

Mohammed Salameh Ibbini

Vice President of Jordan University of Science and Technology



Executive Summary

As you can see in my resume, I am currently the Vice-President of the University of Science and Technology, after receiving many administrative positions in universities and organizations as head of departments and dean of the University in addition to running institutions. Besides, I was interested in transferring my experience in the field through training courses, workshops and international projects.

After obtaining my PhD, I had the privilege of being part of the higher education system where I taught in several universities and various subjects for undergraduate and master students.

I have also prepared many research papers in several fields.

Education

Professor of Electrical & Biomedical Engineering Jordan University of Science & Technology

- 1988 Ph.D. Elec. Eng., **Univ. of Illinois at Urbana-Champaign**, U.S.A.
- 1980 M.Sc. Elec. Eng., **Univ. of Colorado, Boulder**, U.S.A.
- 1978 Diplome d'Electrotechnique, **ENSEEC, Caen**, France.
- 1977 Maitrise d'Automatique, **Univ. de Caen**, Caen, France.
- 1976 License d'Electronique, **Univ. de Caen**, France.
- 1975 DEUG A, **Univ. de Caen**, France.

Professional Positions

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| ▪ Vice President of JUST. | 2017- Now |
| ▪ Professor, EE&BME, JUST. | 2014-2017 |
| ▪ Education & Training Deputy, JUC, Jubail Industrial City, SA. | 2009-2010 |
| ▪ Professor & Liaison Officer for European Projects, JUST. | 2006-2009 |
| ▪ Dean of Al Huson University College, BAU. | 2002-2006 |
| ▪ Head of Biomedical Engineering, JUST. | 2000-2002 |
| ▪ Head of Electrical Engineering, JUST. | 1998-2000 |
| ▪ Visiting Professor, Elec. Eng. Dept. Amman Ahliyah Univ., JUST. | 1997-1998 |
| ▪ Associate Professor, Electrical Engineering, JUST. | 1995-2004 |
| ▪ Assistant Professor, Electrical Engineering, JUST. | 1989-1995 |
| ▪ Post-Doctor, UIUC, Illinois, USA. | 1988-1989 |
| ▪ Teaching Assistant, UIUC, Urbana, Ill., USA. | 1985-1988 |
| ▪ Research Assistant, UIUC, Urbana, Ill., USA. | 1984-1988 |
| ▪ GM, Bibars Industrial Establishment, Amman, Jordan. | 1981-1984 |
| ▪ Distribution Engineer, Electrical Utility Company, Amman, Jordan. | 1978-1979 |

About

- Place : Ajloun
- Date of birth : 15/3/1954
- Nationality : Jordanian
- Social Status : Married

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Professional Activities :Workshops & International Projects

- Ultrasound Techniques: Therapy & Diagnostics in Biomedical Eng. 1994
- Fundamentals of MRI, CIMA at Compiegne, France. 1997
- Web-Based Courses for Engineers at Industry, UNESCO 2001
- From E-Teaching to E-Learning Through Blended Learning, France Telecom and Jordanian MOE 2003
- Quality Assurance in Higher Education Institutions 2004
- Web-CT as a Tool for Web-Based Courses, GIPSECA 2004
- Web-Based Training Courses for Engineers, GIPSECA 2005
- Planning, Development & Quality Assurance in Engineering Profession 2009
- Academic-Industrial Partnership, RCJY, JIC 2011
- Bridging the Gap between Teaching and Engineering Profession, Royal Commission at Jubail 2012
- Engineering Education and Profession: Do we Teach what the Engineering Students Need? World Engineering Federation 2013

