

CONTACT INFORMATION

Personal info:

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Work info:

Research assistant - PhD. Student
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MAIN RESEARCH INTERESTS

Programming Multi-Processor Systems on Chip (MPSoC). MPSoC architectures. Partitioning, mapping and scheduling of application to MPSoC. HW support for MPSoCs. Virtual platforms and simulation (SystemC TLM).

OTHER RESEARCH INTERESTS

Machine learning. Impelmentation of math libraries in HW.

EDUCATION

University of Lugano - Advanced Learning and Research Institute (ALaRI), Lugano, Switzerland

Master of Advanced Studies in Embedded Systems Design, July 2006.

- Master Project: “Fast FPGA-Based Algorithms for Large-Scale Linear Algebra Supercomputing”
- Advisor: Juan Gonzelez, Accelogic LLC. Weston FL, USA.

Grade: 4.87 over 5.00 (first place).

Universidad Pontificia Bolivariana, Medellin, Colombia

Bachelor in Electronic Engineering, Sep 2004.

- Thesis: “Reinforcement learning in Continuous Spaces for Obstacle Avoidance in a Mobile Robot”
- Advisor: Roberto Carlos Hincapie. UPB. Medellin, Colombia.

Grade: 4.85 over 5.00 (first place).

Colegio Colombo Británico, Envigado, Colombia

Bachiller Académico.

AWARDS AND HONORS

Master:

- Intellect Innovation President’s award 2006. Given every year by the Intellect group of companies in USA to the person who contributed the most to the scientific advances among Intellect’s companies. This prize was awarded due to the work done during my thesis at ALaRI. This

research project was done in collaboration of Accelogic LLC, which belongs to the Intellect group.

Bachelor:

- Honorific mention for the thesis.
- Graduated with Honors. Highest academic average over the whole bachelor (4.85 over 5.00).
- Honorific Mention for obtaining the seventh score in Colombia in the ECAES (Quality Evaluation of the Higher Education). Given by the Colombian Ministry of Education. Medellín, Dec 2004. (ECAES is an exam designed for each recognized profession in Colombia. It has to be taken by all graduates in electronic engineering in Colombia.)
- Honorific Mention for obtaining the seventh score in Colombia in the ECAES (Quality Evaluation of the Higher Education). Given by the UPB. Medellín, Dec 2003.
- 6 Honorific Mention and Semester Scholarship in semesters: 1,4,5,6,7 and 8 (years 1999, 2000, 2001, 2002). UPB awards the honorific mention every semester to the student with the highest academic average in the Electronic Engineering Faculty.
- Honorific mention “Best Student of the Electronic Engineering Faculty of UPB”. 2003.

High School:

- “*Andrés Bello*” Award for obtaining the higher score in the Colombian Test (ICFES) in Envigado. 1998. The award comes with an scholarship for university studies. ICFES is an exam that all graduates from high school have to take.
- First place in the “National day of Physics”. Bogotá, Colombia. Nov. 1998.
- First place and scholarship in the “*VII Concurso de Matemáticas y Física de EAFIT*” (VII Contest of Mathematics and Physics, EAFIT University). Medellín, Colombia 1998.
- First departmental score in the National Physics Olympiads. Medellín-Colombia 1998.
- First place in the Envigado’s Mathematics Olympiads. 1996-97-98.

ACADEMIC EXPERIENCE

RWTH Aachen University, Aachen, Germany.

Teaching assistant

Mar. 2007 - present

Teaching assistant for the lectures “*Compilerbau I and II*” (Compiler theory)

Teaching assistant

Dec. 2006

Teaching assistant for the Object Oriented Programming Project

Universidad Pontificia Bolivariana, Medellín, Colombia.

Instructor

Feb - Jul, 2005

Instructor of the “*Diplomatura en Computación Inteligente*” (Advanced Studies on Computational Intelligence). For students in final semesters and for graduate students. I taught the following topics:

- Supervised Learning
- Unsupervised Learning
- Introduction to Reinforcement Learning
- Introduction to Fuzzy Systems

Instructor

Jul 2004 - Jul, 2005

Instructor of maths assignments in the engineering bachelors. I taught the following courses:

- Differential and integral calculus.
- Basic Mathematics.
- Introduction to Calculus.

Researcher

Jun 2003 - May, 2005

Researcher. Project: Antioquia's Telemedicine Network. Bio-engineering Research group and GI-DATI (Informatics and applied telecommunications research group).

Teaching Assistant

Aug 2000 - May, 2002

Teaching assistant for the following courses:

- Vectorial Calculus
- Differential and Integral Calculus
- Discrete Mathematics
- Prolog programming Language

PUBLICATIONS

Master Thesis: Jerónimo Castrillón, Juan Gonzalez. "Fast FPGA-Based Algorithms for Large-Scale Linear Algebra Supercomputing". ALaRI-Accellogic. Lugano, Switzerland 2006, 64p.

