served in a number of committees at the college level and institutional level. The following is the list of some of those committees;

- Member of the project team entitled ”Reconsideration of academic programs to meet the requirements of future technologies” that oversees one of SQU executive plan of 2021-2025 projects.
- Charing the committee that prepares the framework of cooperation between SQU colleges and Units to meet the challenges of emerging technologies 2022 to date
- Chairing the committee that worked on the Research Based Course Procedure
- Chairing the committee that worked on the Academic Assessment Procedure
- Chairing the committee that worked on the Academic Misconduct Procedure
- Member of the University Curriculum & Academic Policies Committee (CAPC) F2018-2021

- Head of the Quality Assurance and Accreditation Unit of the College of Engineering, F2018 – 2021
- Academic Council Member FL2015 – SP2016
- College of Engineering Academic Advising Committee 2011-2014
- College of Engineering Web and Publication committee (Chair) 2002-2003
- College of Engineering Board member 2002-2003, 2006-2007 and 2010-2012, 2020-todate
- Mechatronics Program Establishment Committee member 2002-2003. I helped in developing the degree program, the Labs and suggesting the resources needed to start and run the program.
- Mechatronics Program Steering Committee member 2003-2014
- Member of the committee that established the college Pre-specialization Academic Advising Unit (PAAU) which will start in FL2014, and currently a member of this newly established unit.

PROFESSIONAL SERVICES:

- Associate editor of the Journal of Engineering Research, TJER, published by SQU.(Sept, 2011-Todate).
- Reviewer for the International Journal of Engineering (IJE), http://www.ije.ir
- Reviewer for ISIEA 2012 (2012 IEEE Symposium on Industrial Electronics and Applications), http://www.isiea.org/2012/
- Reviewer for the International Journal of Robotics & Automation (ACTA press) since 2007.
- Technical program committee member of FIRA " Federation of International Robot-Soccer Association", Robot World congress, Singapore, 14-16, December 2005
- Served as a Program external evaluator for the Ministry of higher Education and reviewed a number of undergraduate programs (Mechanical and Mechatronics) for various local private universities and colleges.

COMMUNITY SERVICES:

- Organized a workshop on Teaching STEM Skills via Robotics during the 28AEC: The 28th Arab Engineering Conference, Sheraton Hotel, Muscat, Oman, December 11-13, 2018
- Reviewed the Mechanical Engineering Program for Dhofar University as an external reviewer, 21-22 of Dec 2017,
- Participated in forum on the 4th Industrial revolution in the MILSET Expo-Sciences Asia 2016 with a talk on "Exploring Robotics Future in Oman", 13/12/2016
- Expert talk guest in SciTech - Our World Tomorrow TV series, www.scitech-tv.com, on an episode on Robotics.
- Delivered a key note speech on Robotics Research in SQU in NCATEME2013, Advanced Technologies in Electrical and Mechanical Engineering (NCATEME2013) on April 16th, 2013 in Al Musanna College of Technology, Al Musanna, Oman.
- Organized Sumo Robot Competition for Undergraduate students from various public and private institutes in cooperation with the Embassy of Japan in 2010.
- A member of the national committee on Innovation and Research Capacity Building , chaired by the Assistant Secretary-General of the Research Council from Sept 2008 – June 2009

- A member in the Professional development committee of OSE (Oman Society of Engineers) participated in putting a document on Engineering Classification document that will be used by OSE to grant titles to practicing engineers.
- In 2007 Served as a member in a committee established by the office of the undersecretary for education and vocational training (Ministry of Manpower) to start Mechatronics Programs in the technical colleges.
- In 2006 started an initiative called SQU EngforKids (Engineering for Kids)[1], that aims at increasing the quality, diversity, and number of students prepared to major and work in engineering and technology fields. The outreach program proposes the use of systems such as LEGO Mindstorms (www.legomindstorms.com) or K'nex (www.knexeducation.com) to incorporate robotics into pre-college education with the objective of engaging students through an exciting application of math, computers, and science. The outreach program suggests using a set of activities to let school kids learn how to build robots and to program them for games such as running a maze, following a track, … etc. These games/design projects can empower students by presenting unique learning opportunities for them.The outreach paved the ground for a national contest that was held in April 2007.
    - **(a)** As part of the Engineering for Kids Initiative and during the period 4/-8/2/2006 organized a workshop on educational Robotics in First Scientific Student gathering for Ministry Of Education, Muscat and conducted a seminar on Educational Robots for the ministry of education during "The grade 10 IT curriculum workshop" 29/5-7/6/2006
    - **(b)** 28-30/April 2007 Organized the 1st National Robotic Competition for School Kids in Oman in which 24 public schools from all over Oman participated.
    - **(c)** As part of the Eng for Kids initiative organized a number of workshops on using Robotic as a platform of Learning for school kids and teachers for various public and private schools.

