Andrés Miguel Airabella

Curriculum Vitae

"Weniger, aber besser" - Dieter Rams

Personal Data

Full Name	Andrés Miguel Airabella
Date of Birth	June 4th, 1984
Place of Birth	San Rafael, Mendoza, Argentina
Nationality	Argentinian
Civil State	Married. Three kids.
Postal Address	Barrancas Coloradas Neighborhood, Manzana 479, Casa 9. 5700 - San Luis. San Luis - Argentina
Phone	+54-9-266-4362456
Email	a.airabella@gmail.com

Professional Training

Formal Studies

2011– (Incomplete) **PhD in Engineering Sciences**, *National University of Río Cuarto*, Faculty of Engineering, Thesis Topic: Fault-Tolerant DC-DC Converters for Hybrid Electric Systems Applications.
PhD accredited by CONEAU resolution 023/07

2003–2009 **Electronics Engineering with a focus on Digital Systems (OSD)**, *National University of San Luis*, Faculty of Physics Maths and Natural Sciences, Average: 8.83 (eight point eight three), with and without failed courses.

1997–2001 **Accounting and Administrative Technicature with a focus on computer science**, *San Rafael School, 28 P.S. Marist Brothers*, San Rafael, Mendoza.

Languages

English Level 4 completed and approved at I.A.I. Language School, San Rafael, Mendoza. English I and II, corresponding to the Electronics Engineering with OSD program. Excellent speaking, reading, text interpretation, and writing skills.

Italian Level A2 completed at Danthe Alighieri School, Villa Mercedes, San Luis.

Spanish Native language.

Postgraduate Courses

2012 MODELING AND CONTROL OF ELECTRIC MACHINES (Ding-14). Organized by the Faculty of Engineering, National University of Río Cuarto. Instructors: Dr. Eng. Guillermo O. García and Dr. Eng. Pablo M. De la Barrera. Duration: 60 hours. Dates: April 1, 2012, to July 10, 2012. Certificate: May 27, 2013.

2012 SWITCHED CONVERTERS (Code 2467). Organized by the Institute of Electrical Engineering Research, National University of Sur. Responsible Instructors: Drs. A. Oliva - M. D'Amico. Duration: 80 hours. Approved on June 28, 2012. Certificate: October 30, 2012.

2010 POWER ELECTRONICS (Dinge-06). Organized by the Faculty of Engineering, National University of Río Cuarto. Instructors: Dr. Eng. Guillermo O. García and Dr. Eng. Germán Oggier. Duration: 60 hours. Dates: September 1, 2010, to December 17, 2010. Certificate: March 20, 2012.

2012 ADVANCED LINEAR CONTROL. Organized by the Faculty of Engineering, National University of Río Cuarto. Instructors: Dr. Eng. Cristian de Ángelo, assistant: Ms. Lic. Laura Pérez. Duration: 60 hours. Dates: September 11, 2012, to December 11, 2012. Certificate: May 27, 2013.

2012 INSTANTANEOUS POWER THEORY AND APPLICATIONS. National University of Río Cuarto. Second semester 2012. Responsible: Dr. Eng. G. O. García and Dr. Eng. G.G. Oggier. Duration: 60 hours. Approved: November 3, 2014.

2013 POWER ELECTRONICS IN MICROGRIDS WITH HIGH PENETRATION OF RENEWABLE ENERGY. (Ding-26) National University of Río Cuarto. September 3 to December 30, 2013. Responsible: Dr. Eng. Denizar C. Martins and Dr. Eng. Guillermo. O. García. Duration: 60 hours. Approved. Certificate: December 29, 2014.

2015 LABORATORY OF IMPLEMENTATION OF EXPERIMENTAL PROTOTYPES. National University of Río Cuarto. Responsible: Dr. Eng. Germán G. Oggier and Dr. Eng. Guillermo. O. García. Duration: 80 hours. Approved: 2015.

Postgraduate Seminars

2012 RESEARCH SEMINAR IN CONTROL AND ENERGY CONVERSION. Organized by the Faculty of Engineering, National University of Río Cuarto. Duration: 40 hours. Dates: April 25, 2012, to December 10, 2012. Certificate: May 23, 2013.