Bachelor Thesis: Jerónimo Castrillón Mazo, Daniel Giraldo Maya, Jorge Alejandro Peña Suárez. *Aprendizaje por Refuerzo en Espacios Continuos para la Evitación de Obstáculos en un Robot Móvil* (Reinforcement learning in Continuous Spaces for Obstacle Avoidance in a Mobile Robot). Bachelor Thesis (Electronic Engineering). Universidad Pontificia Bolivariana, Medellín 2004, 365p.

Jerónimo Castrillón, Jorge Peña. "Reinforcement Learning with Kohonen-based State Aggregation for Obstacle Avoidance of a Mobile Robot". ICCI 2005, International Congress of Computational Intelligence. Montería, Colombia.

Jerónimo Castrillón Mazo, Daniel Giraldo Maya, Jorge Alejandro Peña Suárez, Roberto Carlos Hincapié Reyes. *PCA, Sofm, Q-learning: Evitación de Obstáculos en un Robot Móvil* (PCA, Sofm, Q-learning: Obstacle Avoidance in a Mobile Robot). *VI Congreso Nacional de la Asociación Colombiana de Automática* (VI National Congress of the Colombian Automation Association). Colombia, Nov. 2004.

Oscar J. Cardona, Sergio Mejía, Jerónimo Castrillón, Daniel Giraldo, Andrés Jaramillo, Diego Trejos, Alejandra Tamayo. *Red Piloto De Telemedicina De Antioquia: Equipo Interdisciplinario De Telemedicina* (Antioquia's Telemedicine Test Network: Interdisciplinary Team for Telemedicine). ANDESCON. Medellín, Colombia. Jul. 2004.

Oscar J. Cardona, Sergio Mejía, Jerónimo Castrillón, Daniel Giraldo, Andrés Jaramillo, Cesar Martínez, Bilma Londoo, John Bustamante, Luciano Gallón. *Red de Telemedicina de Antioquia: Interfaz Gráfica y Eléctrica para Equipos Médicos* (Antioquias Telemedicine Network: Graphic and Electric Interface for Medical Devices). TECNOCOM 2004. Medellín, Colombia. May 2004.

Oscar J. Cardona, Sergio Mejía, Jerónimo Castrillón, Daniel Giraldo, Andrés Jaramillo, Diego Trejos. *Monitoreo Remoto de Pacientes en una Red de Telemedicina* (Remote Patient Monitoring in a Telemedicine Network). CIDI- UPB. Medellín, Colombia. May 2004.

Oscar J. Cardona, Sergio Mejía, Jerónimo Castrillón, Daniel Giraldo. Desarrollo de una Interfaz para la Visualización de Signos Vitales en un Computador Personal para el Proyecto Red de Telemedicina de Antioquia (Development of an Interface for the Visualization of the Vital Signs in a PC for the Project: ATN). EITI 2004. Medellín, Colombia. Aug. 2004.

Oscar J. Cardona, Sergio Mejía, Jerónimo Castrillón, Daniel Giraldo, Jaime Gutiérrez. Red de Telemedicina de Antioquia, RTA (Antioquias Telemedicine Network, ATN). In proceedings of the *Primer Congreso Colombiano de Bioingeniería en Ingeniería biomédica* (First Colombian Congress on Bioengineering and Biomedical Engineering). Medellín, Colombia. Oct. 2003.

Oscar J. Cardona, Sergio Mejía, Jerónimo Castrillón, Daniel Giraldo, Jaime Gutiérrez. Antioquias Telemedicine Network. In proceedings of the 25th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Cancun- Mxico. Sep. 2003.

- RELEVANT COURSES ATTENDED
- Codewarrior. IEO. Valentín Restrepo. Universidad Pontificia Bolivariana, Medellín, Colombia. Dec. 21-25, 2004.
 - Biostrategies of Control and Navigation. Phd Kevin Passino, asp. Phd Nicanor Quijano, asp. Phd Jorge Finke. Universidad Pontificia Bolivariana, Medellín, Colombia. Jul. 29-30, 2004
 - Machine Learning Summer School (MLSS2003). Tuebingen-Germany. Ago. 3-18, 2003.
 - *II Curso de Control Inteligente: Fuzzy, Neural and GA Control* (2nd Course of Intelligent Control: Fuzzy, Neural and GA Control). Phd Kevin Passino. Bogotá-Colombia. Mar. 23-28 2003.
 - 2nd International Seminar of VHDL-DSP Design. Dipl. Ingr. Hubert Mooshofer (Technische Universitt Mnchen. Medellín-Colombia. Dic. 10-14 2001.
 - *Curso de Diseño digital en FPGA usando VHDL* (Digital Design in FPGA using VHDL). Asp. PhD. Andrés Upegui. Medellín-Colombia. Oct 2001.

- LANGUAGES
- Spanish: native speaker.
 - English: spoken and written (112/120 TOEFL).
 - Italian: spoken and written (B2 level).
 - German: spoken and written.

- COMPUTER SKILLS
- Programming languages: C/C++, Matlab.
 - Hardware description languages: VHDL, SystemC.
 - \LaTeX