**RESUME**

**Umar Mustafa Al-Turki**

**Birth Date:** 28/9/1960

**Mailing Address:** Systems Engineering Department

King Fahd University of Petrolum & Minerals

Dhahran 31261, Saudi Arabia

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**EDUCATION** Ph.D**., Decision Sciences and Engineering Systems, 1994**

Rensselaer Polytechnic Institute, Troy, U.S.A.

**M.Sc., Industrial Engineering and Management, 1989**

Oklahoma State University, U.S.A.

**M.Sc., Systems Engineering, 1986**

King Fahd University of Petroleum and Minerals,

Dhahran, Saudi Arabia.

**B.Sc., Systems Engineering, 1982**

King Fahd University of Petroleum and Minerals,

Dhahran, Saudi Arabia.

**WORK**

**EXPERIENCE:**

2012-Now **Professor**

Department of Systems Engineering,

King Fahd University of Petroleum and Minerals.

2015-2016  **Visting Professor**

Department of Industrial and Syatems Engineering

Rensselaer Polytechnic Institute, Troy, NY, U.S.A.

2007-2015 **Dean,** College of Computer Science and Engineering

**`** and KFUPM University Board Member

King Fahd University of Petroleum and Minerals.

2006-2015 **Director,** Center of Exellence in Maintenance

King Fahd University of Petroleum and Minerals.

2000-2006 **Chairman,** Department of Systems Engineering

King Fahd University of Petroleum and Minerals.

2002-2012 **Associate Professor**

Department of Systems Engineering,

King Fahd University of Petroleum and Minerals.

1994-2000 **Assistant Professor**

Department of Systems Engineering,

King Fahd University of Petroleum and Minerals.

1990-1994  **Saudi Arabian Fellowship for Graduate Studies**

Department of Decision Sciences and Engineering Systems

Rensselaer Polytechnic Institute, Troy, NY, U.S.A.

1987-1990  **Saudi Arabian Fellowship for Graduate Studies**

Department of Industrial Engineering and Management

Oklahoma State University, Oklahoma, U.S.A.

1986-1994  **Lecturer**

Department of Systems Engineering

King Fahd University of Petroleum and Minerals,

Dhahran, Saudi Arabia.

1982-1986  **Graduate Assistant**

Department of Systems Engineering

King Fahd University of Petroleum & Minerals

Dhahran, Saudi Arabia.

**PROFESSIONAL EXPERIENCE and CONSULTING SERVICES**

* Member of the **Advisory Board** **of Techincal University of Munich** (under development)- Kuwait, 2016-Now.
* Member of the **IEOM Global Council** of the **Industrial Engineering and Operations Managemnt Soceity**, 2017-2018.
* **Distinguished Educator Award**, Industrial Engineering and Operations Managemnt Soceity (IEOM), Dubai (2015)
* Member of the **National Commition for legislation and standardization of Operations and Maintenance (Formed by a Royal Decree)**, 2011-2014.
* Member of the **Higher Council of Colleges and Instiution,** **Royal Commission for Jubail & Yanbu**, 2010-2012.
* Member of the Advisory board of the College of Computer Science and Information Systems, **Umm Al-qura University** 2010-2012.
* **Ministry of Interior**, Consulting Project, “Towards Securing Wheat Demand Under Water Scarcity Condition of KSA – A Comperhensive Study”, 2010-2011.
* The **Royal Saudi Naval Forces**, Developing e-Learning Strategic Plan For The Royal Saudi Naval Forces, 2010-2012.
* Developing a Strategic Plan for the Date Palm Research Center, **King Faisal University**, Al-Hassa, 2010-2011.
* Consultant for **Saudi Basic Industries Company (SABIC) R&D** on “Design of Experiments”, 2006-2009.
* Consulting for **Saudi Telecom** Company on “Study and Analysis of the Customer Forecast for the STC Enterprise Business Unit, 2008-2009.
* **Ministry of Higher Education**, Developing the Strategic Plan for Higher Education in Saudi Arabia, 2006-2007.
* Developing the Strategic plan for **King Fahd University of Petroleum and Minerals**, Dhahran. 2004-2005.
* Developing a Corporate integrated strategic plan for **AMIANTIT**, a leading pipe manufacturer in Middle East, RI Project # PN26057. Completed in 1999.
* Consultant (team member) for the **Ministry of Hajj,** developing a simulation model for bus scheduling and routing during the Nafrah Period (1999-2000).
* Vice President of the Gulf Chapter of the IIE (1998-1999)
* President of the Engineering Committee (Industrial Engineering Chapter) in the Eastern Province (1998-1999)
* **Referee for many international and journals** such as:

