

CURRICULUM VITÆ

PERSONAL DETAILS:

Name: Juan Pablo Martinez Brito
Date of Birth: August 12, 1978
Birthplace: Santiago, Chili
Parents: Gerardo Guido Martinez Pino
Gabriela Eliana Brito Jara
Address: Abram Goldzstein 446/206B
Jardim Itália – Porto Alegre
91450-155 Brazil
Phone: +55 51 3276.4678
Cellular: +55 51 9956.7056
E-mail: juanbrito@gmail.com
Web: <http://www.inf.ufrs.br/~juan>



OBJECTIVE: To occupy a post in a semiconductor fab.

PROFESSIONAL EXPERIENCE:

Analog Design Engineer

2010- Analog Design Engineer at *CEITEC Association (non-profit organization)*..
Department: Design Center. Working Subject: Analog Integrated Circuits. RF
Wireless Devices. RFID Design.

Project leader

2006-2010 Research test chip design in IBM 65 nm CMOS 10LPE/RFE process developed
at *Federal University of Rio Grande do Sul (UFRGS)* under MOSIS Educational
Project. Test chip composed of several test structures to evaluate the local
variability in manufacturing process of integrated circuits. Final chip size: 1.58
mm x 1.58 mm (with pads, without scribe lines), or 1mm x 1mm core size.
Number of coordinating research assistants: 2

Internship realized in France

2005 Internship realized in the *Laboratoire d'Étude de L'Intégration des Composants
et Systèmes Electroniques, (IXL)* (Actually, IMS Laboratoire de l'Intégration du
Matériau au Système), Bordeaux/France. Advisor: Prof. Yann Deval. Internship
theme based on the cutting-edge research for new architectures to implement
nowadays multiband Radio Frequency Integrated Circuits. Final Internship
report: *Analog Signal Processing with Charge Transfer Devices applied for
RFIC devices*. http://www.inf.ufrs.br/~juan/stage_ixl.zip (French).

Research experience

2001 – 2006 Undergraduate researcher with *CNPq (Brazilian NSF)* scholarship in the
Microelectronics Group (GME) at UFRGS, Porto Alegre/Brazil. Firstly advised
by Prof. Ricardo Reis, work developed in the support and maintenance in
electronic design automation (EDA) for *Cadence Design Systems®*.
<http://www.inf.ufrs.br/~juan/tutorial/index.html>. Subsequently advised by Prof.
Sergio Bampi, work research area concentrated in the design of CMOS Analog
Integrated Circuits using ultra-scaled VLSI technologies; Having as
Undergraduate Final Project: *A Bandgap Reference Circuit in 0.35µm CMOS
Technology*. Report: http://www.inf.ufrs.br/~juan/diplomacao_gme.zip
(Portuguese).

Teaching assistantship experience

2001/1-2001/2 Undergraduate Discipline: FIS01181, *Physics I-C* at UFRGS.
Physical Measurement. Kinematics, Static and Dynamics of the point of the
strict body. Gravitation.

Past Professional activities

2000 *Teltecnica Comunicações LTDA* – Porto Alegre/Brazil.
Post: Installer and Technician in Electronic Doors, Electronic Porters and
Security Video Systems.

1996 - 2000 *Palace of Police of Porto Alegre* - DETEL (Police Telecommunications
Department), Porto Alegre/Brazil.
Post: Support in Police Radio Systems.

Internship realized during course of specialization:

1994-1995 *Walter D. Fischer Cia&Ltda* – Porto Alegre/Brazil
Post: Junior Apprentice

EDUCATION:

Graduate:

2006- PhD underway at the *Graduate Program on Microelectronics (PGMICRO)* at the
Federal University of Rio Grande do Sul (UFRGS), Porto Alegre/Brazil. Thesis
Subject: *On-Chip Test Structures for Local Random Variability Measurements in
65 nm CMOS Technology*. Advisor: Sergio Bampi.

Undergraduate:

2000-2006 Graduation in *Electrical Engineering EE* from the *Federal University of Rio
Grande do Sul (UFRGS)* in Porto Alegre/Brazil. Graduation date degree:
February 11, 2006. GPA 3.2

2004-2005 Completion of the Electrical Engineering Degree at *École Nationale Supérieure
d'Électronique, Informatique et Radiocommunications de Bordeaux (ENSEIRB)*
in *Bordeaux/France*; course option: Microelectronics/Radio Frequency
Integrated Circuits. GPA 3.9

Courses of Specialization and Lectures Listened:

2004 Fabrication course on integrated circuits. Clean-room experience on the
chemical-physical fabrication process of integrated circuits. *AIME*
Toulouse/France (40h)

2002 *IV EMICRO* (IV School on Microelectronics)
Place: Canasvieiras Praia Hotel. Florianópolis, SC, Brazil.
July 2002. Participation: Advanced course. (40h)

2001 *IIV EMICRO* (IIV School on Microelectronics)
Place: UFSM. Santa Maria, RS, Brazil
August 2001. Participation: Basic course. (40h)

