

Curriculum Vitae (C. V.)

Personal Data

Name: NOURI.
Given names: Bashir Mustafa Yousef.
Date of birth: 25 - 06 - 1968.
Place of birth: Awarta - Nablus - West Bank - Palestine.
Marital Status: Married (I have two children).
Nationality: Palestinian.
Languages: Arabic (Mother tongue) and English (Excellent).
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EDUCATIONAL BACKGROUND

- 1997 - 2001:** Doctorate in Mechanical and Electrical Engineering (Mechatronics) - Department of Mechanical Engineering, Katholieke Universiteit Leuven (K. U. Leuven), Belgium. **(Obtained the Doctoral Degree with Cum Laude).**
- 1996 - 1997:** **(GGS)** Master in Water Resources Engineering, "Option Irrigation" - Katholieke Universiteit Leuven (K. U. Leuven) and Vrije Universiteit Brussel (VUB), Belgium. **(Obtained the Master Degree with Distinction)**
- 1995 - 1996:** **(GAS)** Complementary Studies in Water Resources Engineering - Katholieke Universiteit Leuven (K. U. Leuven), Belgium. **(Obtained the Degree of the Year with Cum Laude).**
- 1986 - 1994:** Bachelor in Mechanical Engineering - Department of Mechanical Engineering, Birzeit University, West Bank, Palestine. **(Obtained the BSc with Very Good).**
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PROFESSIONAL EXPERIENCE

Since the 1st of February, 2005: Assistant Professor. Department of Mechanical Engineering, Faculty of Engineering, An-Najah National University, Nablus, West Bank, Palestine:

My work at An-Najah National University:

1- I teach the following courses:

- 1- Dynamics (sequence 3)
- 2- Statics (Sequence 1)
- 3- Mechanics of Materials (Sequence 4)
- 4- Fluid Mechanics (Sequence 2)
- 5- Mechanical Vibrations (sequence 5)
- 6- Laboratory of Vibrations and Mechanics of Machines (Sequence 2).
- 7- Control (sequence 1)
- 8- Computer Control Systems (Sequence 1)
- 9- Digital logic (Sequence 4)
- 10- Microprocessor (Sequence 5)
- 11- Engineering Measurements (Sequence 6)
- 12- Control of Fluid Power “Hydraulic and Pneumatic Control Systems” (Sequence 4).
- 13- Design of Mechatronic systems (Sequence 2).
- 14- Graduation Projects (10 projects)

2-Other university activities:

1. Chairman of the department of Mechanical Engineering at An-Najah National University for the academic years 2005/ 2006, 2006/ 2007, 2007/ 2008, and 2008/2009.
2. Internal examiner for the master thesis "Cooling of High Heat Flux Electronic Devices by Two Phase Thermosyphon System. By: Aysar Mahmoud Masoud Yasin, An-Najah National University, 2007".
3. Establisher of the Mechatronics Engineering Department: Setting all the requirements, and preparing all the studies of establishing the department including the academic plan.
4. Coordinator of the Sixth Engineering Employ and Show Day Committee for the academic year 2007/ 2008.
5. Coordinator and member of several University Committees established by the university's President.
6. Member of the Engineering Faculty Committee at An-Najah National University for the academic years 2005/ 2006 and 2006/ 2007.
7. Coordinator of the Self Evaluation Committee of the department of Mechanical Engineering at An-Najah National University for the academic years 2006 - 2007.
8. Coordinator of the Development and Maintenance Committee of the Engineering Faculty at An-Najah National University for the academic years 2006 - 2007.

10/2/2002 – 31/1/2005: Assistant Professor. Department of Mechatronics Engineering, Faculty of Engineering, The Hashemite University, P. O. Box 150459, Postal Code 13115, Zarqa, Jordan.

My work at The Hashemite University:

1- I taught the following courses:

1. Transducers and Interfacing (**sequence 6**).
2. Modern Control (**sequence 2**).
3. Computer Aided Design (Computer Aided Control Systems Design) (**sequence 1**).
4. Control Systems Laboratory (**sequence 1**).
5. Hydraulics and Pneumatic Control Systems (**sequence 3**).
6. Microprocessors in Mechatronics (**sequence 5**).
7. Microcomputer and Interfacing (**sequence 5**).