Professional Committees

- Higher Educational Ministerial Committee for Equivalency and Accreditation of Higher Educational Certificates.
- Accreditation of Biomedical Engineering at Amman Ahliah University.
- Accreditation of Biomedical Engineering at Private Universities.
- Enhancement of the Biomedical Engineering Accreditation Rules.
- Increasing the Capacity of Biomedical Engineering Department at Amman Ahliah University.
- Development of Human Resources in North Jordan.
- Accreditation of Electrical Engineering at Philadelphia University.
- Accreditation of Electrical Engineering at Issara University.
- Quality Assurance at Balqa Applied University.
- Biomedical Engineering Curriculum at JUST.
- Control & Power Engineering Curriculum at JUST.
- Industry outreach & Field Training.
- Quality Assurance Officer for the ICDL UNESCO Program in Jordan.
- Quality Assurance Officer for the E-Arabic, MOE Steering Committee.
- Electrical Engineering Research Committee.
- Electrical Engineering Higher Studies Committee.
- Industry Outreach & Graduates Reunion Committee.
- University-Industry Partnership Committee

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International Project Manager

- C++ & Fortran E-Course Design and Implementation, UNESCO. 1998-2002
- GIPSECA- A generic interactive package for system engineering courses and applications, EC. 1997-2002
- Summer University in Middle East Countries French Higher Education & UNESCO. 1997~2008
- FINSI, Industrial System Integration Curriculum, Tempus II, EC, 2002-2004
- E-Arabic in Jordanian Ministry of Education Schools, MOE & France Telecom.
- Professional Masters in Power & Control Engineering, TEMPUS. 2008
- Energy and Environment: A proposal for Bachelor of Science, KTH, Sweden. 2014

Scholarships and Academic Visits

- Visiting Professor: Univ. Of Ottawa - Canada. 1992
- Visiting Professor: Fraunhofer Institute for NDT, Saarbrucken, Germany. 1993
- Visiting Professor: Univ. of Compiegne-CIMA-Medical Imaging Center, France. 1994
- Associate Professor, Amman Ahlia University-Sabbatical Leave. 1997
- Balqa Applied University, Dean, Sabbatical and delegated. 2002-2006

Courses Taught

- **Undergraduate Courses in Electrical Engineering, Computers and Mathematics:**
Circuit I & II, Linear Algebra, Digital Logic, Signals & Systems, Control Systems, Digital Control, Advanced Control, Instrumentation, Biomedical Instrumentation, Ultrasound Techniques, Numerical Analysis, Circuit Laboratory, Control Laboratory, Digital Logic Laboratory.
- **Graduate Courses:**
Advanced Control, Linear Systems, Nonlinear Control Systems, Optimal Control, Advanced Mathematics, MRI Techniques, Modeling & Simulation, Adaptive Control.

Thesis Topic

- Ph.D. Thesis Title: "Analysis and Design of Ultrasonic Applicators for Hyperthermia Cancer Therapy".
- Advisor: Prof. Charles A. Cain- Chairman of Biomedical Engineering - Univ. of Michigan - Ann Arbor

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Research fields

- Control Systems, Linear & Nonlinear Systems, Adaptive Control, Optimal Control, Parameterization, Fuzzy Logic Control, Feedback Linearization, NDT, Therapeutic Ultrasound, Diagnostic Ultrasound, Hyperthermia Cancer Therapy, Thermal & Biological Modeling, Blood Glucose Level Control, Distance Education, Accreditations, Web-Authoring, Engineering Restructuring, Engineering Education, Project Based Curriculum, Problem Based Curriculum.