Journal of scheduling, International journal of quality and reliability management, Journal of Quality in Maintenance Engineering, Computers and Industrial Engineering, Computers and Mathematics with Applications, Computers and electronics in Agriculture, European Journal of Operational Research, Journal of King Abdul Aziz University for Engineering Sciences

* **Evaluater for projects** submitted to : King Abdulaziz City for Science and Technology, King Saud University, King Fahd University of Petroleum & Minerals, Prince Sultan University.
* **Member of the Scientific Committee** of many international conferences and symposiums.

**PROFESSIONAL AFFILIATIONS**

* Member of the Industrial Engineering and Operations Management Society (IEOM)
* Member of the Institute of Industrial Engineers (IIE)
* Member of the Institute for Operations Research and the Management Sciences (INFORMS).
* Member of the Saudi Arabian Quality Council (SAQC). 1999-2000.
* Founding member of the Saudi Society of Industrial and Systems Engineers (2004).

**Courses taught:**

* Sequencing and scheduling
* Advanced sequencing and scheduling (Graduate level)
* Production systems and inventory control
* Reliability and Maintainability
* Quality Control
* Methods engineering
* Engineering Economy
* Engineering probability and statistics
* Numerical methods
* Introduction to Systems Engineering

**TRAINING CONDUCTED:**

Professional training for professional is conducted in the following areas:

* Quality Control
* Maintenance Management : Productivity & Work Measurement
* Industrial Process Re-Engineering
* Statistical Process Control (ARRAZI, SABIC, …)
* Cost Reduction through Industrial Engineering (Kuwait).
* Applying SPC Tools in the Lab. (SABIC)
* Skills for Measuring & Controlling Industrial Costs (Kuwait).
* Experimental Design: Taguchi Methods (SABIC, Middle East Battery Company)
* Business forecasting (Saudi Aramco, SABIC)

**Master and PhD thesis supervision:**

* Supervising many Master and PHD thesis including:
  + Laith Al-Hadidi, PhD, “Integrating production and maintenance scheduling under different production conditions and maintenance policies”, June 2010.
  + Mohammed AlZobi, MSc., “Benchmarking Maintenance Systems”, March 2010.
  + Khalid Al-Sharif, MSc, “Single machine with uncertain processing times”, July 2008.
  + Maher Khader, MSc., “Single machine early/Tardy scheduling problem with distinct due dates”, April 2008.
  + Sameer Al-Zahrani, MSc., “A Model for Procurement Process Evaluation and Improvement at Saudi Aramco”, September, 2006.
  + Asif Raza, MSc., “Job Scheduling on Single machine under various Maintenance Policies”, May 2002.
* Member of a large number of Master and PhD thesis committees.

**LANGUAGES:**

* Native Arabic Speaker
* Fluent English Speaker
* Fluent Turkish Speaker.

