# **CURRICULUM VITAE**

PERSONAL DETAILS

Name: Naif Bejad Almutairi

**KUWAIT UNIVERSITY** 

**Position:** Professor,

Department of Electrical Engineering,

College of Engineering and Petroleum,

Kuwait University,

**KUWAIT** 

**CURRENT POSITION:** Position 1: Vice President for Academic Affairs

**Arab Open University-Headquarters** 

Position 2: Kuwait Branch Director,

Arab Open University, Kuwait branch

**DATE OF BIRTH:** 01 January 1974

PLACE OF BIRTH: KUWAIT

NATIONALITY: Kuwaiti

MARITAL STATUS: Married

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#### **EDUCATION**

- Doctor of Philosophy in Electrical Engineering, **North Carolina State University**, North Carolina, USA, June 2002. Primary Area: Network-Based Control.
- Master of Science in Electrical Engineering, **Kuwait University**, KUWAIT, January 1999. Primary Area: System Identification.
- Bachelor of Science in Electrical Engineering, Kuwait University, KUWAIT, June 1996.

### **EMPLOYMENT HISTORY**

• 5/2018- present Vice president for academic affairs

**Arab Open University-Headquarters** 

• 5/2017 Professor in electrical engineering

**Kuwait University** 

• 7/2011 – 2022 Kuwait Branch Director,

**Arab Open University.** 

• 10/2006 – 6/2011 Associate Professor,

Department of Electrical Engineering,

College of Engineering and Petroleum,

**Kuwait University.** 

• 6/2002 – 10/2006 Assistant Professor,

Department of Electrical Engineering,

College of Engineering and Petroleum,

**Kuwait University**.

• 8/1999 – 6/2002 Ph. D. Student with a scholarship from Kuwait University.

North Carolina State University,

North Carolina, USA.

• 9/1996 – 8/1999 Teaching Assistant,

Department of Electrical Engineering,

College of Engineering and Petroleum,

**Kuwait University.** 

### PROFESSIONAL SOCIETIES

• 6/2002 – Present Member of the Institute of the Electrical and

Electronic Engineers (IEEE), Kuwait.

• 1/2000 - 6/2002 Student Member of the Institute of the Electrical and

Electronic Engineers (IEEE), USA.

# TEACHING EXPERIENCE

# • Undergraduate Courses

- Control Theory I
- Signals and Linear Systems
- Digital Control
- Engineering Probability and Statistics
- Electrical Circuits Fundamentals
- Electrical Engineering Training
- Electrical Engineering Capstone Design
- Introduction to digital signal processing

### • Post-Graduate Courses

Fuzzy Systems and Control

### PROFESSIONAL ACTIVITIES

- **Invited Speaker:** The Thirteenth Conference on Nonlinear Vibrations, Dynamics, and Multi-body Systems, Blacksburg, VA, USA, May 23<sup>rd</sup> 27<sup>th</sup>, 2010.
- **Invited Speaker:** The Twelfth Conference on Nonlinear Vibrations, Dynamics, and Multi-body systems in Blacksburg, VA, USA, June 1<sup>st</sup> 6<sup>th</sup>, 2008.
- Invited Speaker: The Conference on Systems and Control in Marrakesh, Morocco, May 16<sup>th</sup> – 18<sup>th</sup>, 2007.
- **Invited Speaker:** The Annual Conference of the IEEE American Control Conference in Denver, Colorado, USA, June 4<sup>th</sup> 6<sup>th</sup>, 2003.
- Co-chair of the special session titled "Special session on network-based systems". The 28th Annual Conference of IEEE Industrial Electronics Society, Seville, Spain, Nov. 4<sup>th</sup> – 9<sup>th</sup>, 2002.
- **Invited Speaker:** The 28th Annual Conference of IEEE Industrial Electronics Society, Seville, Spain, Nov. 4<sup>th</sup> 9<sup>th</sup>, 2002.