Research papers

- E. Ibbini, S. Umemura, M. Ibbini and C. Cain, "A Cylindrical Section Ultrasonic Phased Array for Hyperthermia Cancer Therapy", IEEE Trans. Ultrasonic, Ferroelectrics and Frequency Control, vol. 35, No. 5, PP. 561-572, Sep. 1988.
- Mohammed Ibbini and Charles Cain, "A Field Conjugation Method for Direct Synthesis of Hyperthermia Phased Array Heating Patterns ", IEEE Trans. Ultrasonic, Ferroelectrics, and Frequency Control, Vol. 36, No. 2, January 1989.
- M. Ibbini and C. Cain, " The Concentric-Ring Ultrasound Array Applicator: Problems Associated with Annular Focusing ", IEEE Trans. Ultrasonic, Ferroelectrics, and Frequency Control, Vol. 36, No. 2, September 1989.
- M.S. Ibbini, E.S. Ibbini, and C.A Cain, "The Concentric - Ring Array for Ultrasound Hyperthermia: Combined Mechanical and Electrical Scanning", International Journal of Hyperthermia, No. 2, Vol. 6, June 1990.
- M. S. Ibbini, E. S. Ebbini, and C. A. Cain, "NXN Square-Element Ultrasound Phased-Array Applicator: Simulated Temperature Distributions Associated with Directly Synthesized Heating Patterns", IEEE Trans. Ultrasonic, Ferroelectrics, and Frequency Control, Vol. 37, No. 6, Nov. 1990.
- M. Amin and M. Ibbini, "Complete Decoupling of Right Inevitable Linear Multivariable Systems", Proceedings of Bilcon 90, Ankara, 1990.
- M. S. Ibbini, "Hyperthermia Cancer Therapy", Chapter 12, Laser in Science and Technology, Elsevier, 1991.
- M. Amin and M. Ibbini, "A Linear Multivariable Parameterized State Feedback Controller", C-TAT, Vol. 8, No. 3, pp. 659-674, 1992.
- M. Ibbini and M. Amin, "A State Feedback Controller with Minimum Control Effort ", C-TAT, Vol. 9, No. 3, Sept. 1993.
- M. Ibbini and Z. Ramadan, "A Reduced Sensitivity State Feedback Controller", IEEE Proceedings Control Theory, Vol. 3, No. 4, 1994.
- M. Ibbini and M. Zoubi, "Optimal LQ Regulators with Performance Bound and Prescribed Eigenvalues", C-TAT, Vol. 10, No.4, part 5, 1995.
- M. Ibbini and W. Zakaria, "Nonlinear Control of DC-Machines", Electrical Machines and Power Systems, Vol. 24, No. 1, 1996.
- M. Ibbini and S. Alawneh, "A State Feedback Controller with Improved Performance", IEE Proc. Control Theory Application, Vol. 145, No.1, Jan 1998
- M. S. Ibbini; M. A. Masadeh and M. M. Bani Amer , "A Semi-closed Loop Optimal Control System for Blood Glucose Level in Diabetics," Journal of Medical Engineering & Technology, Volume 28, Number 5, 2004.
- M. S. Ibbini & W. F. Swedan, "Optimization of Linear Multivariable Systems with Structured Perturbations and Prescribed Closed Loop Eigen Values," Control & Intelligent Systems, 2004

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Research papers

- Mobarek, I., Langevin, F. and Ibbini, M., "Enhanced Performance and Cost-Effective Clinical Engineering System for Jordan," *Journal of Clinical Engineering*, Vol. 30, No. 1, 2005.
- M. S. Ibbini, M. A. Masadeh, "A Fuzzy Logic Based Closed-Loop Control System for Blood Glucose Level Regulation in Diabetics," *Journal of Medical Engineering and Technology*, Vol. 29, No. 2, 2005.
- Hazem A. Al-Otum and Mohammed S. Ibbini, "Low-Bit Rate Color Image Encoder Using an Adaptive Morphological Pyramid Decomposition," *Journal Electron Imaging*, Vol. 14, No. 2, 2005.
- M. Ibbini, "A PI-Fuzzy Logic Controller for the Regulation of Blood Glucose Level in Diabetic Patients." *J. Med. Eng. & Technology*, Vol. 30, No. 2, 2006
- Mubarek Iyad, Tarawneh Walid, Langevin Francois and Ibbini Mohammed, "Fully Automated Clinical Engineering Technical Management System," *Journal of Clinical Engineering*, Vol. 31, No. 1, 2006
- M. S. Ibbini, "Nonlinear Differential Geometric Technique for the Control of DC-Machines with Online Parameters Estimation," *International Journal of Modeling and Simulations*, Vol. 27, No. 1, 2007.
- M. Ibbini, "A comparative study of Conventional Techniques with PI-Fuzzy Logic Control for Blood Glucose Level in Diabetic Patients," *New Aspects of Biomedical Electronics & Biomedical Informatics*, Vol.3. No. 2, 2009.
- M. Ibbini M. Massadeh and S. Mansi, "Analysis and Control of a Single-Phase Double-Stage Grid-Connected Photovoltaic system," *International Journal of Modeling and Simulations*, Vol. 21, No. 2, 2012.
- M. Ibbini, "Engineering Education and Profession: The Need for A Reform to Bridge the Gap between Teaching and practicing Engineering," *Engineering Education*, Vol. 11, NO,2, 2013
- M. Ibbini, "A Proposed Bachelor of Science: Energy and Environmental Engineering," *ATSE Focus* Vol 141, No, 4, 2013.
- E. Ibbini, M. Ibbini, Kweh Lun, "A Novel Mining System for Criminal ISSM from a Video File in Cloud Computing Environment", *International Journal of Video and Images Processing and Network Security*, IJVPINS-IJENI, Vol.14, No. 04, 2014.
- EM Ibbini, KY Lun, MO Othman, ZM Hanapi and MS Ibbini, "An Efficient Mathematical Analysis for Saving Energy in WSN Routing," *Journal of Theoretical and Applied Information Technology*. Vol. 76, No. 3. 2015.
- M. Ibbini, "A Simscape Sollar Cells Model Analysis and Design," Submitted for Publication.
- M. Ibbini and A Adwi, "A Simscape Based Design of a Maximum Power Point Tracker For Stand Alone Photovoltaic System," Submitted for Publication.
- M. Ibbini & A. Adwi "A Simscape Based Design of a Fuzzy Logic Controlled MPPT with Partial Shading," Submitted for Publication .
- M. Ibbini, "Fuzzy PI Controller for the Slip Control of Three-Phase Induction Motor," Submitted for Publication