2- I supervised the following undergraduate projects:

1. Design of Capacitive and Inductive Sensors (2002/2003).
2. Design of Electromagnetic Bearings (2002/2003).
3. Modeling and Control of a Mechatronic System (2002/2003).
4. Design and Simulation of Mobile Robot (2002/2003).
5. Design and Simulation of Pneumatic Planer Robot Arm (2002/2003).
6. Biofeedback Control of Human Brain (2002/2003).
7. Navigation Control of Mobile Robot (2003/2004).
8. Control of the Traffic Lights (2003/2004).
9. Speech recognition and control of mobile robots (2003/ 2004)

3-Other university activities:

9. Chairman of the department of Mechatronics Engineering at the Hashemite University for the academic years 2003/ 2004 and 2004/ 2005.
10. Chairman of the Department of Mechatronics Engineering at the Hashemite University for the period 20/6/2002 – 20/9/2002.
11. Member of the Engineering Faculty Committee at the Hashemite University for the academic years 2002/ 2003 and 2003/ 2004.
12. Member of the High Education Committee at the Engineering Faculty at the Hashemite University for the year (2003/ 2004)
13. Member of the Continuous Education Committee at at the Engineering faculty at the Hashemite University (for the year 2003/ 2004).
14. Member of the Scientific Research Committee at the Engineering faculty at the Hashemite University (for the year 2003/ 2004).
15. Member of the Academic Time Table at the Engineering faculty at the Hashemite University (for the year 2003/ 2004).
16. Member of 3-member graduate program committee at the Engineering faculty at the Hashemite University (Contribution: Setting the requirements of the master program: Master in Control Systems Engineering).
17. Member of the graduate program committee at the Hashemite University (Contribution: Establishing the center of Non-Destructive Evaluation (NDE) and setting the requirements of the master program of Non-Destructive Testing)
18. Member of 5-member graduate program committee at the Engineering faculty at the Hashemite University (Contribution: Setting the requirements of the master program: Master in Maintenance Management)
19. Member of the Engineering Faculty Committee at the Hashemite University for Engineering Students Summer Training (For the academic year 2002/2003).
20. Member of the Engineering Faculty Committee at the Hashemite University for Community services (For the academic year 2002/2003).

1st of October – 30 of December 2001: Post Doctor. “Control of Pneumatic Servo Positioning Systems Which are Actuated by Two, 3-Port Proportional Directional Control Valves”. Division of Production Engineering, Machine Design and Automation (PMA), Department of Mechanical Engineering, Katholieke Universiteit Leuven (K. U. Leuven), Belgium.

August 1997 - August 2001: Researcher for the project IUAP P4/24 - Intelligent Mechatronic systems (IMechS). Belgian programme on Interuniversity Poles of attraction initiated by the Belgian State, Prime Minister’s Office, Science Policy Programming, Katholieke Universiteit Leuven (K. U. L), Leuven, Belgium.

Fields of interest: Pneumatic Systems, Modelling and Identification of Nonlinear Systems, Friction Modelling, and Advanced Control. During the research several articles and posters were published.

November 1994 - August 1995: Mechanical Engineer at Kurdieh Brothers Casting and Metal Work Ltd. (Jerusalem, Shoa'fat, Anata Rd, P. O. Box 21633, West Bank)

My job was concentrated in the following:

1. Management of the quality control department, including full supervision of all production lines.
2. Designing a complete filtration unit for the Plast Furnace being used at the factory.
3. Mechanical maintenance of all the equipment and machinery used at the factory.

1992 - 1994: Teaching assistant for the course "Engineering Drawing" during three academic semesters at the Department of Mechanical Engineering, Birzeit University, West Bank, Palestine.

ARTICLE REVIEWER:

I am an articles' reviewer for ISA-Transactions (International Journal of The Science And Engineering Of Measurement And Automation). Since 2003 I have reviewed the following manuscripts:

- 1- **Manuscript ID ISAT-03-r3-035. Title:** Solution of Low-Dimensional Constrained Model Predictive Control Problems Based upon the Location of Unconstrained Optimum
- 2- **Manuscript ID ISAT-04-r3-006. Title:** Thin-Film Thermal Conductivity Meter.
- 3- **Manuscript ID ISAT-05-r3-025. Title:** Active vibration suppression in a suspended Fabry-Pérot cavity.
- 4- **Manuscript ID ISAT-06-r3-007. Title:** Stability maps for digital PID control of multiple lag processes.
- 5- **Manuscript ID ISAT-06-r3-040. Title:** Precision Coordinated Control of Multi-Axis Gantry Stages.
- 6- **Manuscript ID ISATRANS-D-07-00075. Title:** Developing and implementing an open and non-proprietary device description for foundation field bus based on software standards.
- 7- **Manuscript ID ISATRANS-D-08-00025. Title:** Performance evaluation of Fuzzy ANC (adaptive noise control) system for non-causal condition.

