

## VITAE: Pablo Estévez Castillo

**Venezuelan ID:** V 15.754.933

**Date and place of birth:** March 29, 1982, Mérida, Estado Mérida, Venezuela.

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### Present Occupation:

- PhD Researcher. Precision and Microsystems Engineering Department – Haptic Microassembly project. Technological University of Delft, Delft, The Netherlands.

### Education:

- **Magister** in Electronic Engineering - Mechatronics Option. GPA 5/5. Outstanding Mention. Simón Bolívar University (USB). Caracas, - Venezuela 2005-2008.
- **Bachelor** in Electronic Engineering. GPA 4.6/5, graduation rank: 1<sup>st</sup> / 16. Simón Bolívar University (USB). Caracas - Venezuela, 1999-2005.
- **Secondary:** Science major, Arzobispo Silva School, Mérida, 1994-1999.

### Work experience:

- **Academic Assistantship.** Research and Teaching activities in the Electronics Department. Bachelor theses supervision. Universidad Simón Bolívar. September 2005 – November 2007.
- **Research Internship.** TecO – Karlsruhe, September 2004 – March 2005.
- **Short Labor Internship.** Geophysics Laboratory, Los Andes University, Mérida, July-August, 2003.
- **Laboratory and classroom assistant.** Universidad Simón Bolívar. 2000 - 2004.
- Various projects on electronics and automation. Albatros Ingeniería, Caracas-Venezuela. 2005 – 2007.

### Languages:

- **Spanish:** Mother Language.
- **English:** CBT TOEFL 280/300.
- **German and Dutch:** Basic reading and speaking.

### Expertise:

- Programming in C, C++, Matlab, LabView, VHDL and various assembly languages. Standard electronics and mechanics software (SolidWorks, ProE, COMSOL, MAPLE, PSCICE). Capability to learn new programming languages and programs easily.
- Practical experience in design and development of electronic and mechanic prototypes.
- Knowledge on image processing, artificial intelligence, soft computing, systems modeling, simulation, multi-agent systems, localization, mapping, state space representation and control, electro-mechanic actuators, human robot interaction, mechanical design and other fields of mechatronics engineering.
- Knowledge on computer networks architecture, power electronics, analogue electronics, digital circuits, computer architecture, communications, control, instrumentation and other fields of electronics engineering.

### Main areas of interest:

Mechatronic Design, Mobile Robots, Walking Robots, Automation and Control of Systems, Haptics, Teleoperation, Human-Machine Interaction, Soft Computing, Artificial Vision, Cooperation, Virtual Reality.

### Acknowledgments:

- **Second Place in the 13<sup>th</sup> region,** Student Design Contest 2004, control system for a robotics project, ASME, August 2004.
- **First Place,** IV Latin-American Contest on LabView Academic Applications, National Instruments Corp, March, 2004.
- **12<sup>th</sup> Place,** Admission Test, Simon Bolivar University, Caracas, July 1999 (7.000 aspirants).
- **Silver Medal,** IV Physics Ibero-American Olympiad, San José de Costa Rica, September, 1999. (Selected participants from Spain and all Latin-American countries, including Brazil).

- **First Place**, Team Contest, XXIV Mathematics Olympiad, CENAMEEC, Caracas, July, 1999. (More than 50.000 high school initial participants nationwide).
- **Gold Medal**, IX Physics Venezuelan Olympiad, CENAMEEC, Caracas, June, 1999. (see note above).
- **First Place**, IX Experimental Physics Venezuelan Olympiad, CENAMEEC, Caracas, June, 1999. (see note above).
- **Bronze Medal**. XXII Mathematics Olympiad, CENAMEEC, Caracas, July, 1997. (see note above).
- **Finalist** and Outstanding Participation Award, XVI Chemistry Venezuelan Olympiad, CENAMEEC, Caracas, June 1998. (see note above).

#### Finished projects:

- **Master Thesis:** Dynamic Generation of Velocity Fields for Coordinated Navigation. Algorithms in Matlab and simulations in Matlab and Webots. USB – Caracas – Venezuela 2007. This project was approved with an Outstanding Mention in its evaluation.
- **Final Bachelor Internship:** Analysis and tests of algorithms for context recognition applications on smart-it platforms. Software in Matlab and C. TecO – Karlsruhe, September 2004 – March 2005. This project was approved with an Outstanding Mention in its evaluation.
- **Internship:** Acquisition, analysis and backup system for seismometer data with dynamic range improvement using a PC standard sound card and software in LabView. Geophysics Laboratory, Los Andes University, Mérida, July-August, 2003. This project competed and won the IV Latin-American Contest on LabView Academic Applications, organized by National Instruments Corp in March 2004.
- **Final High School Course Work:** Development of a biometric identification system based on detection and analysis of hand's palm. A/D hardware, Pressure sensing matrix, Acquisition software in C, Analysis software in Matlab. Geophysics Laboratory, Los Andes University, Mérida, October 1998.

#### Publications:

- *"Gait Synthesis and Modulation for Quadruped Robot Locomotion Using a Simple Feed-Forward Network"*, J. Cappelletto, P. Estevez, W. Medina, L. Fermín, J. Bogado, J. Grieco, G. Fernández-López. ICAISC 2006 Proceedings. Lecture Notes in Computer Science 4029, Springer 2006, ISBN 3-540-35748-3.
- *"A CPG-Based Model for Gait Synthesis in Legged Robot Locomotion"*, J. Cappelletto, P. Estévez, J. C. Grieco, G. Fernández-López, M. Armada. CLAWAR 2006 Proceedings.
- *"Synchronous Local Positioning System Based on Ultrasonic Active Beacons and Feed Forward Neural Networks"*, P. Estévez, J. Hernandez, J. Cappelletto, J. C. Grieco. CLAWAR 2007 Proceedings..
- *"A CPG with Force Feedback for a Statically Stable Quadruped Gait"*, J. Cappelletto, P. Estévez, G. Fernandez-Lopez, J. C. Grieco. CLAWAR 2007 Proceedings.
- *"Object Recognition for Obstacles-free Trajectories Applied to Navigation Control"*. W. Medina, L. Fermín, J. Cappelletto, P. Estévez, G. Fernández, J. Grieco. Vision Systems Applications, ISBN 978-3-902613-01-1. June 2007.
- *"Coordinated navigation using dynamically varying velocity fields"*, P. Estevez, J. Cappelletto, R. Acuna, F. Alvarez, G. Fernandez-López. Poster in ICAISC 2008.
- *"Haptic Teleoperation for Micro-assembly"*, P. Lambert et al. To appear in Micronano Conference 2008.

#### Extra-curricular activities:

- Workshop for volunteers of the Environmental Education Office on activities oriented toward communities and school children (110 hours of theoretical and practical training), National Parks Institute, La Mucuy, Mérida, June 1999.
- Occasional Guide and Consultant in Physics, Geophysics and Origami, Mérida Science and Technology Museum, 2000-2003.
- Several courses and workshops on Mountain Sports. National and international expeditions. Mountain Guide and Instructor. OIKOS Mountain Climbing Club, Simon Bolivar University, Caracas, 1999-2007.

**Other interests:** Mountain sports, Photography, Origami, Juggling, Cooking, Sewing and Needlework.

*Delft, November 2009.*