1995 *Delorenzi* School of Electronics Porto Alegre
Course: Basic Electronics. Semiconductor Theory and Radio Communication
Systems. (200h)

1994 *SENAI* School of Professional Education – head office: Visconde Mauá.
Course: Eletro-electronics. Residential electricity: Basics and Design. Industrial
electricity: Command and Project of industrial plants. (400h)

PRINCIPAL PUBLICATIONS:

Books

Girardi, A. G. ; Brito, J. P. M. ; Johann, M. "**23th South Symposium on Microelectronics (23° Simpósio Sul de Microeletrônica),**" *Proceedings*. May 5-6 2008, Bento Gonçalves, RS. 170 Pages. ISBN 978-85-76691-17-4. Publisher: Brazilian Computer Society (SBC)

Journal Papers

Brito, Juan; Bampi, Sergio, "**Design of a digital FM demodulator based on a 2nd-order all-digital phase-locked loop,**" *Journal of Analog Integrated Circuits and Signal Processing (AICSP)*, Springer, ISSN: 0925-1030 (Print) 1573-1979 (Online), Issue: Volume 57, Numbers 1-2 / November, 2008, Pages: 97-105.

Juan Pablo Martinez Brito, Sergio Bampi, "**A DC offset and CMRR analysis in a CMOS 0.35 µm operational transconductance amplifier using Pelgrom's area/accuracy tradeoff ,**" *Microelectronics Journal* ISSN 0959-8324, p. 1281-1292, 2008.

Conference Papers

Brito, J. P. M. ; Werle, F. C. ; Camaratta, G. R. ; Bampi, S., "**Local Random Variability Characterization Structures for FETs in CMOS 65 nm Test-Chip,**" *VARI 2010 First European Workshop on CMOS Variability*, 2010, Montpellier France.

Brito, J. P. and Bampi, S. 2007. "**Design of a digital FM demodulator based on a 2nd° order all-digital phase-locked loop.**" *Proceedings of the 20th Annual Conference on Integrated Circuits and Systems Design (Copacabana, Rio de Janeiro, September 03 - 06, 2007)*. SBCCI '07. ACM, New York, NY, 137-141.

Martinez Brito, J.P.; Bampi, S.; Klimach, H., "**A 4-Bits Trimmed CMOS Bandgap Reference with an Improved Matching Modeling Design,**" *Circuits and Systems*, 2007. ISCAS 2007. *IEEE International Symposium on* , vol., no., pp.1911-1914, 27-30 May 2007.

Brito, J.P.M.; Klimach, H.; Bampi, S., "**A Design Methodology for Matching Improvement in Bandgap References,**" *IEEE Quality Electronic Design*, 2007. ISQED '07. *8th International Symposium on* , vol., no., pp.586-594, 26-28 March 2007.

Brito, J.P.M; Deval Y.; Rivet F., "**Analog Signal Processing in Software-Defined Radio Systems**" *Microelectronics*, 2006. SIM 2006. *21th South Simposium on* , vol. 1, pp. May, Porto Alegre, Brazil 2006.

COMPUTER SKILLS:

Programming:	Assembly, C++, Pascal, VHDL, VHDL_AMS, Verilog
Software:	Agilent Advanced Design System (ADS), Cadence Design Systems, Mentor Graphics, Synopsis, Matlab, Quartus II, SPICE simulation.
Operational System:	Unix-based (mainly Linux and Solaris), Windows 98/2000/XP.
Software Administrator:	Cadence Design Systems.
Process Design Kit Assistant:	Support for 10LP 65nm IBM technology. Installation and configuration within the entire technology options: Calibre/Mentor Graphics, Hercules/Synopsis, Assura-Virtuoso-Spectre/Cadence.

OTHERS:

Language Skills:		Lived places:		Musical Education:
Portuguese	Mother Tongue	1978-1985	Chile, Santiago	Theory and practice in musical percussion since 16 years old. Instrument : Drums Style : Jazz
Spanish	Mother Tongue	1985-1989	Brazil, São Paulo	
English	Advanced	1989-1991	Germany, Stuttgart	
French	Advanced	1991-2004	Brazil, Porto Alegre	
German	Basic	2004-2005	France, Bordeaux	
TOEFL iBT	score: 83 /120	2005-	Brazil, Porto Alegre	

Foreign languages courses:

English	Cosmopolitan English School , Advanced Course - Brazil/Porto Alegre
French	Département d'Etudes de Français Langue Etrangère (DEFLE) , Advanced Course – France/Bordeaux
German	Internationale Klasse an der Friedenschule - Deutsch kurs für Ausländer , Basic Course – Stuttgart/Germany

Memberships and representatives

Member of the bidding commission board at CEITEC Association

IEEE - Institute of Electrical and Electronics Engineers, Inc., since 2006.

SBMICRO - Brazilian Microelectronics Society Student Member, since 2001.

CREA-RS - Regional Engineering, Architecture and Agronomy Council of Rio Grande Do Sul, since 2006.

IEEE UFRGS Student Branch President.