CONSULTANCY

1. Consultant to the Accreditation and Quality Assurance Commission, Ministry of Education & Higher Education, Palestinian National Authority (<http://www.aqac.mohe.gov.ps>) for the curricula accreditation of the Undergraduate Study Program "Mechatronics Engineering" submitted by Birzeit University (File No. BZU071/BA01), August 2007.
2. Representative of the Ministry of Education & Higher Education and a member of the standardization specialized committee of metals and its use (for the period 4/2006 – 7/2007). Standardization Department, Palestinian Standards Institution,

- Palestinian National Authority. The work concentrated in setting the Palestinian standards for Fire resistive doors and fire predictions equipments.
3. Design of a device used for "Detection of Organic Chemical Vapors": I have submitted a proposal for a portable, durable technology or device that would indicate the presence of 1-3 dichloropropene or chloropicrin at threshold levels of 0.05 ppm and higher in an enclosed environment. Submitted to the company entitled Innocentive, USA (<http://www.innocentive.com>). 2006
 4. Research work in the field "Identification, Modeling and Control of Pneumatic Servo Positioning Systems" for the purpose of improving the FESTO industrial pneumatic servo positioning products, where 50 micrometers positioning accuracy is achieved. FESTO Company, Germany. (1997-2001)
 5. Restudy and evaluation of Environmental Impact Assessment (EIA): Screening and Scoping of all the alternatives of the project "Technopolitical Alternative Strategies in Interstate Regional Development of Jordan Rift Valley Beyond the Peace" by Masahiro Murakami, M. (Consulting Engineer, Japan), Usaid I. El-Hanbali (The World Bank, USA), and Aaron T. Wolf, M. (University of Alabama, USA). 1996
 6. Restudy and evaluation of Environmental Impact Assessment (EIA): Screening and Scoping of all the alternatives of the project "Natural Gas Pipeline in Bolivia from Santa Cruz to the Brazilian border through the Amazon Forest". 1996
 7. Restudy and evaluation of the project "Integrated Project Design: Drinking and Irrigation Water Supply to Jakarta, Indonesia-Capital City". This project was designed and constructed with the superposition of Laboratory of Hydraulics, Delft University Netherlands. 1997
 8. Designing a Filter (Gas Wash Filter) for a Plast Furnace to bring the Cast Iron Plast Furnace Emissions within the Environmental Standards. Kurdieh Brothers Casting and Metal Work Ltd. (Jerusalem, Shoa'fat, Anata Rd, P. O. Box 21633, West Bank, Palestine. 1995
 9. Designing an Industrial Layout and Product Management Plans for Abu Ein Aluminum Industry Ltd. BeitUnia, Ramalla, West Bank Palestine. 1993
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Training courses for professional Engineers

I can give and supervise the following training courses:

1. Modern Control Systems.
2. Industrial servo control systems (fundamentals and applications).
3. Analysis and design of hydraulic and pneumatic systems with industrial applications.
4. Methods of Experimental and Measurement techniques.
5. Mechatronics Engineering, Principles and Applications.
6. Matlab and Simulink Softwares for Engineers.

COMPUTER EXPERIENCE (KNOWLEDGE)

1. MATLAB software with identification toolbox, control toolbox and polynomials toolbox.
2. SIMULINK software with MATLAB.
3. Computer languages: FORTRAN, PASCAL and C-Language.

4. Microprocessors and Microcomputers software architecture (assembly language and machine language).
5. MS-office : Microsoft word and Excel, Front Page, Power Point, and Visio
6. AutoCAD software.
7. Present programs and software that are used for Water Resources and Irrigation Engineering.

RESEARCH AREAS

Areas of Active Research: Pneumatic Systems, Electromagnetic Bearings, Robotics, Modelling and Identification of Nonlinear Systems, Friction Modelling, and Advanced Control.

General Areas of Interest:

1. Mechanical, Mechatronics, Automation, Control, and Bio-Medical Engineering.
2. Industrial and Academic Consultation.
3. Water Resources, Water quality and Treatment, Irrigation, Water Pollution.
4. Consultation in the field of Water Resources Engineering and Environment

Current research fields

1. Modeling and control of Mechatronic Systems.
2. Manipulators and Mobile Robot Control.
3. Auto-tracking Solar Radiation Mechatronic Systems.
4. Voice recognition and voice control techniques.

AWARDS

Best Student Paper Award: for the paper entitled, “Modelling a Pneumatic Servo Positioning System with Friction,” presented at the 2000 American Control Conference, June 28-30, 2000, in Chicago, Illinois, USA. The award is given by: The American Automatic Control Council (AIAA, AICHE, AISE, ASCE, ASME, IEEE, ISA, and SCS).

