Victor J. Gallardo

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CAREER SUMMARY

Electrical Engineer with ten years of electronic digital/analog design with DSP, microprocessors and microcontrollers experience. Demonstrated skills in definition, design, simulation and verification of board and chip level systems. Experience on DSP production and collateral activities. Additional skills include research on migration of digital hardware Legacy Systems (LS) toward new technology implementation SOC using FPGA's, CPLD's and ASIC. Teaching experience at University level with excellent achievements in special academic programs oriented to research in sciences and technology. Proven ability to work effectively as a team player and efficient leader. Management experience on projects and activities includes producing deliverables on time and under budget. Hands on experience with:

Embedded systems design	Microcontrollers	Test cases	Code Composer Studio
Systems validation & verification	High speed digital design	Specification	Customers Support
Electronic systems applications	IBIS and BSDL Models	DSP peripherals	Project management
Devices validation	Timing analysis	Documentation	Lab equipment
Debug complex H/S problems	DSP architecture	VHDL and Verilog	Assembly Language

PROFESSIONAL AND RESEARCH EXPERIENCE

UNIVERSITY OF HOUSTON, College of Technology, ET Department, Houston, TX   **2004-Present**
Instructional Lab Manager
- In charge of **administration and management of the Lab Assistants** for the departments of Computer Technology and Power-Control. These functions include: Selection, Hiring, Training, Coordination, Scheduling, Monitoring, and Evaluation.
- **CLABS project**. Participation in the development of new CETE labs, including: lab model, creativity, inventiveness, real applications, projects, hardware, soldering, simulation and programming.
- **Lab facilities.** Evaluate equipment and software for use in undergraduate labs. Engages in lab instruction under faculty supervision.
- **Work with Faculty and Students.** Recommend course material development, maintenance, and upgrades to Faculty. Assists to Faculty in equipment proposal development. Assists to students with capstone projects.
- **Industry links.** Develop industry-sponsored undergraduate laboratory projects.

UNIVERSITY OF HOUSTON, Electrical & Computer Engineering Department, Houston, TX   **2003 - 2004**
Teaching Assistant
- Led Lab practices for Circuit Analysis (ECE2100), Electronics ECE3455, Digital Electronics (ECE3457) courses.
- Participated in teaching of Computer & solving problems (ECE 1331) course.
- Led Computer lab practices

UNIVERSITY OF HOUSTON, Electrical & Electronics Technology Department Houston, TX   **Summer 2003**
Part-Time Professor
- Taught Introduction to C++ (ELET 2300)
- Led Computer lab practices

UNIVERSITY OF HOUSTON, Electrical & Computer Engineering Department, Houston, TX   **2003 - 2004**
Research Assistant
- Performed research on Real-time processing of video data from an Adaptive Optics Retinal Imaging System.

TEXAS INSTRUMENTS INC, Stafford, TX   **2000 – 2002**
Applications Engineer:
- Designed, developed, documented and debugged TI's DSP systems in key market segments for TI's broadband communications, image and video processing and multi-channel telecommunications areas.
- Collaborated with software teams and key end equipment customers to define DSP peripherals, market segmentation strategies and systems for telecommunications markets.
- Together with design group, developed and validated on-chip peripherals and device environments.
    Significant Projects:
    - *Applications Engineer* worked on internal SDRAM failure analysis. Developed verification of internal Program and data memory. Responsible for C6205 and C6203C VDB's update and validation. Worked with testbench for DSP peripherals XBUS, PCI, EMIF, McBSP. Created an IBIS analysis methodology.

    - *C620x/C670x Applications Lead:* led activities related to one of the most important TI's DSP family in the telecommunication market. Wrote applications notes, migration documents, errata and datasheets for the following devices: C6201/02/03B/04/05 and C6701.

    - *Electrical design group:* In charge of parameter definition, integration, test and update of IBIS models for C620x, C64xx, and C67xx DSP devices. Worked on High-speed board analysis. Worked on PLL Characterization in 130 nm TI's state-of-art technology.

TULANE UNIVERSITY, Electrical Engineering & Computer Science Department, New Orleans, LA   **1997**
Teaching Assistant
- Designed, implemented and tested laboratory practices for Micro Computer Interface Course.