2011 RESEARCH SEMINAR IN ENGINEERING SCIENCES. Organized by the Faculty of Engineering, National University of Río Cuarto. Duration: 40 hours. Dates: April 6, 2011, to September 6, 2011. Certificate: November 20, 2012.

2011 RESEARCH SEMINAR IN CONTROL AND ENERGY CONVERSION. Organized by the Faculty of Engineering, National University of Río Cuarto. Dates: March 23, 2011, to December 18, 2011. Duration: 40 hours. Certificate: May 11, 2012.

Training and Development Courses

2018 Course: "Advanced Design of Embedded Systems on Programmable Logic: Zynq APSoC, Vivado HLS, and SDSoC". Credit Hours: 60 hours. LEIS. Electra Training. March 19 to 23, 2018. National University of San Luis. San Luis, Argentina.

2017 Course: "High-Level Synthesis for FPGAs with Vivado-HLS". LEIS. Electra Training. April 11 and 12, 2017. LEIS. National University of San Luis. San Luis, Argentina.

2017 Course: Accelerating FPGA Design (FPGA Competence). Bitbis AS (Norway). May 8 and 9, 2017. Satellogic S.A. Buenos Aires, Argentina.

2017 Course: Advanced VHDL Verification - Made Simple (FPGA Competence). Bitbis AS (Norway). May 9 to 11, 2017. Satellogic S.A. Buenos Aires, Argentina.

2009 Course: "Advanced Training Course on FPGA Design and VHDL for Hardware Simulation and Synthesis" at the International Centre for Theoretical Physics (ICTP) in Trieste, Italy. Duration: 120 clock hours. October 2009.

Undergraduate Teaching

2019–present Assistant Professor, Part-time. Faculty of Physics, Maths and Natural Sciences. National University of San Luis. Date: February 5, 2019, to present. Responsible for courses: Computer Architecture (Electronics Engineering with a focus on Digital Systems), Audio and Video (Telecommunications Technicature), and Multimedia Production (Telecommunications Technicature).

2017–2019 Assistant Professor, Full-time. Faculty of Physics, Maths and Natural Sciences. National University of San Luis. Date: September 1, 2017, to February 4, 2019. Responsible for courses: Computer Architecture (Electronics Engineering with a focus on Digital Systems), Audio and Video (Telecommunications Technicature), and Multimedia Production (Telecommunications Technicature).

2016–2017 Assistant Professor. Full Time. Faculty of Physics, Maths and Natural Sciences. National University of San Luis. Date: April 14, 2016, to August 30, 2017. Responsible for courses: Computer Architecture (Electronics Engineering with a focus on Digital Systems), Audio and Video (Telecommunications Technicature), and Multimedia Production (Telecommunications Technicature).

2013–2016 Assistant Professor, Part-time, Temporary Character. Faculty of Physics, Maths and Natural Sciences. National University of San Luis. Date: July 22, 2013, to April 13, 2016. Responsible for courses: Computer Architecture (Electronics Engineering with a focus on Digital Systems), Audio and Video (Telecommunications Technicature), and Multimedia Production (Telecommunications Technicature).

2012–present First-level Teaching Assistant, Part-time dedication. Faculty of Physics, Maths and Natural Sciences. National University of San Luis. Date: November 1, 2012, to present. On leave without pay due to incompatibility. Responsible for courses: Computer Architecture (Electronics Engineering with a focus on Digital Systems), Audio and Video (Telecommunications Technicature), and Multimedia Production (Telecommunications Technicature).

2011–2012 First-level Teaching Assistant, Part-time. Faculty of Physics, Maths and Natural Sciences. National University of San Luis. Date: April 1, 2011, to October 30, 2012. Responsible for Practical Works: Computer Architecture (Electronics Engineering with a focus on Digital Systems) and Digital Systems Design (Electronics Engineering with a focus on Digital Systems).

2010–2011 First-level Teaching Assistant. Full-Time. Faculty of Physics, Maths and Natural Sciences. National University of San Luis. Date: March 12, 2010, to March 31, 2011. Responsible for Practical Works: Computer Architecture (Electronics Engineering with a focus on Digital Systems) and Digital Systems Design (Electronics Engineering with a focus on Digital Systems).