DIRECT TUITION (DOCTORAL COURSES)

Sliding Mode in Automatic Control

Organizer: The International School in Automatic Control. Place: Ecole Centrale de Lille, Lille, (France). Period: September 6 to 9, 1999.

Theory of Robot Control

Organizer: Graduated Schools in Systems and Control. Lecturers: Professors Bastin and G. Campion (CESAME, UCL). Place: Université Catholique de Louvain, (Belgium). Period: May 14 to 28, 1999.

Control, Identification and related subjects

Organizer: Prof. J. Swevers, Department of Mechanical Engineering, Division of Production Eng., Machine Design and Automation Katholieke Universiteit Leuven. Place: Department of

Mechanical Engineering, Katholieke Universiteit Leuven (Belgium). Period: Academic year 1997-1998, and Academic year 1998 - 1999.

Polynomial Methods for Controller Design

Organizer: Graduated Schools in Systems and Control. Lecturers: Professors H. Kwakernaak (Twente University of Technology, The Netherlands) and M. Sebek (Academy of Sciences, The Czech Republic). Place: Katholieke Universiteit Leuven (Belgium). Period: November 6 to December 11, 1998.

Theory and Application of Fuzzy Control

Organizer: Graduated Schools in Systems and Control. Lecturers: Professors S. Yurkovich (The Ohio State Univ., Columbus, USA) and V. Wertz (CESAME, UCL). Place: Université Catholique de Louvain, (Belgium). Period: March 23 to April 3, 1998.

Vibration Control

Organizer: Graduated Schools in Systems and Control. Lecturers: Professors A. Preumont (ULB), and J. Swevers, H. Van Brussel, W. Dehandschutter(KUL). Place: Katholieke Universiteit Leuven (Belgium). Period: October 3 to 31, 1997.

Computer Aided Control Systems Design

Organizer: Department of Electrical Engineering at Katholieke Universiteit Leuven. Lecturer: Prof. Bart De Moor. Place: Department of Electrical Engineering, Katholieke Universiteit Leuven (Belgium). Period: October 1 to December 20, 1997.

Computer Aided Control Systems Design (Practical)

Organizer: Department of Electrical Engineering at Katholieke Universiteit Leuven. Lecturer: Prof. Bart De Moor. Place: Department of Electrical Engineering, Katholieke Universiteit Leuven (Belgium). Period: October 1 to December 20, 1997.

PUBLICATIONS

Published Papers in International Journals

- [1] Nouri, Bashir M. Y.. "Friction Identification In Mechatronic Systems". ISA Transactions, (A Journal For The Science And Engineering Of Measurement And Automation), Vol 43, No 2, April 2004, pp 205-216.
- [2] Bashir M. Y. NOURI and Arafat Zaidan. "Computer Control of a Powered Two Degree Freedom Reciprocating Gait Orthosis". ISA Transactions, Vol 45, No 2, April 2006, pp 249-258..

Published Papers in Conferences Proceedings

- [1] Nouri, Bashir M. Y., (2005). "Modeling and Control of Mobile Robots". Accepted for publication in the proceedings of the First international Conference on Modeling, Simulation & Applied Optimization, ICMSAO/05, which will be held at the American University of Sharjah, UAE on February the 1st, 2005.
- [2] Nouri, B. M. Y., F. Al-Bender, J. Swevers, P. Vanherck and H. Van Brussel, (2000). "Identification, Modelling and Simulation of a Pneumatic Servo Positioning System with Friction." Proceedings of the IASTED (The International Association of Science and

Technology for Development) International Conference Modelling, Identification and Control, February 14 - 17, 2000, pp. 421 - 427, Innsbruck, Austria.

- [3] Nouri, B. M. Y., F. Al-Bender, J. Swevers, P. Vanherck and H. Van Brussel, (2000). "Identification, Modelling and Simulation of a Pneumatic Servo Positioning System with Friction for the Purpose of Accurate Position Control." Proceedings of the 5th National Congress on Theoretical and Applied Mechanics, May 23 - 24, 2000, pp. 67 - 70, Louvain-La-Neuve, Belgium.
- [4] Nouri, B. M. Y., F. Al-Bender, J. Swevers, P. Vanherck and H. Van Brussel, (2000). "Modelling a Pneumatic Servo Positioning System with Friction." Proceedings of American Control Conference (ACC 2000), June 28 - 30, 2000, PP. 1067 - 1071, Chicago, Illinois, USA.