TULANE UNIVERSITY, Electrical Engineering & Computer Science Department   **1995 - 1996**
Research Assistant
- Performed research on components identification in Digital systems.
- Implemented a basic image acquisition system.
- Completed research on automatic inspection and its applications.

UNIVERSIDAD AUTONOMA DE SAN LUIS POTOSI, Physics Institute,   **1991- 1994**
Professor & Researcher
- Led the electronics lab, designed and implemented intelligent systems based on microprocessor application of Artificial Intelligence techniques.
- Directed the project Intelligent Instrumentation (virtual instrumentation).
- Taught courses: Advanced Microprocessors, Basic electronics and Electronics Applications, Computer Architecture, Microprocessor Introduction

MONTERREY TECH INSTITUTE, Electronics & Telecommunications Center   **1989-1991**
Research Assistant
Led the Microprocessor Lab, developed the system TV-ANSWER (communication bi-directional through video signals), designed, implemented and tested an Error Detection/ Correction Transmission System using FEC techniques. The system was based on 8748/49 and 8051 microcontrollers.

UNIVERSIDAD AUTONOMA DE SAN LUIS POTOSI, Physics Institute   **1988-1989**
Professor (Researcher –Lecturer)
- Developed systems based on 8 bits microprocessor and their applications on research labs (e.g. power control, computer interfaces, RS-232 communications, IEEE-488 modules, X-Y position system, etc.). The systems were based on Z-80, 6502, 6809 microprocessors.
- Taught Microprocessor Applications course.

INSTITUTO TECNOLOGICO DE SAN LUIS POTOSI Electrical and Electronics Department   **1986 - 1987**
Professor (Laboratory Instructor -Lecturer)
- Managed the electronics lab and instructed students in the use of test and measurement equipment.
- Instructed and supervised projects in Basic electronics and Digital Logic courses. The practices included sequential circuits, combinational circuits, ALU and computer organization.
- Taught the Electrical and Electronic Measurements course.
- Supervised practices in instrumentation, measurements of voltage, impedance, capacitance, inductance, frequency, RMS values, etc.

EDUCATION
Ph.D. Studies Electrical Engineering, University of Huston, Houston, TX
Ph.D. Candidate Electrical Engineering, Tulane University, New Orleans, LA
M.S. Electrical Engineering with emphasis in Computer Engineering, Tulane University New Orleans, LA
M.S. Electrical Engineering with emphasis in Electronics Systems, Monterrey Tech Institute, Monterrey, N.L.
B.S Industrial Engineering in Electronics, Instituto Tecnológico de San Luis Potosi (I.T.S.L.P.) San Luis Potosi

CERTIFICATION
- **Professional Engineer**
  EIT certificate # 18810, Oct 1998
  Louisiana State Board of Registration for Professional Engineer
- **Texas Teaching Certification**
  ACT Fall Institute Program intern
  Alternative Certification Program, Houston TX
- **Ingeniero Profesional**
  Industrial in Electronics Engineer
  Professional Registration ID: 1657519
  Dirección General de Profesiones, Mexico, D.F.

PATENTS
- **Methodology for migration of Digital Legacy Systems to new Technology using Automatic HDL model generator based on an image analysis system.**
  Victor J. Gallardo, Cris Koutsougeras and Nickolaos Bourbakis. Tulane University, Office of Technology and Development. Pending
- **Wireless smart credit card**, Victor J. Gallardo and Rene Reyes, General Micro Devices Inc. Pending
- **Electronic tutor for musical teaching,** Victor J. Gallardo. Pending

HARDWARE/SOFTWARE SKILLS
- **Design software:** Verilog HDL, VHDL, MATLAB, Pspice, Design works, OrCAD, Tango, Cantata, Code Composer Studio Beta 2(TI), Xilinx foundation tools, Hyperlinx. Familiarity with Synopsis, veritime, verifault, Multisim.
- **Programming Languages:** Qbasic, Visual basic, Pascal, Fortran, C, C++, Assembly (Z-80, 6502, 6809, 8085, 8748, 8749, 8051, 68HC11, TMS320C620x, TMS320C67xx)
- **Hardware Ability:** Electronic lab equipment for debugs complex hardware problems (logic analyzers, oscilloscopes, signal analyzer, spectrum analyzer, etc.) Personal computer hardware, specific interfaces, office automation, and networking.