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Conferences and Presentations

- .Ibbini, M.S. and Frizzell, L.A. "Temperature Dependence of the Absorption and the Heat Capacity in Tissues", ALUM / SDMS Annual Convention, Oct. 8-11, 1985, Dallas, Texas.
- Charles A. Cain, Shin Ichiro Umemura, Mohammed Ibbini and Emad Ebbini "Ultrasound Phased Array Hyperthermia Applicators", 1986 EMBS Conference, Fortworth, Tx.
- M. Ibbini, E. Ebbini, S. Umemura, and C. Cain, "A New Technique Based on the Field Conjugation Method as an Alternative to Scanning", Proc. 1987 Ultrasonic Symposium, PP. 863-866, 1987.
- M. Ibbini, E. Ebbini, S. Umemura, and C. Cain, "Ultrasonic Phased Arrays: Hyperthermia Heating Patterns Synthesis Using A Field Conjugation Method", 1987 NAGH Meeting, Atlanta, Ga. 1987.
- M. Ibbini, E. Ebbini, S. Umemura, and C. Cain, "Application of a General Field Conjugation Method to Ultrasound Phased Array Hyperthermia", 1987 NAGH Meeting, Atlanta, Ga. 1987.
- E. Ebbini, M. Ibbini, S. Umemura and C. Cain, "A Body Surrounding Annular Phased Array for Heating Deep-Seated Tumors", 1987 NAGH Meeting, Atlanta, Ga. 1988.
- Ebbini, E. S., Ibbini, M. S. and Cain, C.A; "An Inverse Method for Hyperthermia Phased-Array Pattern Synthesis." Ultrasonic Symposium, 1988 IEEE Proceedings, Vol.2, 1988.
- E. S. Ebbini, M. S. Ibbini, S. Umemura, and C. A. Cain, "Cylindrical Section Ultrasound Phased-Array Applicators for Localized Hyperthermia at Depth", 1988 NAGH Meeting, Philadelphia, PA. 1988.
- M. Ibbini, E. Ebbini, S. Umemura, and C. Cain, "Direct Synthesis of Hyperthermia Heating Patterns with Ultrasonic Arrays: an Alternative to Scanning", NAGH Meeting 1988, Philadelphia, PA. 1988.
- M. Ibbini, "Hyperthermia in Cancer Therapy", Laser in Science and Technology, Amman, 1989.
- M. Ibbini and M. Amin, "Modal Control: A Parameterized State Feedback Controller for a General Eigenvalue Assignment", 1992 Data, Signal and Systems Conf., Chicago, 1992.
- M. Ibbini and M. Amin, "A Sequential State Feedback Controller", 32nd Science Week, Damascus, 1992.
- M. Ibbini and W. Zakaria, "DC-Motors Feedback Linearization", First National Conference on Elec. Eng., Mutah, 1993.
- M. Ibbini and Z. Ramadan, "A state Feedback Controller with minimum Sensitivity", First National Conference on Elec. Eng., Mutah, 1993.
- M. Ibbini and M. Al-Zoubi, "Robust Pole Assignment in Automatic Control ", 34th Science Week, Damascus, 1994.
- M. Ibbini and M. Al- Zoubi, "A Sensitivity Reduced Prescribed Eigenvalues State Feedback Controllers", ICECS'94, 1994, Cairo.
- M. Ibbini and M. Al- Zoubi, "Robust Pole Assignment", ISCAS 1996, Atlanta, 1996.
- M. Ibbini and S. Alawneh," An Improved Performance Parameterized State Feedback Controller", ICEC's 1996, Rodos, Greece. 1997.
- M. Ibbini, "Advances in Biomedical Engineering: MRI Techniques", 37th Science Week, Damascus, Syria, 1997.
- M. Ibbini & Eyad Taqialdine, "Engineering System Simulation Software Interfacing with A Universal Web-Course", IASTED, Las Vegas, 2000.
- M. Ibbini," A Web Interactive Package for System Engineering Application Targeting Working Engineers, Arab Engineers Association, Cairo, 2001
- M. Ibbini, "Biomedical Engineering in Jordan: Curriculum, Accreditation, and Market Satisfaction Programs," Arab Engineers Association, Tunisia, 2001.
- M. Ibbini, "Advances in Biomedical Engineering: Noninvasive Localized Deep Heating of Cancer Tumors by Ultrasound Applicators" 42 Syrian Scientific Week, Aleppo, 2002.