Internal Reports

- [1] Nouri, B. M. Y. (1999). "Micro Study of Pre-Sliding Friction in a Pneumatic Servo Positioning System." Internal report No. 99R013, January, 1999, Mechanical Engineering Department, Division of Production Eng., Machine Design and Automation (PMA), Katholieke Universiteit Leuven (Belgium).
- [2] Nouri, B. M. Y. (1999). "Modelling a Pneumatic Servo Positioning System." Internal report No. 99R014, March, 1999, Mechanical Engineering Department, Division of Production Eng., Machine Design and Automation (PMA), Katholieke Universiteit Leuven (Belgium).

Thesis

Ph.D. Thesis: "Modelling and Control of Pneumatic Servo Positioning Systems". Mechanical Engineering Department, Division of Production Eng., Machine Design and Automation (PMA), Katholieke Universiteit Leuven, Belgium. (August, 2001). ISBN 90-5682-312-4

M.Sc. Thesis: "Inverse Modelling of Flow in Open Channels." Katholieke Universiteit Leuven and Vrije Universiteit Brussel, Belgium. 1997.

B.Sc. Thesis: "Flow Visualization by Hydrogen Bubble Generator." Birzeit University, Palestine. 1994.

Presentations at Conferences

- [1] "Modelling a Pneumatic Servo Positioning System with Friction," presented at the American Control Conference (ACC 2000), Chicago, Illinois, USA, June 2000.
- [2] "Identification, Modelling and Simulation of a Pneumatic Servo Positioning System with Friction for the Purpose of Accurate Position Control," presented at the 5th National Congress on Theoretical and Applied Mechanics, Louvain-La-Neuve, Belgium, May, 2000.

- [3] “Modelling and Identification of a Pneumatic Servo Positioning System with Friction for the Purpose of Simulation and Accurate Position Control,” presented at the 19th Benelux Meeting on Systems and Control, Mierlo, The Netherlands, March 2000.
- [4] “Identification, Modelling and Simulation of a Pneumatic Servo Positioning System with Friction,” Presented at the International Association of Science and Technology for Development (IASTED) International Conference Modelling Identification and Control (MIC 2000), Innsbruck, Austria, February 2000.
- [5] “Empirical Model of a Pneumatic Servo Positioning System,” presented at the ICCos Workshop Applications and Experimental Aspects of Robust Control and Identification, Leuven, May 1999.

Posters at Workshops

- [1] “Robust Control of Pneumatic Servo Positioning Systems,” Presented at IUAP 4/24 IMechS Workshop, Université de Liège (ULG), Liège, Belgium, November 2000.
- [2] “Modelling and Identification of a Pneumatic Servo Positioning System with Friction for the Purpose of Simulation and Control,” presented at ICCos Workshop, Vrije Universiteit Brussel (VUB), Brussels, Belgium, December 1999.
- [3] “Identification, Modelling and Simulation of a Pneumatic Servo Positioning System,” presented at IUAP 4/24 IMechS Workshop - Intelligent Mechatronic Systems ,UCL, Louvain-La-Neuve, Belgium, October 1999.
- [4] “Modelling of a Pneumatic Servo Positioning System,” presented at IUAP-4-24, 2nd Workshop on Intelligent Mechatronic System, ULB, Brussels, Belgium, October 1998.
- [5] “Design and Optimisation of Pneumatic Servo Systems,” presented at IUAP-4/24: IMechs Workshop Intelligent Mechatronic Systems, KUL, Leuven, Belgium, November 1997.

SCHOLARSHIPS

- [1] Katholieke Universiteit Leuven - Scholarship: I obtained the Master studies scholarship for the period August 1995 to August 1997.
- [2] Katholieke Universiteit Leuven - Scholarship: I obtained the PhD research scholarship for the period October 1997 to September 2001.

PROFESSIONAL ORGANIZATIONS

Member of the Palestinian/ Jordanian Engineers Association - Division of Mechanical Engineering.

Training

- [1] Irrigation and Drainage of the International Course on Microcomputer Applications in Water Resources Engineering and Management. Institute for

Land and Water Management, Katholieke Universiteit Leuven (K. U. L),
Leuven, Belgium.

[2] Design and Production of Laboratory Instruments. Field training, Mechanical
Engineering Department, Birzeit University, West Bank, Palestine.

REFERENCES

1. Prof. Dr. A. Al-Momani
Dean of the Engineering Faculty at the Hashemite University.
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Zarqa (13115), Jordan.
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E-mail: ahmomani@hu.edu.jo

2. Prof. Dr. Ir. H. Van Brussel
Chairman of the Mechanical Engineering Department at Katholieke Universiteit Leuven.
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2. Prof. Dr. Ir. H. Hassan Nigim
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