

OBJECTIVE A full-time position in the industry, focusing in the field of Control Engineering, in development of electromechanical automated systems.

RELEVANT COURSES

Control Engineering, Linear Systems Analysis, Advanced Digital Control, Industrial Logic Control, Fuzzy Logic, Identification and Modern Control, Instrumentation for Measuring and Control, Industrial Networks, Manufacturing Systems Automation, Manufacturing Technologies, Mechanisms, Spacecrafts Dynamics, Advanced Mechanics of Materials and Nonlinear Finite Elements Analysis

EDUCATION

M.S. Mechanical Engineering (in progress) GPA: 3.5/4.0
The University of Texas at El Paso (UTEP). El Paso TX. May 12

B.S. Mechatronics Engineering (with specialization in industrial automation) Grade: 90/100
Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM). Monterrey, Mexico. Dec 08

EXPERIENCE

Teaching Assistant Aug 11 – Present
Electrical and Computer Engineering Department. UTEP. El Paso, TX.
• Teach the Introduction to Electrical Engineering Laboratory: Instrumentation and Basic Circuits.
• Develop and plan the laboratory tutorials, manuals and practices material for this laboratory.
• Assist teaching Systems and Controls course.

Research Assistant Apr 10 – Present
Laboratory for Industrial Metrology and Automation (LIMA). UTEP. El Paso, TX.
• Research in biomechanics measuring and rehabilitation of locomotion impairments of human body.
• Develop the “6-degree-of-freedom platform for balance and posture testing and measuring ” (Thesis)
• Analyze data of human gait analysis experiments, data filtering and processing using MATLAB.

Programmer and electrical designer Jan 08 – Dec 08
ITESM. Monterrey, NL, Mexico.
• Developed the Human Machine Interface (HMI), based on a Real-Time Operative System (RTOS).
• Implemented the interpolation algorithms, in C++, of Computer Numerical Control (CNC) machine.
• Fabricated the Printed Circuit Board (PCB) and electronic driver card to control the stepper motors.
• Achieved the machine safety features: selecting and placing components such as sensors and actuators.

Mechatronic Engineer Jan 07 – Dec 07
Whirlpool de Mexico. Apodaca, NL, Mexico.
• Awarded the best mechatronic project for Whirlpool Company, during the semester Aug-Dec 2007.
• Created a new product concept (a refrigerator) under Product Lifecycle Management scheme (PLM).
• Integrated the electronics, mechanical and control parts in the Mechatronic Design Methodologies class.
• Accomplished the quality and functionality requirements of the product, using IDEF and QFD.
• Collaborated in the Aesthetics and Ergonomics of the product, in coordination with industrial designers.

SKILLS

Software

Acrobat, Dreamweaver, Flash, Photoshop, Excel, OneNote, PowerPoint, Publisher, Visio, Word, ANSYS Fluent, AutoCAD, Corel Draw, Delmia & Catia, Festo Fluidsim, MAPLE, MATLAB / Simulink, NI ELVIS, NI LABVIEW, Protel PCB, RS Logix, Siemens Step 7, SolidWorks, Wolfram Mathematica and Workbench Multisim.

Programming Languages

Assembly, C++, CSS, G Code (for CNC), HTML, Java, Ladder and GRAFCET (PLC), LATEX and PHP.

Industrial Networks

DeviceNet, ControlNet, Ethernet/IPAS-i, Profibus, Industrial Ethernet. CAN Protocol.

Automation

Flexible Manufacturing Cell, Programmable Logic Controller (PLC's), PID Controller, Microcontrollers, MOTOMAN UP6, CNC Machine Tools and Vision Inspection System.

Languages

Spanish and English