- **Invited Speaker:** The 27th Annual Conference of IEEE Industrial Electronics Society, Denver, CO, USA, Nov. 29<sup>th</sup> Dec. 2<sup>nd</sup>, 2001.
- **Invited Speaker:** The International Joint Conference on Neural Networks, Washington, DC, USA, July 15<sup>th</sup> 19<sup>th</sup>, 2001.
- Paper Reviewer for the following Journals and Conferences:
  - Journal of Control Science and Engineering, 2015.
  - Journal of Control Science and Engineering, 2014.
  - American Control Conference, 2012.
  - Nonlinear Dynamics, 2012.
  - Mechanism and Machine Theory, 2012.
  - Scientific Research and Essays, 2012.
  - Control Engineering Practice, 2012.
  - Mechanism and Machine Theory, 2011.
  - Journal of Control Science and Engineering, 2011.
  - International Journal of Control, Automation, and Systems, 2010.
  - Nonlinear Dynamics, 2009.
  - Journal of Nonlinear Dynamics, 2009.
  - International Journal of Control, 2009.
  - IEEE International Conference on Industrial Technology, 2009.
  - Journal of Control Science and Engineering, 2009.
  - Control Engineering Practice Journal, 2009.
  - Engineering Applications of Artificial Intelligence Journal, 2009.
  - IEEE American Control Conference, 2009.
  - King Saud University Journal [Engineering Sciences], 2009.
  - The 5th IEEE International Conference on Mechatronics, 2009.
  - Co-chair, IEEE GCC Conference. Electric Power and Control Track, 2009.
  - King Saud University Journal [Engineering Sciences], 2008.
  - The 3rd IEEE Conference on Industrial Electronics and Applications, 2008.
  - Conference on Systems and Control, 2007.
  - IEEE Trans. on Industrial Electronics, 2006.
  - The 2nd International Conference on Engineering Education & Training, 2006.
  - The 31st Annual Conference of the IEEE Industrial Electronics Society, Special session on Network-Based Control Systems, 2005.

- The Journal of The Franklin Institute, 2004.
- The Journal of Zhejiang University Science, 2004.
- The Journal of Automatic control and system Engineering, 2004.
- The First 2004 IEEE–EURASIP International Symposium on Control, Communications, and Signal Processing, 2004.
- IEEE Trans. on Industrial Electronics, 2003.
- IEEE/ASME International Conference on Advanced Intelligent Mechatronics, 2003.

# • Attended the following Conferences:

- International Electric Machines and Drives Conference (IEMDC 2011) in Niagara Falls, Ontario, Canada, May 15<sup>th</sup> 18<sup>th</sup>, 2011.
- The Thirteenth Conference on Nonlinear Vibrations, Dynamics, and Multi-body Systems, Blacksburg, VA, USA, May 23<sup>rd</sup> 27<sup>th</sup>, 2010.
- The Third Global Conference on Power Control and Optimization in Gold Coast, Queensland, Australia, February 2<sup>nd</sup> 4<sup>th</sup>, 2010.
- The 1<sup>st</sup> Annual ASME Dynamic Systems and Control Conference, Ann Arbor, Michigan, USA, October 20<sup>th</sup> 22<sup>nd</sup>, 2008.
- The 2005 IEEE Conference on control applications in Toronto, Ontario, Canada, August 28<sup>th</sup> 31<sup>st</sup>, 2005.
- The 2004 IEEE International Conference on Robotics and Automation (IEEE ICRA 2004) in New Orleans, Louisiana, USA, April 26<sup>th</sup> May 1<sup>st</sup>, 2004.
- The Annual Conference of the IEEE American Control Conference in Denver, Colorado, USA, June  $4^{th} 6^{th}$ , 2003.
- The IEEE International Electric Machines and Drives Conference (IEEE IEMDC) in Madison, Wisconsin, USA, June 1<sup>st</sup> 3<sup>rd</sup>, 2003.
- The 28th Annual Conference of IEEE Industrial Electronics Society, Seville, Spain, Nov. 4<sup>th</sup> 9<sup>th</sup>, 2002.
- The 27th Annual Conference of IEEE Industrial Electronics Society, Denver, CO, USA, Nov. 29<sup>th</sup> Dec. 2<sup>nd</sup>, 2001.
- The International Joint Conference on Neural Networks, Washington, DC, USA, July 15<sup>th</sup> 19<sup>th</sup>, 2001.