2009-2010 Second-level Teaching Assistant, Part-time. Faculty of Physics, Maths and Natural Sciences. National University of San Luis. Date: June 9, 2009, to March 11, 2010. Teaching Assistant: Computer Architecture (Electronics Engineering with a focus on Digital Systems) and Digital Systems Design (Electronics Engineering with a focus on Digital Systems).

Postgraduate Teaching

2013 POWER ELECTRONICS. Taught by the Faculty of Mathematical and Natural Sciences, National University of San Luis. Instructors: Dr. Ing. Germán Oggier. Teaching Assistant: Ing. Andrés Miguel Airabella. Coordinator: Ing. Cristian Ariel Falco. Duration: 60 hours. Dates: November 1, 2013, to November 30, 2013.

Bachelor's Thesis Evaluation

2023 "Crono TDC: Design and implementation of a Time to Digital Converter on FPGA." Author: Julián Rodriguez. Supervisor: Eng. Nicolás Alvarez. Co-Supervisor: Dr. Federico Izraelevitch. Degree: Electronics Engineering. School of Science and Technology. UNSAM. May 31, 2023.

2022 Obstacle detection on sidewalks for the assistance of visually impaired individuals." Author: Lucas Carranza. Supervisor: Dr. Emanuel Trabes. Degree: Electronics Engineering with a focus on Digital Systems. UNSL. November 4, 2022.

2022 "Detection and classification of cracks in asphalt pavements using Computer Vision." Author: Emanuel Alfredo Cortez Médici. Supervisor: Eng. Ricardo Petrino. Degree: Electronics Engineering with a focus on Digital Systems. UNSL. December 1, 2022.

2016 Wireless networks for the development of digital rural communities in the Yauya district." Author: Ada Luz Caballero Sifuentes. Supervisor: Eng. Alfredo Debattista. Degree: Electronics Engineering with a focus on Digital Systems. UNSL. December 2016.

2016 "Load cell measurement system with AC excitation based on a lock-in amplifier." Author: Laura Beatriz Adaro. Supervisor: Carlos Federico Sosa Páez. Degree: Electronics Engineering with a focus on Digital Systems. UNSL. December 2016.

2011 Acoustic signal processing using programmable logic." Author: Felix Leonardo Garro Martínez. Supervisor: Diego Esteban Costa. Degree: Electronics Engineering with a focus on Digital Systems. UNSL. September 16, 2011.

2011 "Implementation of basic functions of the lock-in amplifier on FPGA." Author: Layla María Martínez Guevara. Supervisor: Eng. Esteban Maximiliano Peláez. Degree: Electronics Engineering with a focus on Digital Systems. UNSL. December 19, 2011.

Supervision of Scholarships and Final Projects

2017-2018 Final Career Project: Student: Emiliano Álvarez. Title of the Work Plan: Design of a Test Bench for Power Transistor Activation Circuits (Drivers). Academic Year 2016-2017. Completed. Role: Supervisor.

2016–2017 Final Career Project: Student: Rodrigo Agustn Perna. Title of the Work Plan: Supervision and Control System on FPGA for a Solar Battery Charger. Academic Year 2016-2017. Completed. Role: Supervisor.

2016-2017 CIN (National Interuniversity Council) Research Scholarship: Student: Rodrigo Agustín Perna. Title of the Work Plan: Supervision and Control System on FPGA for a Solar Battery Charger. Academic Year 2016-2017. Completed. Role: Supervisor.

2012–2014 TIC 2012 Scholarship and Final Career Project: Student: María Julia Xacur. Title of the Work Plan: Development of Specific Instrumentation for Measuring Breaking Force of Solids. Academic Year 2012-2014. Completed.

2012–2013 TIC 2012 Scholarship: Student: Gerardo Galo. Title of the Work Plan: Design of a Low-Power LED Lighting Source. Academic Year 2012-2013. Completed.

