

CURRICULUM VITAE

A – Identification

Full Name: Miryam Elizabeth Paredes Quintanilla
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B – Personal Information

National ID: 1711516151
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C – Academic Background

1 – Education

Area: Electronics and Telecommunications
Institution: National Polytechnic School
Degree: **B.Sc. in Electronics and Telecommunications**
Year: 2009
Research Project: “Diseño y construcción de un Calibrador Telemétrico Digital para del Departamento de Geofísica de la Escuela Politécnica Nacional”
“Design and construction of a Digital Telemetric Calibrator for the Geophysical Department of the National Polytechnic School”
Country: Ecuador

Area: Business Administration
Institution: Indoamerica Technological University
Degree: **B.Sc. in Process Management**
Year: 2009
Research Project: “Levantamiento de Procesos de la Unidad Ejecutora del Departamento de Geofísica de la Escuela Politécnica Nacional”.
“Survey of processes and performance of process manuals of the Execution Unit of the Geophysical Department of the National Polytechnic School”
Country: Ecuador

Area: Electrical, Electronics and Telecommunications Engineering
Institution: The University of Queensland
Degree: **Master of Engineering Science**
Year: 2014

Country: Australia

Area: Electronics and Telecommunications Engineering
Institution: Politecnico di Torino
Degree: **PhD in Electrical, Electronics and Telecommunications Engineering**
Year: 2017-Present
Research Project: Design, prototyping, calibration and testing in laboratory and simulating environment of new ultra-light disposable radio-probes released by airplanes or UAV.
Design and prototyping of an adequate ground station able to receive the data coming from the moving radiosondes.
Testing on the field of the probes previously realized. The whole data system will be fully tested on the field.

Country: Italy

2 – Training courses:

Name: *Organization and Application of Physical Inventory*
Institution: PROPADE
Place: Quito - Ecuador
Date: December 2008

Name: *Linux Administrator*
Institution: Continuing Education Centre - National Polytechnic School.
Place: Quito - Ecuador
Date: January 2010 – April 2010

Name: *Use of Renewable Energy*
Institution: Geophysical Institute - National Polytechnic School.
Place: Quito - Ecuador
Date: February 2011

Name: *Basic Course of Freewave Equipment Operation: FGR2-PE-U*
Institution: AMPERE.
Place: Quito - Ecuador
Date: March 2011

Name: *Basic Course of GURALP Equipment Operation*
Institution: AMPERE.
Place: Quito - Ecuador
Date: March 2011

Name: *Design of Optic Fiber Networks*
Institution: Continuing Education Centre - National Polytechnic School.
Place: Quito - Ecuador
Date: April 2011

Name: Configuration and Instalation of Reftek Servers and Equipment
Institution: Geophysical Institute - National Polytechnic School.
Place: Quito - Ecuador
Date: April 2011

Name: Microwave Networks: ALC Radio Systems
Institution : SIAE MICROELETTRONICA.
Place : Quito - Ecuador
Date : September 2011

Name: Workshop on Low Cost Solutions for Wireless Connectivity
Institution: International Centre for Theoretical Physics ICTP
Place: Guatemala City – Guatemala
Date: November 2011

Name: Configuration, Operation and Maintenance of Reftek Equipment
Institution: REF TEK
Place: Quito - Ecuador
Date: January 2013

Name : Ampere Latinamerican Seminar: Freewave
Institution: AMPERE.
Place: México DF - México
Date: March 2013

Name: Ampere Latinamerican Seminar: Guralp
Institution: AMPERE.
Place: México DF - México
Date: March 2013

Name: Satellite Transmission Networks
Institution : Level 3 Communications
Place : Quito - Ecuador
Date: April 2013

Name: Basic course on FPGA and DSP on FPGA
Institution : SAI TECHNOLOGIES
Place : Quito - Ecuador
Date: April 2013

Name: Programming with MATLAB
Institution : Geophysical Institute – National Polytechnic School.
Place : Quito - Ecuador
Date: May 2015

Name: Remote Sensing applied to Volcanology

Institution : National Autonomous University of Mexico
Place : Quito - Ecuador
Date: August 2015 – January 2016

Name: *“Technical Training for Waveform Station Operators with Guralp Equipment”*

Institution : Comission for the Comprehensive Nuclear-Test-Ban Treaty Organization CTBTO
Place : Viena - Austria.
Date: October 2016

Name: *High altitude work*
Institution : Coporsuper
Place : Quito – Ecuador.
Date: October 2016