- Invited several times by the ministry of Education to act as a judge or referee for various scientific competitions.
- Guest speaker in the 2nd Symposium on Challenges in the 4th Industrial Revolution- 4IR, on6th of March, 2024, Exploring Robotics in Oman: A promising Future with Challenges

PROFESSIONAL DEVELOPMENT

- Completed a Program Evaluator Candidate (PEVC) Training, Online (April 2021).
- Attended a workshop entitled, "Building an Effective Internal Quality Assurance System", 15th & 16th of January, 2019 in Dubai .
- Attended a workshop entitled "Creating Significant Learning", Sept 12, 2018 organized by CETL
- Attended a workshop titled "Facilitating the use of the Flipped Classroom in Higher Education", 26-28 Feb., 2017, Dubai, UAE
- Attended The Melbourne Clinical Gait Analysis Course, 11-15 of August, 2015 at the Royal Children's Hospital, Melbourne, Australia
- Attended the World Engineering Education Forum – WEEF 2014, under the theme "Engineering Education for a Global Community", 3rd - 6th December 2014, Dubai International Convention and Exhibition Centre, Dubai World Trade Center.

[1] For more information refer to **A. S. AlYahmadi**, M. Al Mugheiry , and S. Al Kitani, "Robotic Kits as a Platform of Learning" 3rd Annual Conference for Middle East Teachers of Science, Mathematics and Computing, METSMaC 2007, 17-19 March 2007, Abu Dhabi, United Arab Emirates.

- Attended a workshop on "an introduction to PBL learning principles and the Aalborg PBL model", during the period of 30-31, Oct 2014, in Aalborg University, Denmark.
- Attended a three-day workshop (17-19, Sept, 2014) on PBL held at the Problem-Based Learning (PBL) Institute , www.rp.edu.sg/pbli in the Republic Polytechnic in Singapore
- Attended a two day workshop entitled Situational Leadership workshop training @ SQU 10-11/March 2012
- Attended an ABET workshop entitled " Program Assessment Workshop" held at SQU on 14-15, Feb 2012
- 9/2009 – August/2010 Spent the sabbatical year as a visiting fellow in the Biorobotics & Locomotion Lab., Sibley School of Mechanical and Aerospace Engineering, Cornell University, NY, USA .
- During my sabbatical at Cornell university I attended a number of lectures and seminars in the Cornell University's Center for Teaching Excellence including a symposium on "How Brain Research Can Inform Teaching", delivered by Dr. James Zull who is the author of "The Art of Changing the Brain" and professor of Biology and Biochemistry at Case Western University, Director of UCITE (The University Center for Innovation in Teaching and Education).
- 19-23/3/2004 Participated in a workshop on Educational robots in Kuwait .
- Attended the international workshop on research and education in mechatronics, held in Bochum, Germany, 09-10, Oct 2003.
- 15-27, June/2003 Worked in the Robotics Intelligence Technology Lab with Professor Jong-Hwan Kim in the Korea Institute of Science & Technology
- March 9-13/2003 Completed the sub-regional training workshop on "Introduction to Online Teaching & Learning : An interactive Workshop, AUS, Sharja, UAE

OTHER EXPERIENCE

- Attended a workshop on Energy Efficiency and Conservation-Energy Audit- organized by Sultan Qaboos University, Public Authority for Electricity & Water, and the JICA Study team (Japan) on 26th of Nov, 2012
- June/2007 Attended an Embedded Technology Forum for machine designers in Santa Clara, CA, USA
- June/2007 Attended an Intro to Labview and Computer Based Measurement hands-on Seminar by NI in Campbell, CA, USA
- 19-23/3/2004 Participated in a workshop on Educational robots in Kuwait.
- 19 – 21/8/2002 attended the 1st international Mine Detector Robots Competition (RobotDeminer Contest which was held in Amir Kabir University of Technology.