

Jorge Tomás Gómez Mir

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Education

2018 - Today: Doctoral student at University of Notre Dame, IN, USA.

2016 - Today: Doctoral student at Pontificia Universidad Católica de Chile. CONICYT fellow: National PhD Scholarship.

2008 - 2014: Degree in Electrical Engineering, Universidad de los Andes, Santiago, Chile. Award for best graduation rate and Universidad de los Andes award. Full scholarship for academic performance throughout the career.

P.S.U. (like SAT): Highest score in Math and highest score in Science of the German School of Santiago. National highest score in Math.

Work Experience

2021 - Today: Research Intern at Facebook Reality Labs.

2020 (16 weeks): Research Intern at Facebook, CA, USA.

2014 – 2016: Work on the development and maintenance of meteorological sensors to optimize fog capture at Andes Iron Mining Company.

Summer 2013: Internship at company Termodinámica S.A.
(Company dedicated to the control of fluids and energy efficiency).

Summer 2011: Internship at construction company Boetsch S.A.

Selected Publications

- **Conferences:**

- H. Ye, **J. Gomez**, W. Chakraborty, S. Spetalnick, S. Dutta, K. Ni, A. Raychowdhury, and S. Datta, " Double-Gate W-Doped Amorphous Indium Oxide Transistors for Monolithic 3D Capacitorless Gain Cell eDRAM," *2020 IEEE International Electron Devices Meeting, (IEDM)*, (2020).
- **J. Gomez**, S. Dutta, K. Ni, JA Smith, B. Grisafe, A. Khan and S. Datta, " Hysteresis-free negative capacitance in the multi-domain scenario for logic applications," *2019 IEEE International Electron Devices Meeting, (IEDM)*, (2019).
- **J. Gomez**, S. Dutta, K. Ni, B. Grisafe, J. Smith, A. Khan and S. Datta, "Significance of Multi and Few Domain Ferroelectric Switching Dynamics for Steep-Slope Non-Hysteretic Ferroelectric Field Effect Transistor", *IEEE Device Research Conference (DRC)*, (2019)

- **Journal Papers:**

- **J. Gomez**, I. Vourkas, A. Abusleme, R. Rodriguez, J. Martin-Martinez, M. Nafria, A. Rubio , "Exploring the "resistance change per energy unit" as universal

performance parameter for resistive switching devices”, *Solid-State Electronics*, 165, (2020).

- S. Dutta, P. Abhinav, A. Khanna, **J. Gomez**, W. Chakraborty, M. Jerry, B. Grisafe, A. Raychowdhury, S. Datta, “Programmable coupled oscillators for synchronized locomotion”, *Nature Communications*, 10, Article number: 3299 (2019).
- **J. Gomez**, I. Vourkas, A. Abusleme, G.C. Sirakoulis and A. Rubio, “Voltage Divider for Self-Limited Analog State Programming of Memristors”, *IEEE Transactions on Circuits and Systems II: Express Briefs* (2019).
- **J. Gomez**, I. Vourkas and A. Abusleme, “Exploring Memristor Multi-Level Tuning Dependencies on the Applied Pulse Properties via a Low Cost Instrumentation Setup”, *IEEE Access* 7, 59413-59421 (2019).

Teaching Experience

Teaching assistant:

- At Pontificia Universidad Católica de Chile, Department of Electrical Engineering:
 - Electronics: 2016 – II, 2017 – I, 2017 – II
 - Design of analog integrated circuits: 2017 – I
- At Universidad de los Andes de Chile, Faculty of Engineering and Applied Sciences:
 - Analog Design 2014 – II and 2015 – II
 - Electrical Design Project: 2013 – II, 2014 – II and 2015 – II
 - Digital Design: 2015 – I
 - Philosophy of Science: 2010 I and II.
 - Electromagnetism: 2009 I and II.

Teacher:

- At Universidad de los Andes de Chile, Faculty of Engineering and Applied Sciences:
 - Engineering project workshop: 2015 – I, 2016 – I and 2017 – I.

Skills

- Fluent in English (IELTS C1) and German (Sprachdiplom Niveau B 2).
- Programming language in an advanced level: Python
- Programming languages at a basic level: JavaScript, Verilog, C++ and C.
- Circuit design: Advanced level in SPICE circuit simulator.
- Integrated Layout Circuit drawing: Medium level in Magic VLSI Layout Tool.
- 3D design: Advanced level in Inventor.
- DC and RF Solid-state devices characterization.

References

1. Suman Datta, Stinson Professor of Nanotechnology at ND, PhD. Advisor at ND, sdatta@nd.edu
2. Ángel Abusleme, Professor at PUC, PhD. Advisor at PUC, angel@uc.cl.
3. Pablo Zegers, Cofounder and Chief Product Officer at Anastasia.ai, PhD., undergraduate thesis advisor, pablozegers@gmail.com.