Name: *“Infrasound Technology Workshop”*
Institution : Comission for the Comprehensive Nuclear-Test-Ban Treaty Organization CTBTO
Place : Quito – Ecuador.
Date: November 2016

Name: *Satellite Transmission Networks*
Institution : LEVEL 3 ECUADOR LVLT S.A
Place : Quito – Ecuador.
Date: January 2017

Name: *Joint ICTP-IAEA School on LoRa Enabled Radiation and Environmental Monitoring Sensors*
Institution: International Centre for Theoretical Physics ICTP
Place: Trieste – Italy
Date: April - May 2018

3 – Language courses

Name: Sufficiency Certificate in English
Institution: Language Center. National Polytechnic School
Place: Quito – Ecuador

Name: English Language
Institution: Continuing Education Centre - National Polytechnic School.
Level: Academic 4 (Level 11)
Place: Quito – Ecuador

Name: IELTS Preparation
Institution: Southern Cross British Language Centre
Level: IELTS

Place: Quito – Ecuador
Name: Italian Language
Institution: CENTRI PER L'ISTRUZIONE DEGLI ADULTI 1
Level: A2
Place: Turin – Italy

D – Academic Achievement

- Academic Excellence scholarships granted by the National Polytechnic School. Quito – Ecuador.
- Top World Universities Scholarship granted by the The National Secretariat for Higher Education, Science, Technology and Innovation of Ecuador (SENESCYT). Quito - Ecuador.
- Scholarship awarded by the Marie Sklodowska-Curie Action Innovative Training Network COMPLETE. Early Stage Researcher. Turin – Italy.

E – Work Experience

PAST:

Geophysical Institute, National Polytechnic School. Quito – Ecuador.

Technical Engineer

Instrumentation Area, January 2005 – June 2014

Duties and Responsibilities:

Design, implementation, maintenance and operation of Seismic and Volcanic Monitoring Networks in Ecuador: Short Period, Broadband, GPS, Acoustic Flow Monitor (AFM), Accelerograph, Infrasond, and Inclinator Stations and Repeaters.

Central University of Ecuador. Quito – Ecuador.

Math's Professor (Alternate)

Faculty of Engineering Geology, Mines, Petroleum and Environmental Central University of Ecuador, June 2013

Duties and Responsibilities:

Conduct assigned undergraduate Math courses.

International House World Organization. Quito – Ecuador.

Math's Professor

Elementary and Intermediate High-Performance students. July 2015 - August 2015

Duties and Responsibilities:

Conduct assigned undergraduate Math courses for preparing students for admission to international universities. English language.

Geophysical Institute, National Polytechnic School. Quito – Ecuador.

Geophysicist 2

Instrumentation Area, March 2015 – June 2017

Duties and Responsibilities:

1.- Coordinate, control and evaluate the operation of the seismic and volcanic monitoring networks of the IG (Broadband, Short Period, GPS, AFM (Acoustic Flow Monitor), Accelerograph, Inclimeters, Infrasound) as well as, transmission systems (Satellite, Radiofrequency, Analog, Microwave, Internet, etc). 2.- Deploy of the seismic and volcanic instrumental networks and data transmission networks throughout the country. 3.- Manage the data acquisition systems. 4.- Develop, implement and improve of the processes and procedures that are carried out at the Instrumentation Area of the Geophysical Institute for the reliable maintenance and operation of the monitoring networks. 5.- Control and supervise compliance with existing procedures to assure operational effectiveness. 6.- Elaborate reference terms for the acquisition of scientific equipment and spare parts for the monitoring and data networks. 7.- Administrate service acquisition contracts.

AT PRESENT:

Envisens Technologies Srl. Turin - Italy.

Scholarship Holder

July 2017 - Present

Duties and Responsibilities:

Perform engineering activities of innovative technological solutions in the field of environmental applications and safety, with particular regard to sensors and simulations, drawing up studies and engineering projects to promote previous activities.

Get involved in a staff training project for industrial research and experimental development.

Perform research activity related to the scholarship in support of the research project called COMPLETE CLOud-MicroPhysics-turbuLence-Telemetry.

F – Publications and Conferences

M. Paredes, S. Bertoldo, L. Carosso, C. Lucianaz, E. Marchetta, M. Allegretti, P. Savi, Propagation measurements for a LoRa network in an urban noisy environment, Journal of Electromagnetic Waves and Applications (JEWA). PAPER SUBMITTED

S. Bertoldo, **M. Paredes**, L. Carosso, M. Allegretti, P. Savi, Empirical indoor propagation models for LoRa radio link in an office environment, 13th European Conference of Antennas and Propagation (EuCAP 2019) 31st March - 5th April 2019, Krakow, Poland, pp. 1-4.

