

Curriculum Vitae

Julian Gutierrez

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PERSONAL INFORMATION

Surname : Gutierrez Santiago
First Name : Julian Eduardo
Citizenship : Colombian
Date of Birth : September 28, 1982
Place of Birth : Roldanillo, Valle del Cauca, Colombia.
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RESEARCH INTERESTS

Computational logics and concurrency theory
Formal specification and verification of Concurrent, Distributed and Reactive Systems
Process Algebras and Independence Models

EDUCATION

Engineering degree in Computer Science. Pontificia Universidad Javeriana, Cali, Colombia. 2006.
Honour distinction for academic excellence and *Honour distinction for excellence in graduation work.*
Thesis Work: Applying Concurrent Constraint Programming to Bioinformatics: An Exploratory study.
Supervisor: Professor Camilo Rueda.

Engineering degree in Electronics. Pontificia Universidad Javeriana, Cali, Colombia. 2005.
Honour distinction for academic excellence.
Senior Project: Design and Implementation of a Pipelined Processor.
Supervisor: Professor Eugenio Tamura-Morimitsu.

HONOURS, DISTINCTIONS AND AWARDS

- **Overseas Research Students (ORS) Award.** College of Science and Engineering. University of Edinburgh. Edinburgh. Scotland. UK. 2007.
- **School of Informatics Scholar.** Laboratory for Foundations of Computer Science (LFCS). School of Informatics. University of Edinburgh. Scotland. UK. 2007.
- **Honour distinction for academic excellence.** Highest honour awarded for academic excellence and graduation ranking (1st place). Engineering degree in Computer Science. Pontificia Universidad Javeriana, Cali, Colombia. 2006.
- **Honour distinction for excellence in graduation work.** Laureate Thesis Award. Highest honour awarded for outstanding research work. Engineering degree in Computer Science. Pontificia Universidad Javeriana, Cali, Colombia. 2006.
- **Honour distinction for academic excellence.** Highest honour awarded for academic excellence and graduation ranking (1st place). Engineering degree in Electronics. Pontificia Universidad Javeriana, Cali, Colombia. 2005.
- **INFIVALLE Scholar.** Full scholarship for 5-year university studies. Awarded for academic excellence amongst all the students in the county (Valle del Cauca). 1999.
- **Gold Medal 'Francisco de Paula Santander'.** Best bachelor of Colegio Republicano de Santa Librada, Cali, Colombia. Awarded for academic excellence and graduation ranking (1st place).

PUBLICATIONS

- J. Gutiérrez, J. A. Pérez, C. Rueda, and F. D. Valencia. **Timed Concurrent Constraint Programming for Analysing Biological Systems.** *Electronic Notes in Theoretical Computer Science.* Elsevier, 171(2):117-137. 2007.
- A. Arbeláez, A. Aristizábal, J. Gutiérrez, H. López, J. A. Pérez, C. Rueda, and F. D. Valencia. **Process Calculi to Analyse Emerging Applications in Concurrency.** *Matemáticas: Enseñanza Universitaria.* Colombia. 2007.
- A. Arbeláez, J. Gutiérrez and J. A. Pérez. **Timed CCP in Systems Biology.** *The ALP Newsletter.* Association for Logic Programming (ALP). Vol. 19, No. 4. Nov-Dec. 2006.
- A. Arbeláez, J. Gutiérrez, C. Olarte, and C. Rueda. **A Generic Framework to Model, Simulate and Verify Genetic Regulatory Networks.** *CLEI'06,* 32nd Latinamerican Conference on Informatics. Chile. 2006.

- J. Gutiérrez, J. A. Pérez, and C. Rueda. Modelamiento de Sistemas Biológicos usando Cálculos de Procesos Concurrentes (**Modelling Biological Systems using Process Calculi**). *Epiciclos Scientific Journal*, 4(1):79-101, ISSN 1657-5636. Colombia. 2005.

B Sc. Thesis

- A. Arbeláez and J. Gutiérrez. Estudio Exploratorio de la Aplicación de la Programación Concurrente por Restricciones en Bioinformática (**Applying Concurrent Constraint Programming to Bioinformatics: An Exploratory Study**). B Sc. Thesis. Laureate Thesis Award. Thesis nominated to the Otto de Greiff Award. School of Engineering. Pontificia Universidad Javeriana, Cali, Colombia. 2006.

RESEARCH AND TEACHING EXPERIENCE

Research Postgraduate Student (PhD)

Laboratory for Foundations of Computer Science (LFCS). School of Informatics.

College of Science and Engineering. University of Edinburgh.

Main advisor: Dr. Julian Bradfield.

September 2007 – present.

Research Assistant

Avispa Research Group. School of Engineering.

Department of Sciences and Engineering of Computing. Pontificia Universidad Javeriana, Cali, Colombia.

Senior Researchers: Professor Camilo Rueda and Dr. Frank D. Valencia.

January 2005 – June 2006.

Teaching Assistant

In Computer Science:

Artificial Intelligence, Operating Systems, Algorithms and Complexity, Fundamentals of Programming.

In Electronics:

Microprocessors, Computer Architectures, Digital Logic.

In Mathematics and Natural Sciences:

Discrete Maths, Integral and differential calculus, Electricity and Magnetism, Cinematic and Dynamics.

School of Engineering. Pontificia Universidad Javeriana, Cali, Colombia.

August 2001 – May 2005.

SPECIALISED KNOWLEDGE AND RESEARCH-ORIENTED TRAINING

- Theory and applications of Models for Concurrency, mainly Process Calculi.
- Computational Logics for the specification and verification of Reactive and Concurrent Systems.
- Languages for concurrency, especially those based on the CCP model.
- Process Algebras and Petri Nets for Computational Systems Biology.
- Computer architectures for parallel computation.
- Mathematical description of robotic manipulators.
- Participant in the "LIX Colloquium on Emerging Trends in Concurrency Theory". Ecole Polytechnique. Paris, France. November 13 – 15. 2006.
- Participant in the course "Formal Models of Concurrency". Pontificia Universidad Javeriana, Cali, Colombia. 2004.

COMPUTATIONAL PROFICIENCY

- Programming Languages: C, C++, Mozart-Oz, Python, TCL-TK, LaTeX, and Assembler for several microprocessor and microcontroller architectures.
- Hardware Description Languages: VHDL, AHDL.
- Operating Systems: MacOSX, Linux and Windows.

LANGUAGES

Spanish and English.

REFERENCES

Professor Camilo Rueda. Head, Department of Sciences and Engineering of Computing. Pontificia Universidad Javeriana, Cali, Colombia. email: crueda@cic.puj.edu.co

Dr. Andres Jaramillo-Botero. Director, Multiscale Modeling and Simulation.

California Institute of Technology, Pasadena, California, USA. email: ajaramil@caltech.edu

Professor Eugenio Tamura-Morimitsu. Assistant Professor.

Pontificia Universidad Javeriana, Cali, Colombia. email: tek@puj.edu.co

Dr. Frank D. Valencia. CNRS and LIX.

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