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Conferences and Presentations


- M.S. Ibbini and A.S. Jafar , “Self-Tuning Fuzzy Logic Controller for a Series DC Motor ”, European Power and Energy Systems (EuroPES 2002), Crete, Greece, 2002
- M. Ibbini, “The Role of Scientific Research in Accreditation and Quality Assurance”, Friends of Scientific Research Conference, Amman, 2003.
- M.S. Ibbini, M.A. Masadeh, and M.M. Bani Amer , “A Fuzzy Logic Control Technique for Blood Glucose Level in Diabetics,” BioMech 2003, Rodos, Greece, 2003.
- Y.S. Khraisat, M.S. Ibbini and F. J. Yanovsky, “Models of Interaction of Sounding Radar Signal with Turbulized Meteorological Objects,” URSI EMETS 2004, Italy, 2004
- Mashhour Bani Amer and Mohammad Ibbini, “A Novel Single-Element- Controlled CFOA-Based Square Wave Oscillator,” Third International Conference on Systems, Signals & Devices, Tunisia, 2005
- Mohammed Ibbini, “Industrial System Integration: An Industry-Driven Curriculum for Engineers as an Example of Market Need satisfaction”, 22d Arab Engineers Association, Cairo, 2006
- Mohamed Ibbini, “From E-Teaching to E-Learning through Blended Learning at Public Schools in Jordan,” The 6th open Classroom Conference, European E-Learning Association, Stockholm, 2007.
- Mohammed Ibbini, “A Comparative Study of PI-Fuzzy with Conventional controllers for the Regulation of Blood Glucose level in Diabetics”, 2008 WSEAS Conference, Rodos, 2008.
- M. Ibbini, “Industry-Academic Collaboration Platform for Real Partnership,” Proceedings of the 14th Global Engineering World Forum, Dubai, 2013.
- M. Ibbini, “Engineering Education and Profession: The Need for A Reform to Bridge the Gap between Teaching and practicing Engineering,” International Conference of Engineering Education, Venice, Italy, 2016
- M. Ibbini, “Bridging the Gap between Teaching and Practicing Engineering: How far our graduates are from being Professionals?”, Educon 2017, Global Engineering Forum, Dubai, 2017

References

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