**JOURNAL PUBLICATIONS:**

* Zaim, S., Turkyilmaz, A., Acar, M., Al-Turki, U.M., and Demirel, O.“Maintenance Strategy Selection Using AHP and ANP Algorithms”, Journal of Quality in Maintenance Engineering, 18(1), (2012), pp. 16-29.
* Al-Turki, U.M. Saleh, H., Deyab, T, and Almoghathawi, Y., “*Resource Allocation and Job Dispatching for Unreliable Flexible Flow Shop Manufacturing Systems*”, Advanced Materials Research, Vol. 445, (2012), pp. 947-952.
* Hadidi, L. A., Al-Turki, U.M. and Rahim, M.A., “*Integrated Models in Production Planning and Scheduling , Maintenance and Quality: A Review*”, International Journal of Industrial and Systems Engineering, vol. 10(1) (2012), pp. 21-50.
* Hadidi, L.A., Al-Turki, U.M. and Rahim, M.A. “*Joint Production and Maintenance Planning*”, International Journal of Operational Research (IJOR), 13(2) (2012), pp 174-184.
* Al-Turki, U.M.,“*A Framework for Strategic Planning in Maintenance*”, Journal of Quality in Maintenance Engineering, Vol. 17(2), (2011), pp. 150-162.
* Hadidi, L.A., Al-Turki, U.M. and Rahim, M.A., “*An Integrated Cost Model for Production Scheduling and Perfect Maintenance*”, International Journal of Mathematics in Operational Research, Vol. 3(4), (2011), pp. 395-413.
* Mahmoud, Magdi S., Al-Turki, Umar M., and Selim, Shokri Z., “*Tracking Policies for a Class of Dynamic Production-Inventory Systems*”, Journal of the Franklin Institute, vol. 347, (2010), pp. 1689-1703.
* Al-Turki, U.M., Arifusalam, S., El-Seliaman, M. and Khan, M., “*Resource Allocation, Batching and Dispatching in a Stochastic Flexible Job Shop*”. Journal of Advanced Materials Research, Vols. 264-265 (2011) pp. 1758-1763.
* Al-Turki, U.M., “*An Exploratory Study of ERP Implementation in Saudi Arabia”,* Production Planning and Control, Vol. 22(4) (2011), pp. 403-413.
* Raza, S.A. and Al-Turki, U.M. “*A New Policy for Scheduling Maintenance on a Single Machine*”, International Journal of Applied Decision Sciences, Vol. 3(2) (2010), pp. 132-150.
* AlFares, H., Duffuaa, S., and Al-Turki, U.M. “Developing an outcome-based Industrial & Systems Engineering Program”, *Journal of Industrial Engineering and Management Systems (IEMS)*, 60-68, 9(1), 2010.
* Duffuaa, S.O., Al-Turki, U.M. and Kulus, A.A., "A Process Targeting Model for a Product with Two Dependent Quality Characteristics Using Acceptance Sampling Plans", International Journal of Production Research, 4031-4046, 47(14), 2009.
* Duffuaa, S.O., Al-Turki, U.M. and Kulus, A.A., "A Process Targeting Model for a Product with Two Dependent Quality Characteristics Using 100% inspection", International Journal of Production Research, 1039-1053, 47(4), 2009.
* Al-Turki, U.M., Duffuaa, S. O., Ayar, T. and Demeril, O., "Stakeholders Integration in Higher Education: Supply Chain Approach", European Journal of Engineering Education, 211-219, 33(2), 2008.
* Raza, S. A., Al-Turki, U.M. and Selim, S.Z., “Early-Tardy Minimization for Joint Scheduling of Jobs and Maintenance Operations on a Single Machine” International Journal of Operations Research, 1-10, 4(1), 2007.
* Raza, S. A. and Al-Turki, U.M., "A Comparative Study of Heuristic Algorithms to Solve Maintenance Scheduling Problem", Journal of Quality in Maintenance Engineering, 13(4),2007, 398-410.
* Al-Turki, U.M., Andijani, A. A. and Arifusalam, S. "A New Dispatching Rule for Stochastic and Dynamic Job Scheduling",Simulation: Transactions of The Society for Modeling and Simulation International 80(3), (2004)165-170.
* Duffuaa S. O. and Al-Turki, U. M., Howsawi, F., "Quality Function Deployment for Designing a Basic Statistics Course", International Journal of Quality and Reliability Management, 20(6) (2003), 740-750.
* Al-Turki, U. M. and Duffuaa S. O., "Performance Measures for Academic Departments", International Journal of Educational Management, 17(7) (2003), 330-338.
* Al-Turki, U., Fedjki, C., and Andijani, A., “Tabu Search for a Class of Single Machine Scheduling Problems” , *Computers and Operations Research*, 28 (2001) 1223-1230.
* Al-Turki, U.M. “Simple heuristics for the single machine minimum variance scheduling problem”, *Arabian Journal for Science and Engineering*, 26-2B (2001), 127-132.
* Al-Turki, U.M., “Analysis of the set of V-Shaped schedules”, *Arabian Journal for Science and Engineering*, 26-1B (2001) 59-67.
* Al-Turki, U., and Andijani, A., “Quality Control Practices in Saudi Arabia: Survey Results”, *Production Planning & Control*, 8, 726-730, 1997.
* Al-Turki, U.M., Mittenthal, M., and Raghavachari, M., "A Dominant Subset of V-shaped Sequences for a Class of Single Machine Sequencing Problems", *European Journal of Operational Research* 88, 345-347, 1996.
* Al-Turki, U.M., Mittenthal, M., and Raghavachari, M., "The Single Machine Absolute Deviation Early-Tardy problem with Random Completion Times", *Naval Research Logistics*, 43, 573-587, 1996.