#### **ADMINISTRATIVE EXPERIENCE**

- Rector (secondment basis), Arab Open University, Kuwait. July 2011–Now.
  - Chair of the Academic Committee.
  - Chair of the Research and Development Committee.
  - Chair of the Quality Assurance Committee.
  - Chair of the Finance Committee.
  - Chair of Administrative Committee.
- Graduate Program Coordinator in EE Department, Academic Year 2010–2011.
- Graduate Program Coordinator in EE Department, Academic Year 2009–2010.
- Member of the EE Department Sabbatical Leave Committee, Academic Year 2009– 2010.
- Graduate Program Coordinator in EE Department, Academic Year 2008–2009.
- Coordinator of the EE Department Sabbatical Leave Committee, Academic Year 2008– 2009.
- Member of the EE Department Committee of the New buildings in Shadadiya Campus (the new campus), Academic Year 2008–2009.
- Coordinator of Class Schedule Committee, Academic Year 2007–2008.
- Coordinator of the Control Group, Academic Year 2007–2008.
- Member of the EE Department Graduate Studies Committee, Academic Year 2007– 2008.
- Member of the adhoc committee to write a proposal on "Master of Science in Mechatronics", 2002–2006
- Member of the EE Department Academic Assessment Committee, Academic Year 2005–2006.
- Member of the EE Department Strategic Plan Committee, Academic Year 2005–2006.
- Member in Class Schedule Committee, Academic Year 2005–2006.
- Supervisor of Digital Control Lab, Academic Year 2005–2006.
- Coordinator of the Control Group, Academic Year 2005–2006.
- Member in Class Schedule Committee, Academic Year 2004–2005.
- Supervisor of Digital Control Lab, Academic Year 2004–2005.
- Coordinator of the Control Group, Academic Year 2004–2005.
- Member in the Scholarship Committee, Academic Year 2003–2004.

- Seminar Coordinator, Academic Year 2003–2004.
- Supervisor of Digital Control Lab, Academic Year 2003–2004.
- Member of Equipment and Laboratories committee, Academic Year 2003–2004.
- Supervisor of Robotics Lab, Academic Year 2002–2003.
- Member of Equipment and Laboratories committee, Academic Year 2002–2003.

### **FUNDED RESEARCH GRANTS**

- Solution of linear-quadratic optimal control problem with inequality constraints (Principal Investigator). This project is supported by the research administration of Kuwait University (amount about 6,800 US \$). April 2004 – March 2005.
- Fuzzy and Sliding Mode Controllers for a Gantry Crane System (Principal Investigator). This project is supported by the research administration of Kuwait University (amount about 14,160 US \$). September 2014 January 2016.

## **PATENTS, HONORS AND AWARDS**

Prof. AlMutairi has proved his competency in research by earning a patent for one of his research projects entitled "The heuristic fuzzy controller for gantry cranes", which was funded by Kuwait University. The invention relates to nonlinear controllers, and particularly to a heuristic fuzzy controller to control the position of a cart of a gantry crane while suppressing the swing angle of the payload. In addition, this invention considers the rules of the controller that obtained taking into account the knowledge of an experienced crane operator.

### LIST OF PUBLICATION

# • JOURNAL PAPERS

- Magdi S. Mahmoud and Naif B. Almutairi, "Feedback fuzzy control for quantized networked systems with random delays", Applied Mathematics and Computation, 2016, Vol. 290, pp. 80–97
- 2. **Naif B. Almutairi** and Mohamed Zribi, "Fuzzy Controllers for a Gantry Crane System with Experimental Verifications", *Mathematical Problems in Engineering*. Vol. 2016, Article ID 1965923, pp. 1–17, **2016**.
  - ISI Journal Impact Factor = 0.762, ISI Journal Ranking = Q3.

