



Curriculum Vitae

Dr. Mohammed Bani Younis

Office Tel. (+ 962 - 6- 479900) ext.2221 **Mobile** (962 -776173478)

P. O. Box (1)Philadelphia, 19392- Amman – Jordan:

mby71@yahoo.com, mbaniyounis@philadelphia.edu.jo

Personal Data

PLACE OF BIRTH: Dair Abi Said, Jordan

DATE OF BIRTH: 12-12-1971

NATIONALITY: German, Jordanian.

Summary

Strong Knowledge and experience of Re-Engineering and Reverse Engineering delegated through specifications and verification of software/hardware systems using different tools and logics. Knowledge/understanding and experience of the Distributed and Concurrent Systems approach for software modeling, design and development. Moreover the application of these methods introduced above along with Software Engineering technologies to solve automation and control specific problems. This Knowledge is also assisted by the basic knowledge of electrical machines.

Education

2002-2006 University of Kaiserslautern, Kaiserslautern, Germany. Ph.D. in Engineering (has already defended successfully at 01.092006)

2000-2002 University of Kaiserslautern, Kaiserslautern, Germany. Masters in Digital Systems with an average of 1.4 (Excellent).

1990-1995 University of Jordan, Amman, Jordan, Bachelor of Electrical engineering (Good).

1990 Jordan, General Certificate Examination (Al Tawjihi) with an average of 90.3

Major Projects

Ph.D. Project

Re-Engineering Approach for PLC programs based on Formal Methods.

A Project dedicated to the application of formal methods and Software Engineering technologies to re-engineer and re-implement already existing PLC programs.

Masters Thesis

Design and realization of the interaction services for programmed controls.

The goal of this work is the Design of a graphic CONTROLLER to the input and expenditure of process parameters for a handling system

Masters Project

Design and realization of the interaction services for programmed controls,

A project on the Environment RTX-communication System from "Keil" supporting the Multitasking programming, where the Design has been implemented using this RTX-kernel in C-language.

Final year Project (Bachelor)

Adaptive Control Systems, Design of Variable Structure Controller (VSC).

This design of VSC for the purpose to be used for variable structure systems which can be used using digital Computers.

Different Block courses

Lecture and Practical course, Object Oriented Software Development for control Engineering and Signal Processing Applications.

Lecture and Practical Course , Computer-Aided Implementation of Integrated Circuits(VHDL, and Quicksim).

Major Subjects in Ph.D.

No exams have been held for the Ph.D. program but the main subjects related to the Ph.D. were connected to Formal Methods and Software Engineering and their application in the Automation field.

Major Subjects in Masters

Architecture of Digital Systems I, Architecture of Digital Systems II, Switching Theory I, Switching Theory II, Asynchronous Sequential Circuits, Synthesis and Optimization of Microelectronic Systems, Process Counting on Microcomputers I, Process Counting on Microcomputers II, EMC, Multi Dimensional Signal Processing, Data Compression, Modelling of Programmed Systems, Bus Systems in the Automatic Control Engineering, Process Automation.

Major Subjects in Bachelor

Electromagnetic II, Electromagnetic I, Electrical Circuits I, Electrical Circuits II, Electrical Measurements and Instrumentation, Electrical Machines I, Electrical Machines II, Power Systems I, Power Systems II, Power Electronics, Control and Drive Systems, Assembly Language and Microprocessors, Artificial Intelligence, Digital Logic.

Interests

Modelling and Specifications, Software Engineering, Distributed and Concurrent systems, Real Time systems. Electrical Machines and Drives.

Computer Skills

Programming Languages/Tools : C/C++, Java

AI languages : PROLOG, LISP.

Low level languages : Assembly language for 68000 processor, and 8085.

Seminar Presented

Checking Safety Properties using Induction and SAT-Solver.

Language Skills

German: Very Good

Arabic: native

English: Very Good

Urdu: Beginner

Experience

2008-Present: Philadelphia University, Jordan:

Assistant Prof. at the Computer Engineering Department.

2007-2008: Helmut-Schmidt University, Germany:

Research assistant at the Helmut-Schmidt University in Hamburg (01.01.2007)

2002-2006: University of Kaiserslautern, Germany:

Four years as a teaching assistant within the P.hD. studies in supervising tow labs in the department of Juniorprofessorship Agentbased Automation at the same time supervising the exercises of the lecture Systems and Software Engineering for three years in the same department at the University of Kaiserslautern. Within my activity as a teaching and research assistant I have also supervised a number of Master as well as Diploma works and thesis. This period of Promotion was also for working on several industrial projects.

2000-2002: University of Kaiserslautern, Germany:

Two years as a teaching assistant within the Master studies in supervising tow labs in the department of Digital Systems at the University of Kaiserslautern

1997-1998: Jordan Telecommunication Company, Jordan:

One year to Jordan Telecommunication Company in the Switching section at an EWSD switching systems which represents the new age of digital switching systems.

1996-1997: Al-Zagha Modern Electronic Equipments, Jordan:

One year as a maintenance and sales Eng. in modern electronic equipments (Communication and Security systems PBX) to Al-Zagha Modern Electronic Equipments.