**CONFERENCES PUBLICATIONS:**

* Al-Turki, U., “Optimum scheduling of physicians in a small size clinic”, Production and Operations Management Society, POMS 26th Annual Conference, 8-11 May, 2015, Washington DC,USA.
* Al-Turki, U. “A Strategic System Approach for  
  Turnaround Planning”, Plant Maintenance Middle East: 6th Edition, 24-25 November, 2013, Abu Dhabi, UAE.
* Al-Turki, U. and Al-Shareef, K., “Single Machine Scheduling with Uncertain Processing Times”, Industrial And Systems Engineering Conference, ISERC2013, San Juan, Puerto Rico, May 20, 2013.
* Al-Turki, U., Fedji, C., and Khader, M., “Single Machine Early-Tardy Scheduling with Distinct Due Dates”, Industrial And Systems Engineering Conference, ISERC2013, San Juan, Puerto Rico, May 20, 2013.
* Al-Turki, U., Duffuaa, S., and Bendaya, M, “Holistic and Integrated   
  Planning for Turnaround Maintenance”, Shutdown and Turnaround Praxis Interactive , Technology Workshop / 2nd Global Edition, 11-13 February, 2013, Doha, Qatar
* Al-Turki, U., Haitham Saleh, H., Deyab, T., and Almoghathawi, Y., “Resource allocation and job dispatching for unreliable Flexible flow shop manufacturing system”, AMPT2011, Istanbul, 15 July, 2011.
* Al-Turki, Umar M., “Scheduling Physicians in a University Clinic”, POMS 21st Annual Conference, May 7-10,2010, Vancouver, Canada.
* Al-Turki, U.M., Arifusalam, S., El-Seliaman, M., and Khan, M., "Resource Allocation and Batch Sizing in a Flexible Job Shop", Advances in Materials and Processing Technologies (AMPT), 26 - 29 October 2009, Kuala Lumpur, Malaysia.
* Alfares, H., Al-Turki, U. and Duffuaa, S. "Revising the Industrial & Systems Engineering program at KFUPM", The Second International Conference on Engineering Education and Training, 9-11 April, 2007, Kuwait.
* Haroun, Ahmed and Al-Turki, U. "Objectivity of students' Evaluation of faculty", The Second International Conference on Engineering Education and Training, 9-11 April, 2007, Kuwait.
* Al-Turki, U.M., Andijani, A., and Siddiqui, A. "ERP Implementation Trends in Saudi Arabia”,The 36th International Conference on Computers and Industrial Engineering, June 20-23, 2006, Taipei, Taiwan
* S. O. Duffuaa and U. Al-Turki "Benchmarking King Fahd University Community Service with Leading Universities" **IFEE2006, 4th International Forum on Engineering Education Integrating Teaching & Research with Community Service25-27 April 2006,** Sharjah, UAE
* Al-Turki, U.M., Duffuaa, S. O., and Ayar, T. " Stakeholders Integration in Higher Education: Supply Chain Approach ", **IFEE2006, 4th International Forum on Engineering Education Integrating Teaching & Research with Community Service25-27 April 2006,** Sharjah, UAE
* Al-Turki, U.M. Asif Raza, " Integrated Scheduling of Maintenance Operations and Job Processing on a single Machine", Proceedings of the ECCO XVII, European Conference on Combinatorial Optimization, June 24-26 (2004), Beirut.
* Seliman, M.E. and Al-Turki, U.M., "Single Machine Scheduling with a Common Due Window and Random Machine Breakdowns", The second IIEC-2004, December 19-21, ( 2004), Riyadh.
* Duffuaa S. O. and Al-Turki, U. M. "Quality function deployment for Curriculum Design: Framework" Third Forum on Engineering Education: Building Partnership with government, Industry and Society, Sharjah, UAE, October, 2003.