- Naif B. Almutairi and Mohamed Zribi, "Sliding Mode Controllers for a Tempered Glass Furnace", *ISA Transactions*. Vol. 60, pp. 21–37, 2015.
   ISI Journal Impact Factor = 2.984, ISI Journal Ranking = Q1.
- Naif B. Almutairi and Mohamed Zribi, "Control of a Plate Heat Exchanger Using the Terminal Sliding Mode Technique", *Industrial & Engineering Chemistry Research*.
   Vol. 51, No. 12, pp. 4610–4623, 2012.
   ISI Journal Impact Factor = 2.206, ISI Journal Ranking = Q1, Scopus Citation = 5.
- Naif B. Almutairi, Mohamed Zribi, and Mohamed Abdel-Rohman, "Lyapunov-Based Control for Suppression of Wind-induced Galloping in Suspension Bridges", *Mathematical Problems in Engineering*. Vol. 2011, Article ID 310938, pp. 1–23, 2011.
  - ISI Journal Impact Factor = 0.777, ISI Journal Ranking = Q2, Scopus Citation = 2.
- Naif B. Almutairi and Mohamed Zribi, "On the Sliding Mode Control of a Ball on a Beam System", *Journal of Nonlinear Dynamics*. Vol. 59, No. 1, pp. 221–238, 2010.
   ISI Journal Impact Factor = 1.741, ISI Journal Ranking = Q1, Scopus Citation = 19.
- Naif B. Almutairi and Mohamed Zribi, "Sliding Mode Control of a Three-Dimensional Overhead Crane", *Journal of Vibration and Control*, Vol. 15, No. 11, pp. 1679–1730, 2009.
  - ISI Journal Impact Factor = 0.896, ISI Journal Ranking = Q2, Scopus Citation = 38.
- 8. Magdi S. Mahmoud and **Naif B. Almutairi**, "Resilient decentralized stabilization of interconnected time-delay systems with polytopic uncertainties", *International Journal of Robust and Nonlinear Control*. Vol. 21, No. 4, pp. 355–372, **2011**.

  ISI Journal Impact Factor = 1.554, ISI Journal Ranking = Q1, Scopus Citation = 12.
- M. F. Hadi and Naif B. Almutairi, "Discrete Finite-Difference Time Domain Impulse Response Filters for Transparent Field Source Implementations", *IET Microwaves*, *Antennas & Propagation*. Vol. 4, No. 3, pp. 381–389, 2010.
   ISI Journal Impact Factor = 0.682, ISI Journal Ranking = Q3, Scopus Citation = 2.

- 10. Magdi S. Mahmoud and Naif B. Almutairi, "Robust Stability and Stabilization Methods for a Class of Nonlinear Discrete-Time Delay Systems", Applied Mathematics and Computation. Vol. 215, No. 12, pp. 4280–4292, 2010.
  ISI Journal Impact Factor = 1.534, ISI Journal Ranking = Q1, Scopus Citation = 11.
- 11. Magdi S. Mahmoud and Naif B. Almutairi, "Stability and Implementable H∞ Filters for Singular Systems with Nonlinear Perturbations, *Journal of Nonlinear Dynamics*, Vol. 57, pp. 401–410, 2009.
  ISI Journal Impact Factor = 1.658, ISI Journal Ranking = Q1, Scopus Citation = 5.
- 12. Magdi S. Mahmoud and Naif B. Almutairi, "Decentralized Stabilization of Interconnected Systems with Time-Varying Delays", *European Journal of Control*, Vol. 15, No. 6, pp. 624–633, 2009.
  ISI Journal Impact Factor = 0.703, ISI Journal Ranking = Q3, Scopus Citation = 12.
- 13. Magdi S. Mahmoud and Naif B. Almutairi, "Improved Resilient Filtering of Linear Discrete-Time Systems," *Journal of Mathematical Control Science and Applications*, Vol. 1, No. 2, pp. 351–364, 2007.
- 14. Mohamed Zribi, **Naif B. Almutairi**, and M. Abdul-Rahman, "Control of Vibrations due to Moving Loads on Suspension Bridges," *Nonlinear Analysis: Modeling and Control*. Vol. 11, No. 3, pp. 293–318, **2006**.
- 15. Naif B. Almutairi and M. Zribi, "Sliding Mode Control of Coupled Tanks," *International Journal of Mechatronics*. Vol.16, pp. 427-441, 2006.
   ISI Journal Impact Factor = 0.745, ISI Journal Ranking = Q2, Scopus Citation = 46.
- 16. Naif B. Almutairi, M. F. Hassan, M. Abdul-Rahman, and M. Terro, "Control of the Suspension Bridge Nonlinear Vibrations due to Moving Loads," *Journal of Engineering Mechanics*, ASCE, Vol. 132, No. 6, 2006.
  ISI Journal Impact Factor = 0.965, ISI Journal Ranking = Q1, Scopus Citation = 11.

