Dr. Nidal Farhat

Mechanical and Mechatronics Eng. Dept., An-Najah National University, Nablus, Palestine
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CURRENT POSITION

- Assistant Professor, Mechanical and Mechatronics Engineering Departments, An-Najah National University, Nablus, West Bank, Palestine. August 2009 - Present.

EDUCATION

- Ph.D. in Mechanical Engineering, Robotics: Identification and Simulation, Polytechnic University of Valencia, Spain, (July, 2006), evaluation "Excellent cum laude".
- Dynamic Parameters Identification in Closed Chain Mechanical Systems, Application on Parallel Robots.
- "Proven Research Experience" and "Advanced Studies" Certificates, Polytechnic University of Valencia, Spain, (February, 2005), evaluation "Excellent".
- BSc. Mechanical Engineering, Birzeit University, Palestine, 1994-2000, evaluation "Distinction", Four semesters "Deans List".

WORK EXPERIENCE

- Assistant professor at An-Najah National University, Mechanical and Mechatronics Engineering Department (since Sept. 2009).
- Head of Mechanical and Mechatronics Engineering Departments, An-Najah National University, September 2012 – August 2014. During this period ABET Accreditation was granted for both Mechanical and Mechatronics Engineering Programs.
- Part-time assistant Professor, Mechanical Engineering Department, Palestine Polytechnic University, Hebron, West Bank, Palestine. First Semester 2006/2007.
- Research Fellow, Polytechnic University of Valencia & Biomechanics Institute of Valencia, 2007-2009. "Development of a muscular model of the lower extremity oriented for the generation of methods for the determination of amount of injury in the knee with respect to the sporting pavement INCAPA & INCAPA2".
- Design and construction of a three degrees of freedom RPS parallel robot, (2005).
- Familiar with serial and parallel robots, like Puma 560 and SCARA serial robots, and Stewart Platform parallel robot.
- Worked as a technician (2001, almost one year).

ADDITIONAL CAREER EXPERIENCE - PART TIME

- Assistant Professor, Mechanical Engineering Department, Palestine Polytechnic University, Hebron, West Bank, Palestine. First Semester 2006/2007.

SOCIAL AND ORGANIZATIONAL SKILLS

COMPUTER SKILLS

- Microsoft (Windows, Word, Excel, PowerPoint, Outlook Express, …)
- MSC. ADAMS-View 2005
- AutoCAD 3D
- Visual Nastran (Working Model 4D)
- Visual Fortran (Fortran 90) + Numerical Algorithms Group Library (NAG).
- SolidWorks.
- MATLAB
- ANSYS
- Maple

TRAINING

- Advanced Robotics & Machine Vision Systems, Intelitek Training Center, Palestine, January 2012 (2 days).
- MPS Commissioning and Start-up Step7, Festo, An-Najah University, Palestine, March 11 (5 days).
- Mechanical engineering academic training, Jordanian Phosphate Company, Al-Aqaba, Jordan (Jul.-Aug. 1998).

AWARDS

- Ph.D. Fulbright Scholarship from the Polytechnic University of Valencia, Spain, 2002-2006.

COURSES TAUGHT:

BACHELOR COURSES

- Theory of Machines
- Mechanics of Materials
- Mechanical Drawing
- Introduction to Mechatronics Programming
- Dynamics
- Control Systems
- Machine Elements Design
- Robotics

PUBLICATIONS

REFEREED JOURNALS:

- A procedure for estimating the relevant forces in the human knee using a four-bar mechanism. N. Farhat, V. Mata, D. Rosa D, J. Fayos. Computer Methods in Biomechanics and Biomedical Engineering. Volume 13, No. 5, pp. 577~587, 2010.
- Dynamic Simulation of a Parallel Robot: Coulomb Friction and Stick-Slip in Robot Joints. N. Farhat, V. Mata, A. Page, M. Díaz-Rodríguez. Robotica. Volume 28, No. 1, pp. 35~45, 2010.
- Dynamic parameter identification of parallel robots starting from the measurement of joints position and forces. M. Díaz-Rodríguez, V. Mata, N. Farhat and S. Provenzano. Revista Técnica de la Facultad de Ingeniería Universidad del Zulia. Volume 2, No. 2, 2009.
- Identifiability of the Dynamic Parameters of a Class of Parallel Robots in the Presence of Measurement Noise and Modeling Discrepancy. M. Díaz-Rodríguez, S. Provenzano, V. Mata, and N. Farhat. Mechanics Based Design of Structures and Machines. Volume 36, No. 4, pp. 478~498, 2008.
- Identification of dynamic parameters of a 3-DoF RPS parallel manipulator. N. Farhat, V. Mata, Á. Page, F. Valero. Mechanism and Machine Theory. Volume 43, No. 1, pp. 1~17, 2008.
- Dynamic parameter identification in industrial robots considering physical feasibility. V. Mata, F. Benimeli, N. Farhat, and A. Valera. Advanced Robotics. Volume 19, No. 1, pp. 101~120, 2005.

BOOK CHAPTER: (Online)

- Dynamic Parameter Identification for Parallel Manipulators. Parallel Manipulators, New Developments. 2008. http://books.i-techonline.com/.

REFEREED CONFERENCES:

- An Approach for the Reduction of the Soft Tissue Artifact. V. Mata, N. Farhat, A. Page, H. Rosario. 10th International Symposium on Biomechanics and Biomedical Engineering CMBBE2012, Berlin, Germany, April 11-14, 2012.
- Musculo-skeletic Model for Knee Joint Forces Estimation in Sport Activities. N. Farhat, V. Mata, D. Rosa, J. Fayos, X. Peirau. 7th EUROMECH Solid Mechanics Conference, Lisbon, Portugal, September 7-11, 2009.
- Identifiability of the Dynamic Parameters of a Class of Parallel Robots in the Presence of Measurement Noise and Modeling Discrepancy. M. Díaz-Rodríguez, S. Provenzano, V. Mata, and N. Farhat. Proceedings of MUSME 2008, the International Symposium on Multibody Systems and Mechatronics, San Juan (Argentina), April 8-12, 2008.
- Identificación de parámetros dinámicos de robots paralelos: métodos de obtención de las variables cinemáticas a partir de la medición de la posición. M. A. Díaz-Rodríguez, V. Mata, N. Farhat, and S. Provenzano. Proceeding of 8º Congreso iberoamericano de ingeniería mecánica, Cusco, October 23-15, 2007.
- Dynamic Parameter Identification of Parallel Robots Considering Physical Feasibility and Nonlinear Friction Models. N. Farhat, M. A. Díaz-Rodríguez, and V. Mata. Proceedings of 12th IFToMM World Congress, Besançon (France), June 18-21, 2007.
- On the Simulation of Friction Phenomena in Multibody Dynamic System. V. Mata, N. Farhat, and M. A. Díaz-Rodríguez. Proceedings of 16th Int. Workshop on Robotics in Alpe-Adria-Danube Region - RAAD 2007, Ljubljana, June 7-9, 2007.
- Some Considerations about the Dynamic Simulation of Industrial Robots Based on Identified Inertial and Friction Parameters. F. Benimeli, N. Farhat, V. Mata, and F. Valero. Proceedings of MUSME, the International Symposium on Multibody Systems and Mechatronics, Uberlandia (Brazil), March 6-9, 2005.

- Experimental Set-Up and Some Results in Parameter Identification in Robots. F. Benimeli, V. Mata, N. Farhat, and A. Valera. Proceedings of RAAD'03, 12th International Workshop on Robotics in Alpe-Adria-Danube Región, Cassino May 7-10, 2003.

REFERENCES

Available upon request