2012–2013 Co-Supervision of Final Career Project: Student: Enzo Belpoliti. Title of the Work Plan: Implementation of the SVPWM Modulation Technique for Control of Three-Phase Inverters. Academic Year 2012-2013. Completed.

Supervision of Research Stays

2012 Supervision of the "Summer of Science, Universidad Autónoma San Luis Potosí 2012" Scholarship. Student: Oscar Zamarripa. Title of the Work: "Operation of a DC-DC Converter with Active Dual Bridges in Forward Mode for the Study of Semiconductor Faults." Location: "Applied Electronics Group - Faculty of Engineering - National University of Río Cuarto." Mexico-Argentina Exchange Scholar. May to June 2012.

2013–2014 Supervision of the "UNSL-Hochschule Bonn Rhein Sieg" Exchange Scholarship. Student: Sven Stockhausen. Title of the Work: "Design of an Instrument for Measuring Breaking Force of Solids." Location: Laboratory of Electronics, Research and Services - National University of San Luis. Germany-Argentina Exchange Scholar. October 2013 to February 2014.

Work Experience in the Private Sector

2021-present January 2021 to present: Satellogic S.A. Payload System Flight Engineer. In this position, I am responsible for the commissioning, calibration, and maintenance of image sensors on a fleet of over 35 satellites in orbit.

2017–2020 May 2017 to December 2020: Satellogic S.A. HDL Development Engineer (Hardware Description Language). In this role, I participated in the design of payloads for Earth observation satellites. This inlcuded: board design, FGPA & HDL designs, power supply design, design validation and in-orbit operation.

2016–2017 August 2016 to April 2017: Advisor to the Government of the Province of San Luis on Renewable Energy and Energy Efficiency. Renewable Energy and Energy Efficiency Program, Ministry of Environment, Field, and Production. San Luis, Argentina.

2009–2010 June 2009 to April 2010: Scholarship holder at the Environmental Studies Group, providing support in the development of electronic equipment for environmental variable measurements.

2008–2009 October 2008 to March 2009: Design of low-power digital modules/macros (IP Cores) using hardware description languages for MGB Design SRL, subcontracted to Actel Corp (now Microsemi).

Background in Scientific Research and Technological Development

Participation in Research and Development Programs and Projects

2016 University extension project: "Worker-Recuperated Factories." Accepted through CS 279-16 resolution, National University of San Luis. Role: Member.

2015–2016 "Hardness Measurement Equipment." Project of the University, Design, and Productive Development Program 2015. Role: Project Director.

2015–2016 "Intelligent Energy Meter." Project of the University, Design, and Productive Development Program 2015. Role: Project Director.

2015–2017 (Biennial project) PDTS-CIN-CONICET PDTS209. "Modular Traction System for Electric Vehicles." Principal Investigator: Cristian De Angelo, Area: Engineering and Technology. National University of Río Cuarto. CIN-CONICET, Resolution CE Nº 1055-15.

2015–2018 (Three-year project) PICT-2014-2760. "Electric Traction Urban Vehicles: Propulsion System and Energy Management." Principal Investigator: Cristian De Angelo, Area: Mining Mechanical and Materials Energy Technology. National University of Río Cuarto. ANPCyT, Resolution Nº 270-15.

2015–2018 (Three-year project) CONICET PIP 2014-2016 GI "Electric Traction Urban Vehicles: control, supervision, energy management, and integration into the power grid." Director: Guillermo O. García, Co-director: Cristian H. De Angelo. Approved. Res. 5013/14.

2015–2018 (Three-year project) PICT-Start-Up 2014-3647 "R&D of Technologies for High-Power UPS." Director: Guillermo O. García. Joint project between CREXEL S.A. and GEA-UNRC.

2014–2015 (Biennial project) PROIPRO 142514. "Power Converters Control for Renewable Energy Systems." Financed by the National University of San Luis. Work line: "Programmable Logic Applied to Power Electronics." Project Director: Cristian De Angelo, Line Director: Cristian Ariel Falco.

2014–2017 (Three-year project) PICT-2013-1194 "Parallelism of Three-Phase Inverters for Renewable Energy Integration in Microgrids" Open Topics. Guillermo Oscar García, Energy, Mining, Mechanical, and Materials Technology, National University of Río Cuarto.