* Duffuaa S. O. and Al-Turki, U. M. "Role of performance measures in self assessment", 8th Congress on Total Quality Management (TQM), (2003), Dubai.
* Al-Turki, U.M., Andijani, A. A. and Arifusalam, S., "A New Dispatching Rule for Stochastic and Dynamic Job Scheduling", Summer Computer Simulation Conference, July 20-24, 2003, Montreal, Canada, 35(3), (2003) 536-539.
* Al-Turki, U. M., Duffuaa, S. O., Kayyal, A., and Al-Ghamdi, H., (2003) "Evaluation and Selection Scheme for Funding Research Projects", Third Forum on Engineering Education: Building Partnership with government, Industry and Society, Sharjah, UAE, October, 2003.
* Andijani, Bendaya, Duffuaa, Selim, Alhaboubi, Al-Turki, and Vaqar “*A Simulation Model for Bus Scheduling and Routing during the Nafrah Period*”, Second Scientific meeting on Hajj research, March 2002.
* Al-Turki, U. M. and Duffuaa S. O., "Performance Measures for Academic Departments " Proceedings of the 6th Engineering Conference, Dhahran, Saudi Arabia December 2002.
* Al-Turki, U. M. and Duffuaa, S.O. “Role of Measures ofPerformance in Strategic Planning”, *Conference on Quality, Kuwait*, 10-13 March 2002
* Duffuaa, S.O. and Al-Turki, Umar M. “Quality Function Deployment for Designing a Course”, *Conference on Quality, Kuwait*, 10-13 March 2002.
* Al-Turki, U.M., Selim, S., and Andijani, A. “Window Due Date Determination in the Stochastic Single Machine Scheduling Problem”, *Seventh International Workshop on Project Management and Scheduling*, Osnabruck, Germany, 49-52, April 2000.
* Al-Turki, U.M., Andijani, A., and Rahim, M.A. “Sensitivity of the Replacement Model Under Various Failure Distributions”, *the fifth ISSAT International Conference on Reliability and Quality in Design*, Las Vegas, Nevada, 274-278, August 1999.
* Al-Turki, U., “Scheduling on a Single Machine with Breakdowns”, *EURO / INFORMS Joint International Meeting*, Barcelona, Spain, July (1997).
* Al-Turki, U., Andijani, A. “Quality Control Practices in Saudi Arabia Manufacturing Business”, *Workshop on Manufacturing Management and Technology*, KFUPM, Dhahran, Saudi Arabia, June (1997).
* Al-Turki, U., “Multiobjective Job shop Scheduling: A simulation Study”, *International Conference on Operations and Quantitative Management*, Jaipur The Pink City of India, January 5-8 (1997).
* Al-Turki, U., Andijani, A., “A Study of Quality Control Practices in the Manufacturing Sector in the Eastern Province of Saudi Arabia”, *First International Conference on Industrial Engineering Applications and Practice*, Houston, USA, December (1996).
* Al-Turki, U., and Andijani A., “Stochastic Job shop Scheduling: A Simulation Study”, *20th International Conference on Computers & Industrial Engineering*, Kyongju, Korea, October (1996).
* Al-Turki, U., Andijani, A., “Stochastic Job shop Scheduling: A simulation Study”, *Minisymposium on: Computer Simulation and its Applications*, KFUPM, Dhahran, Saudi Arabia, May (1996).
* Al-Turki, U.M., Mittenthal, M., and Raghavachari, M., "Solution Characteristics for Stochastic Early/Tardy Problems", *ORSA/TIMS Joint National Meeting*, Boston, May 24-27, 1994.
* Al-Turki, U.M., Mittenthal, M., and Raghavachari, M., "Stochastic Single Machine Scheduling to Minimize Total Absolute Deviation from a Common Due Date", *ORSA/TIMS Joint National Meeting*, Chicago, May 16-18, 1993.