Publications :

BOOKS:

Re-Engineering Approach for PLC programs based on Formal Methods.

ARTICLES:

More than 14 scientific articles about PLCs, Re-Engineering, and Formalization of PLC Programs.

THESIS:

Adaptive Control Systems, Design of Variable Structure Controller (VSC). BSc. Final Year Project, University of Jordan, Amman, 1995.

Design and realization of the interaction services for programmed controls. MSc. Thesis, University of Kaiserslautern, Kaiserslautern, 2002.

Re-Engineering Approach for PLC programs based on Formal Methods. Ph.D. Thesis, University of Kaiserslautern, Kaiserslautern, 2006.

□

THESIS SUPERVISION:

Six theses submitted for Diploma and M.Sc. degrees.

Conferences, Symposiums, Seminars &Workshops:

More than 14 Conferences, Symposiums, Seminars &Workshops

Consultation, and Training Activities:

Supervision of different Projects in cooperation with industrial Partners, such as ABB, Freudenberg, etc..

A member TEMPUS committee for establishing international Master of Mechatronic Engineering.

A member of the postgraduate committee of the faculty of engineering (Master of Mechatronic Engineering).

Cultural, and Academic activities

Publication Chair of IEEE ETFA 2008 (Emerging Technologies and Factory Automation)

Reviewer of Scientific articles for Different Conferences and Journals.

Awards & Merits:

Award for the Publication chair's issues of ETFA 2008.

Professionals Affiliations:

A member of Institute of Electrical & Electronic Eng. "IEEE", (USA), Membership No: 85025728.

Jordan Engineer Association, Membership No.: 08238/04.

Member of PLCopen.

List of Publications

Bani Younis, M.; Tutunji, T.: Reverse Engineering Course at Philadelphia University in Jordan, accepted for publication by CEEE European Journal of Engineering Education, 2012.

Bani Younis, M.; Tutunji, T.: Reverse Engineering in Mechatronic Education, IEEE ISMA 2010 in sharajah, April 19-22, 2010.

Bani Younis, M.; Frey, G., Fay, A: Automatic Re-Implementation of PLC Programs. Atp Intyernational

Bani Younis, M.; Frey, G.: Software Quality Metrics to Determine the Diagnosability of PLC Applications, Accepted for Presentation Proceedings of the 10th IEEE International Conference on Emerging Technologies and Factory Automation (ETFA 2007), Prague, pp. 1340–1347, Sep. 2007.

Bani Younis, M.; Frey, G.: UML-based Approach for the Re-Engineering of PLC Programs. Proceedings of the 32nd Annual Conference of the IEEE Industrial Electronics Society (IECON'06), Paris, France, November 7-10, pp. 3691-3696, Nov. 2006.

Bani Younis M.; Frey G.: A Formal Method Based Re-Implementation Concept for PLC Programs and Its Application. Proceedings of the 10th IEEE International Conference on Emerging Technologies and Factory Automation (ETFA 2006), Prague, pp. 1340–1347, Sep. 2006.

Bani Younis M.; Frey, G.: Formalization and Visualization of Non-binary PLC Programs. Proceedings of the 44th IEEE Conference on Decision and Control (CDC 2005) and European Control Conference (ECC 2005) Seville, Spain, pp. 8367-8372, Dec. 2005.

Frey, G.; Bani Younis M.: Systematisches Re-Engineering bestehender Steuerungsprogramme auf der Basis formaler Beschreibungen. Proceedings of the SPS/IPC/DRIVES, Nürnberg, Germany, pp. 301-309, Nov. 2005.

Loeis, K.; Bani Younis, M.; Frey, G.: Application of Symbolic and Bounded Model Checking to the Verification of Logic Control Systems. Proceedings of the 10th IEEE International Conference on Emerging Technologies and Factory Automation, ETFA 2005, Catania, Italy, Vol. 1, pp. 247-250, Sept. 2005.

Frey, G.; Bani Younis, M.: A Re-Engineering Approach for PLC Programs using Finite Automata and UML. 2004 IEEE International Conference on Information Reuse and Integration, IRI-2004, Las Vegas, USA, pp. 24-29, Nov. 2004.

Bani Younis, M.; Frey, G.: Formalization of PLC Programs to Sustain Reliability. Proceeding of the 2004 IEEE Conference on Robotics, Automation and Mechatronics, RAM-2004, Singapore, pp. 613-618, Dec. 2004.

Gabel, O.; Bani Younis, M. Internet based Remote Control and Remote Maintenance with AConML. Proceedings of the System, Man and Cybernetics (SMC2004), The Hague, NL, pp. 490-495, Oct. 10-13, 2004.

Bani Younis, M.; Frey, G.: Visualization of PLC Programs Using XML. Proceedings of the American Control Conference (ACC2004), Boston, USA, pp. 3082-3087, June 30 - July 2, 2004.

Bani Younis, M.; Frey, G.: Formalization of Existing PLC programs: Survey. Proceedings of CESA 2003, Lille (France), CD-Rom paper S2-R-00-0239, July 2003.