S. Bertoldo, L. Carosso, E. Marchetta, **M. Paredes**, M. Allegretti, Feasibility Analysis of LoRa-based WSN using public transport. Applied System Innovation, Vol. 1, No. 4, 49, 2018. Special Issue "Wireless Sensor Networks on Internet of Things and Intelligent System". ISSN: 2571-5577. DOI: <https://doi.org/10.3390/asi1040049>

S. Bertoldo, M. Allegretti, **M. Paredes**, L. Carosso, P. Savi, Feasibility study of LoRa ad-hoc network in an urban noisy environment. Mediterranean Microwave Symposium 2018 (MMS 2018), 31 October - 2 November 2018, Istanbul (Turkey), pp. 357-360, ISBN: 9781538671320. DOI: 10.1109/MMS.2018.8612027

S. Bertoldo, **M. Paredes**, L. Carosso, C. Lucianaz, M. Allegretti, F. Canavero, G. Perona, Progress on the realization of a LoRa® based communication system for atmospheric monitoring probes, XXII Riunione Nazionale di Elettromagnetismo, XXII RiNEm, 3-6 September 2018, Cagliari (ITA), pp. 129-132, ISBN: 9788890759925 (<http://www.elettromagnetismo.it/wpcontent/uploads/2018/09/XXII-RiNEm-Conference-Proceedings.pdf>).

L. Carosso, S. Bertoldo, **M. Paredes**, M. Allegretti, On the realization of a communication system for atmospheric probes based on LoRa technologies: preliminary measurements and results, World Multidisciplinary Earth Sciences Symposium 2018 (WMESS 2018), 3-7 September 2018, Prague (Czech Republic) (http://mess-earth.org/files/WMESS2018_Book.pdf).

M. Paredes, S. Bertoldo, C. Lucianaz, M. Allegretti, Ultra-light disposable radio probes for atmospheric monitoring, EGU General Assembly 2018, 8 -13 April 2018, Vienna (AUT), Geophysical Research Abstracts, Vol. 20, EGU2018-1389 (<https://meetingorganizer.copernicus.org/EGU2018/EGU2018-1389.pdf>).

G – Participation in Research Projects

Name: **“Upgrading the continuous GPS monitoring network at Sierra Negra Volcano”**
Institution: UNAVCO (University Navstar Consortium)
Participants: Dr. Bill Chadwick , Dr. Dennis Geist, Ing. Brendan Hodge, Ing. Mark Piersol.
Place: Sierra Negra Volcano, Isabela Island. Galápagos – Ecuador.
Year: 2010.

Name: **JICA Project “Ampliación de Redes de Monitoreo aplicados a los Volcanes de Cotopaxi y Tungurahua”**
JICA Project “Enlargement of the Monitoring Networks of Tungurahua and Cotopaxi volcanoes”
Institutions: Japan International Cooperation Agency (JICA)
Geophysical Institute – National Polytechnic School
Place: Ecuador.
Period: 2006 - 2009

Name: **SENESCYT Project “Fortalecimiento del Instituto Geofísico: Ampliación y Modernización del Servicio Nacional de Sismología y Vulcanología”.**
SENESCYT Project “Strengthening of the Geophysical Institute: Enlargement and Modernization of the National Service of Seismology and Vulcanology”.
Institutions: The National Secretariat for Higher Education, Science, Technology and Innovation of Ecuador (SENESCYT)
Geophysical Institute – National Polytechnic School
Place: Ecuador.

Period: 2009 – 2012

Name: **SENPLADES - EPN Project “Generación de Capacidades para la difusión de alertas tempranas”.**

SENPLADES - EPN Project “Building Capability for the Diffusion of Early Warnings”.

Institutions: National Secretariat of Planning and Development (SENPLADES)
Geophysical Institute – National Polytechnic School

Place: Ecuador.

Period: 2013 - 2016

H – Work References

Ph.D. Mario Ruiz

Ex-Director of the Geophysical Institute. Principal Professor. National Polytechnic School.
Quito – Ecuador.

Visiting Professor, University of North Carolina - Chapel Hill. United States.

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PhD. Wilson Enríquez

Ex-Chief of the Division of Instrumentation Area of the Geophysical Institute. Principal Professor. National Polytechnic School. Quito – Ecuador.

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wenriquez@igepn.edu.ec

I – Personal References

Ph.D. Gloria Quintanilla

Principal Professor of the Technological Institute “Cinco de Junio”. Quito – Ecuador.

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