**BOOKS:**

* Al-Turki, Umar M., Tahir Ayar, Bekir Sami Yilbas, and Ahmet Ziyaettin Sahin. Integrated Maintenance Planning in Manufacturing Systems. Cham: Springer, 2014.
* Pirim, Harun, Umar Al-Turki, and Bekir Sami Yilbas. Supply Chain Management and Optimization in Manufacturing. Springer, 2014.

**BOOK CHAPTERS:**

* Al-Turki, Umar, Maintenance Planning and Scheduling, *Handbook of Maintenance Management and Engineering*, Edited By Ben Daya, Duffuaa,et al, Springer, June 2009.
* Duffuaa, S.O., and Al-Turki, U., "Benchmarking King Fahd University Community Service with Leading Universities" ***Integrating Teaching and Research with Community Service*, 298-305, 2008, Collge of graduate Studies & Research, University of Sharjah,** Sharjah, UAE.
* Al-Turki, U.M., Duffuaa, S. O., Ayar, T., and Demirel, O. " Stakeholders Integration in Higher Education: Supply Chain Approach ", ***Integrating Teaching and Research with Community Service*, 116-123, 2008, Collge of graduate Studies & Research, University of Sharjah,** Sharjah, UAE.
* Selim, S.S., and Al-Turki, U.M., "A New Heuristic for the Flow shop Problem", *Advanced Production Management Systems*, Elsevier Science Publishers, Amesterdam, The Notherlands, 91-96, 1987.

**TECHNICAL REPORTS:**

* Al-Turki, U.M., Duffuaa, S., and Bendaya, M. “Effective Planning and Scheduling of Shutdown Maintenance”, KFUPM project RG1121, 2011-2013.
* Al-Turki, U., et al., “Developing food and water security strategic plan for the Kingdom of Saudi Arabia ”, RI Project , April, 2009.
* Duffuaa, S., and Al-Turki, U., “Developing a strategic plan for the Data Palm research center”, King Faisal University, AlHassa, 2010-2011.
* Budaiwi, I., Al-Turki, U.M., The effectiveness of the preparatory Year Program in Preparing University Students to Undergraduate Studies”, KFUPM special Assignment project, Feb 2009.
* Al-Turki, U., et al., “Developing e-learning strategic plan for the Royal Saudi Naval Forces, ”, RI Project , April, 2009.
* Al-Fares, H., and Al-Turki, U. “Study and Analyze the Customer forecast for the STC Enterprise business unit”, RI Project # CCIT2228, November, 2008
* Al-Fares, H., and Al-Turki, U. “Forecasting Modeling for Saudi Telecom Company (STC)”, RI roject # CCCR2215, 2007.
* Azad, A. Al-Turki, U., and El-Amin, I., “Aligning Work Culture to Improve University Values”, KFUPM Strategic Planning Projects, 2007.
* Al-Turki, U., “On Stochastic Single Machine Early-Tardy Scheduling”, Research proposal submitted to the British Council, Summer, 1996.
* Al-Turki, U.M., Selim, S., and Andijani, A. “On stochastic Single Machine Early-Tardy Scheduling”, KFUPM project SE\SCHEDULE/191, May 1998.