2014–2015 "Driver Testing Bench." Project of the University, Design, and Productive Development Program 2014. Role: Project Director.

2014–2015 "PLD in Power Electronics." Project of the University, Design, and Productive Development Program 2014. Role: Collaborating Professor.

2012–2013 "Alternative Energies for Electric Power Supply in the Central West Region." ANPCyT FONCyT CIN II PICTO-2010-0154 project.

2011–2013 "Electro-Eolic Generation Systems - 5 and 30 kW Scales." Joint project between FONCyT, ANPCyT, PICT-2010.

2011–2013 "Detection and Diagnosis of Incipient Faults in Electric Drives." PIP CONICET 2010.

2013–2014 "Fault-Tolerant DC Power Flow Control." Project subsidized by the Ministry of Science and Technology of the Province of Córdoba. Res. Nº 113/2011. Director: Dr. Eng. Germán Gustavo Oggier.

2012–2015 "Control and Energy Conversion Program." Research Program subsidized by the Secretariat of Science and Technology of UNRC. Res. Rec. 328/12. The Program includes the following Projects: Electro-Eolic Generation Systems, Electric and Hybrid Vehicles, Diagnosis of Incipient Faults in Electric Drives.

2012 International Cooperation Project "Power Electronics Topologies for Efficient Integration of Renewable Energy Sources into Microgrids and Electrical Systems," subsidized by the Ministry of Science and Technology of the Province of Córdoba. Joint project between GEA-UNRC, Argentina, and INEP-UFSC, Brazil. Project CCII -11347549-A-2011. Res. 174/11.

2009–2011 "Control and Energy Conversion Program." Research Program subsidized by the Secretariat of Science and Technology of UNRC. Res. Rec. 442/09. The Program includes the following Projects: Electro-Eolic Generation Systems, Electric and Hybrid Vehicles, Diagnosis of Incipient Faults in Electric Drives.

Received Scholarships

2014–2015 Internal Postgraduate Training Scholarship Type II. Project: "Fault-Tolerant DC-DC Converters for Hybrid Electric Systems." Awarded by the National Council for Scientific and Technical Research (CONICET). Duration: April 2014 to March 2016.

2011–2013 Internal Postgraduate Training Scholarship Type I. Project: "Fault-Tolerant DC-DC Converters for Hybrid Electric Systems." Awarded by the National Council for Scientific and Technical Research (CONICET). Duration: April 2011 to March 2014.

2009 International Center for Theoretical Physics (ICTP). Full Scholarship for the course "Advanced Training Course on FPGA Design and VHDL for Hardware Simulation and Synthesis." Trieste, Italy. October and November 2009.

2007–2008 Stimulus Scholarship from the Faculty of Physics, Maths, and Natural Sciences. Research Work (Final Degree Project): "Image Processing on FPGA."

Scientific Research Production - Publications

Published Papers in Indexed International Journals

2015 **A.M. Airabella**, G.G. Oggier, L.E. Piris-Botalla, C. A. Falco, and G.O. García, "Semiconductors Faults Analysis in Dual Active Bridge DC-DC Converter." IET Power Electronics. October 2015. DOI: 10.1049/iet-pel.2015.0299, Online ISSN 1755-4543

2014 L. E. Piris Botalla, G. G. Oggier, **A. M. Airabella**, and G. O. García, "Power Losses Evaluation of a Bidirectional Three-Port DC-DC Converter for Hybrid Electric System." Elsevier International Journal of Electrical Power & Energy Systems (ISSN: 0142-0615). Volume 58, June 2014, Pages 1-8

2016 L. E. Piris Botalla, G. G. Oggier, **A. M. Airabella**, and G. O. García, "Extension of the Operating Range with Soft Switching of a Bidirectional Three-Port DC-DC Converter." Revista Iberoamericana de Automática e Informática Industrial (RIAI) (ISSN: 1697-7912) - Accepted March 2015.

