

# Andrés Jacoby Krateil

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Licensed professional with major in Electrical and Computer Engineering by Pontifical Catholic University of Peru (PUCP). Currently pursuing a Masters in Embedded Systems at Oakland University. Proactive, innovation-minded, adaptable, flexible and willing to take on challenges. Expert in embedded system design, digital circuit design, hardware acceleration, firmware development, programmable logic devices (FPGAs), Dynamical Partial Reconfiguration (DPR), System-on-Chip (SoC), Wireless Sensor Networks (WSN). My research interests include hardware acceleration, reconfigurable computing, Hardware-in-the-Loop (HIL), signal processing, parallel processing, FPGAs and embedded systems applications in the automobile industry.

## Education:

Present      **Oakland University, Rochester, Michigan, USA.**  
Currently pursuing a Masters in Embedded Systems.

01/14      **Pontifical Catholic University of Peru (PUCP), Lima, Peru.**  
Licensed professional with major in Electrical and Computer Engineering.  
Top 20% of Science and Engineering Faculty.  
Thesis: Development of a framework and a demonstrative implementation for dynamically reconfigurable embedded systems based on OpenRISC.

04/12      **University of New Mexico (UNM), Albuquerque, USA.**  
Exchange student in the Electrical and Computer Engineering department.  
GPA: 3.91.

## Skills:

- Ability to learn new tools, systems and concepts in a self-taught way.
- Responsibility and ability to meet deadlines.
- Skills to detect problems and take action judiciously.
- Teamwork skills.
- Ability of problem solving related to electricity, electronics, informatics and computer systems.

## Software Knowledge:

Microsoft Windows, Linux (Ubuntu, OpenSUSE), HP-UX, Microsoft Office (Word, Excel, Power Point, Access, Visio) , TexMaker, Microsoft Visual Studio, Microsoft SQL Server, MATLAB, Altera

Quartus II, Xilinx ISE, Xilinx PlanAhead, Xilinx ISim, ModelSim, Atmel AVR Studio, VMLAB, L-Edit, L-Spice, Eagle, LabView, LogixPro 500 , Proteus ISIS, Photoshop, Premiere, After Effects.

## **Programming languages, hardware description languages and scripts knowledge:**

VHDL, Verilog, C, Visual Basic 6, VB .NET, ASM AVR, Qt framework, MATLAB, PHP, Korn-Shell, Tcl, MySQL, Yii Framework, JQuery, Jqplot, HighCharts.

## **Related knowledge:**

Atmel AVR, OpenRISC, ARM, Microblaze (basic), SPI, I<sup>2</sup>C, UART, VGA, Wishbone, TCP/IP stack, dynamic partial reconfiguration with Xilinx FPGAs, device driver development (kernel) in Linux environment, WSN, Arduino.

## **Languages:**

- Spanish (native).
- English (fluent).

## **Publications:**

- Andres Jacoby, Daniel Llamocca, Ramiro Jordan, G. Alonzo Vera, “Proteus: An Open Source Dynamically Reconfigurable System-on-Chip with applications to Digital Signal Processing”, en International Caribbean Conference on Devices, Circuits and Systems, 2014.
- José C. Lazo-Cannata, Antonio Nieto-Márquez, Andrés Jacoby, Ana L. Paredes-Doig, “Adsorption of phenol and nitrophenols by carbon nanospheres: Effect of pH and ionic strength” en Separation and Purification Technology, 2011.

## **Professional Experience:**

- 08/2015 – present    **OU's Reconfigurable Computing Research Laboratory**  
Development of a Crank-Angle-Resolved Engine Cylinder Pressure Model for the HIL.
- 04/2014 – 07/2015    **Rural Telecommunications Research Group (GTR-PUCP)**  
Development of a low cost and fast deployment solution for air monitoring in urban areas based on Wireless Sensor Networks (WSN).
- 02/2014 – 04/2014    **Building Automation Technologies S.A.C**  
Software Engineer in R&D department.  
Responsibility: Development of a VB .NET/SQL application to record the logs, view the activity and analyze data of Chaskiy™.
- 08/2013 – 12/2014    **Pontifical Catholic University of Peru (PUCP)**  
Teacher assistant in:  
Computer architecture's laboratory.

Digital circuits' laboratory.  
Microelectronics' laboratory.  
Digital systems' laboratory.

06/2012 - 12/2012

**Luz del Sur S.A.A**

Intern at the Data Base section of the department of Informatics and Telecommunications.

Responsibilities: Provide support for the SQL DB servers.

Development of scripts (ksh) for the servers.

Update the web-based (PHP) platform to control the Active Directory.

Migration to HP Data Protector 7.0