- 17. Naif B. Almutairi and M. F. Hassan, "New Algorithm for Discrete-Time Linear-Quadratic Control with Inequality Constraints," *Dynamics of Continuous, Discrete and Impulsive Systems, Series B: Applications and Algorithms*, Vol. 13, No. 2, pp. 309-336, 2006.
  - ISI Journal Impact Factor = 0.193, ISI Journal Ranking = Q4.
- 18. M. F. Hassan and **Naif B. Almutairi**, "New Algorithm for Complex Optimization Problem with Inequality Constraints," *International Journal on Intelligent Automation and Soft Computing*, Vol. 12, No. 2, pp. 151-172, **2006**.

  ISI Journal Impact Factor = 0.354, ISI Journal Ranking = Q4, Scopus Citation = 7.
- 19. Naif B. Almutairi, M. T. Alrifai and A. L. Nelson, "Fuzzy Position Controller for an Axial Flux Variable Reluctance PM Motor," *International Journal on Automatic Control and System Engineering*, Vol. 5, No. 4, pp. 1-12, 2005.
- 20. M. Zribi, Naif B. Almutairi, M. Abdul-Rahman, and M. Terro, "Nonlinear and Robust Control Schemes for Offshore Steel Jacket Platforms," *Journal of Nonlinear Dynamics*, Vol. 35, No. 1, pp. 61-80, 2004.
  ISI Journal Impact Factor = 0.774, ISI Journal Ranking = Q1, Scopus Citation = 47.

### • CONFERENCE PAPERS

- 1. **Naif B. Almutairi** and Mohamed Zribi "Terminal Sliding Mode Controllers for a Heat Exchanger System", The Thirteenth Conference on Nonlinear Vibrations, Dynamics, and Multibody systems in Blacksburg, VA, USA, May 23<sup>rd</sup> 27<sup>th</sup>, 2010.
- Naif B. Almutairi and Mohamed Zribi, "On the Sliding Mode Control of a Ball on a Beam System", The Twelfth Conference on Nonlinear Vibrations, Dynamics, and Multibody systems in Blacksburg, VA, USA, June 1<sup>st</sup> – 6<sup>th</sup>, 2008.
- Naif B. Almutairi and Mohamed Terro, "A Nonlinear Controller for Buildings under Earthquake Excitation," Presented in The Conference on Systems and Control in Marrakesh, Morocco, May 16<sup>th</sup> – 18<sup>th</sup>, 2007.

- 4. **Naif B. Almutairi**, and M-Y. Chow, "Stabilization of networked PI control system using fuzzy logic modulation," Presented at The Annual Conference of the IEEE American Control Conference in Denver, Colorado, USA, June 4<sup>th</sup> 6<sup>th</sup>, 2003.
- 5. **Naif B. Almutairi** and M-Y. Chow, "PI Parameterization Using Adaptive Fuzzy Modulation (AFM) for Networked Control Systems- Part I: Partial adaptation," Presented at The 28th Annual Conference of IEEE Industrial Electronics Society, Sevilla, Spain, Nov. 4<sup>th</sup> 9<sup>th</sup>, 2002.
- 6. **Naif B. Almutairi** and M-Y. Chow, "PI Parameterization Using Adaptive Fuzzy Modulation (AFM) for Networked Control Systems- Part II: Full adaptation," Presented at The 28th Annual Conference of IEEE Industrial Electronics Society, Sevilla, Spain, Nov. 4<sup>th</sup> 9<sup>th</sup>, 2002.
- 7. **Naif B. Almutairi**, M-Y. Chow, and Y. Tipsuwan, "Network-based controlled DC motor with fuzzy compensation," Presented at The 27th Annual Conference of IEEE Industrial Electronics Society, Denver, CO, USA, Nov. 29<sup>th</sup> Dec. 2<sup>nd</sup>, 2001.
- 8. **Naif B. Almutairi**, and M-Y. Chow, "A modified PI control action with a robust adaptive fuzzy controller applied to DC motor," Presented at The International Joint Conference on Neural Networks, Washington, DC, USA, July 15<sup>th</sup> 19<sup>th</sup>, 2001.