Published Papers in Non-Indexed National Journals

2015 **A. M. Airabella**, G. G. Oggier, L. E. Piris-Botalla, Cristian A. Falco, and G. O. García, "Fault Detection Strategy for Open Circuit Faults in Semiconductors of Isolated DC-DC Converters." Nota T'ecnica, Revista Ingeniería El'ectrica. Editores On-Line S.R.L. March 2015.

Full Papers in International Refereed Conferences

2023 **A. M. Airabella.** "Ambitious: Edge AI Platform." XII Argentine Congress of Space Technology. April 12-14, 2023. Mendoza, Argentina.

2019 **A. M. Airabella**, D. Caruso, A. J. Demski. "BitSync: A novel Data to Clock Phase Alignment for Microsemi FPGAs." SPL Conf. April 10th to 12th, 2019. Buenos Aires, Argentina.

2019 A. J. Demski, D. Caruso, **A. M. Airabella**. "Clock Domain Crossing Problem Solution Proposal in an AXI to AHB IP Core." SPL Conf. April 10th to 12th, 2019. Buenos Aires, Argentina.

2019 D. Caruso, **A. M. Airabella**, R. A. Melo. "High-Speed serial protocol multi-link and multi-stage for FPGAs." SPL Conf. April 10th to 12th, 2019. Buenos Aires, Argentina.

2018 **A. M. Airabella**, C. Falco, G. Oggier, and G. O. Garcia. "Fault Detection, Diagnosis, and Tolerance for Transistors in DC-DC Converters with Dual Active Bridges in Buck Mode." IEEE ARGENCON 2018. June 6-8, 2018. San Miguel de Tucumán.

2012 **A. M. Airabella**, G. G. Oggier, L. E. Piris-Botalla, Cristian A. Falco, and G. O. García, "Open Transistors and Diodes Fault Diagnosis Strategy for Dual Active Bridge DC-DC Converter." 10th IEEE/IAS International Conference on Industry Applications (INDUSCON 2012). November 5-7, 2012, in Fortaleza.

2012 L.E. Piris-Botalla, G. G. Oggier, **A. M. Airabella**, and G. O. García. "Analysis and Evaluation of Power Switch Losses for Three-Port Bidirectional DC-DC Converter." 2012 IEEE International Conference on Industrial Technology (ICIT), Athens, Greece, March 19-21, 2012.

Full Papers in National Refereed Congresses

2017 M. E. Postemsky, S. F. Hernández Velázquez, R. M. Murdocca, **A. M. Airabella**. "Intelligent Energy Meter". VIII Congress of Applied Microelectronics. Córdoba, October 11-13, 2017.

2016 R. A. Perna, O. E. Álvarez, J. R. Sánchez, and **A. M. Airabella**. "Control Logic of a Test Bench for Power Transistor Activation Circuits". VII Congress of Applied Microelectronics 2016. Universidad Nacional de San Luis, San Luis, Argentina.

2016 O. E. Álvarez, R. A. Perna, J. R. Sánchez, and **A. M. Airabella**. "Implementation of a Test Bench for Power Transistor Activation Circuits". VII Congress of Applied Microelectronics 2016. Universidad Nacional de San Luis, San Luis, Argentina.

2016 **A. M. Airabella**, G. G. Oggier, L. E. Piris-Botalla, C. A. Falco, G. O. García. "Power Transfer Limits of a Fault-Tolerant Step-Down Dual Active Bridge DC-DC Converter". XVI Meeting on Information Processing and Control (XVI RPIC) Ciudad de Córdoba, October 6-8, 2015.

2015 L. E. Piris-Botalla, G. G. Oggier, **A. M. Airabella**, and G. O. García. "Design of Auxiliary Inductances for a Bidirectional Three-Port DC-DC Converter". XVI Meeting on Information Processing and Control (XVI RPIC) Ciudad de Córdoba, October 6-8, 2015.

2015 L. E. Piris-Botalla, G. G. Oggier, **A. M. Airabella**, and G. O. García. "Comparison of Losses in a Bidirectional Three-Port DC-DC Converter for Different Values of Auxiliary Inductances". XVI Meeting on Information Processing and Control (XVI RPIC) Ciudad de Córdoba, October 6-8, 2015.

2015 L. E. Piris-Botalla, G. G. Oggier, **A. M. Airabella**, and G. O. García. "Determination and Extension of the Operating Limits of a Bidirectional Three-Port DC-DC Converter". XVI Meeting on Information Processing and Control (XVI RPIC) Ciudad de Córdoba, October 6-8, 2015.

2014 E. Belpoliti, **A. M. Airabella**, Cristian Ariel Falco. "SVPWM Technique in FPGA for Three-Phase Inverter Control". 24th Argentine Congress on Automatic Control. October 27-29, 2014 - Buenos Aires, Argentina.

2013 **A. M. Airabella**, G. G. Oggier, L. E. Piris-Botalla, C. A. Falco, G. O. García. "Fault-Tolerant Power Transistor Schemes for Dual Active Bridge Converters". XV Meeting on Information Processing and Control (XV RPIC) S.C. de Bariloche, September 16-20, 2013.

2011 **A. M. Airabella**, G. G. Oggier, L. E. Piris-Botalla, Cristian A. Falco, and G. O. García. "Fault Detection Strategy for Open Circuit Faults in Isolated DC-DC Converters". AADECA 2012, October 3-5, 2012, Buenos Aires, Argentina.

2011 A. I. Testa, M. R. Palavecino Nicotra, **A. M. Airabella**, F. Aguilera. "Implementation of an Embedded System on FPGA Based on the miniMIPS Microprocessor". III Congress of Applied Microelectronics 2012. Student Section. 2012. ISBN 978-987-702-004-5.

2011 **A. M. Airabella**, G. G. Oggier, L. E. Piris-Botalla, and G. O. García. "Fault Diagnosis in Power Semiconductor Devices of Dual Active Bridge DC-DC Converters". XIV Meeting on Information Processing and Control (RPIC 2011), Universidad Nacional de Entre Ríos, Oro Verde, Entre Ríos, Argentina, November 16-18, 2011.

2011 L. E. Piris-Botalla, G. G. Oggier, **A. M. Airabella**, and G. O. García. "Bidirectional Three-Port DC-DC Converter: Evaluation of Power Switches Losses". XIV Meeting on Information Processing and Control (RPIC 2011), Universidad Nacional de Entre Ríos, Oro Verde, Entre Ríos, Argentina, November 16-18, 2011.

2010 **A. M. Airabella**, C. Sosa Páez, R. Petrino. "Platform for Image Processing on FPGA". I Congress of Applied Microelectronics, UnLAM 2010.

Participation in Scientific and Educational Meetings

As an Author of Papers

2013 XVI Meeting on Information Processing and Control (XVI RPIC). Title of the paper: "Power Transfer Limits of a Fault-Tolerant Step-Down Dual Active Bridge DC-DC Converter". City of Córdoba, October 6-8, 2015.

2012 AADECA'12 - Week of Automatic Control. 23rd Argentine Congress of Automatic Control. October 3-5, 2012. Buenos Aires, Argentina. Title of the paper: "Fault Detection Strategy for Open Circuit Faults in Isolated DC-DC Converters".

2011 XIV Meeting on Information Processing and Control (RPIC 2011), National University of Entre Ríos, Oro Verde, Entre Ríos, Argentina. November 16-18, 2011. Title of the paper: "Fault Diagnosis in Power Semiconductor Devices of Dual Active Bridge DC-DC Converters".

2010 I Congress of Applied Microelectronics. 2010. La Matanza, Buenos Aires, Argentina. Title of the paper: "Platform for Image Processing on FPGA".

As a Speaker, Teacher, or Organizer

2018 "Satellogic: A talk about satellites". March 21, 2018, National University of San Luis. Organized by IEEE San Luis Student Branch.

2017 SASE 2017 - Speaker at the Workshop: "Starting Point for FPGA-VHDL Designs" in the Argentine Symposium on Embedded Systems (SASE 2017), August 9-11, 2017.

2016 uEA 2016 - VII Applied Microelectronics Congress 2016. National University of San Luis. October 26-28, 2016, San Luis, Argentina.

2015 III JOREIC - 3rd Regional Conference of Civil Engineering Students 2015. "Do you have two minutes? How to share ideas in a limited time". National Technological University. Regional Faculty San Rafael. May 22, 2015.

2014 XX JOSEII. Title of the conference: "Do you have two minutes? How to share ideas in a limited time". National Technological University. Regional Faculty San Rafael. November 7, 2014.

2014 Title of the conference: "Prohibited to Look for a Job". National University of Cuyo, Faculty of Applied Sciences to Industry. Organized by AECA. San Rafael. November 4, 2014.

2014 II National Week of Technological Entrepreneur. Title of the conference: "Prohibited to Look for a Job". National Technological University. Regional Faculty San Rafael. September 16, 2014.

2012 Seventh National Meeting of Engineering Students (ENEI 2012). Title of the conference: "Engineer? Prohibited to Look for a Job". August 18-19, 2012. San Luis, Argentina.

2011 Argentine Symposium on Embedded Systems 2011. Buenos Aires, Argentina. Title of the conference: "Advanced Simulation with TestBench in HDL".

2010 Fifth National Meeting of Engineering Students (ENEI 2010). Title of the conference: "Engineer? Prohibited to Look for a Job". November 25-27, 2010, Río Cuarto, Córdoba, Argentina.

2010 I Congress of Applied Microelectronics. 2010. La Matanza, Buenos Aires, Argentina. Title of the conference: "Advanced Simulation with TestBench in HDL".

2010 Seminar "Introduction to Programmable Logic Technologies", held at the National University of Comahue, October 2010. Contents: Digital design using VHDL for synthesis and simulation.

2009 Seminar "Introduction to Programmable Logic Technologies", held at the National University of Catamarca, on August 12-14, 2009, organized by the IEEE student branch of that university. Contents: Digital design using VHDL for synthesis and simulation.

2011 Laboratory Teaching Assistant in the course "ICTP Latin-American Basic Course on FPGA Design for Scientific Instrumentation", organized by the International Centre for Theoretical Physics (ICTP), in Mar del Plata, Buenos Aires, Argentina. February 2011.

Awards and Distinctions

2009 Third place in the "IB50K" business plan competition. Balseiro Institute.

2008 Flag bearer of the province in 2008.

Informatics and Programming Tools

Operating Systems

Windows in all its versions

Linux: Debian, Ubuntu

Office Suite

Word, Excel, PowerPoint

LibreOffice

LaTeX (TeXnicCenter, TexMaker)

Image Processing

GIMP

Adobe Lightroom

Programming Languages, HDL, and Scripting

C, Matlab (Advanced)

VHDL (Advanced)

Python

Verilog

Makefile

TCL

Experience in Leadership, Mentoring, and NGOs

PMI Nuevo Cuyo / PMI Latin America

2023 Mentor in the Leaders of the Present and Future Program, 2023 edition.

Mentorship Program

2021 Mentor in the Mentorship Program organized by the National Directorate for Strengthening Entrepreneurial Capacities, Small and Medium Enterprises and Entrepreneurs Secretariat, Ministry of Productive Development of the Nation.

The Mars Society Argentina

2022 Organizing Committee for NASA Space Apps, Mendoza headquarters.

IEEE Young Professionals Program

2016 President of the IEEE Young Professionals Program, Argentina Section.

2015 Vice President of the IEEE Young Professionals Program, Argentina Section.

2014 Secretary of the IEEE Young Professionals Program, Argentina Section.

IEEE Student Branch

2011-2012 Member of the IEEE Student Branch at the National University of Río Cuarto.

2007 Former President 2007, IEEE Student Branch, UNSL

2006 President 2006, IEEE Student Branch, UNSL. Organizer of the "National Meeting of IEEE Student Branches 2006." City of San Luis, November 16-18, 2006.

2005 Coordinator of the Website Commission of the IEEE Student Branch, San Luis.

Interests

Sports Running, Cycling, Climbing

Hobbies Motorcycling and Motorsports, Reading and Traveling

Barrancas Coloradas Neighborhood. M479 C9 – San Luis, Argentina
+54 9 266 4362456 • a.airabella@gmail.com
about.me/andresmiguel