

Alexander Vladimir Conde
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Date of Birth: 1979-02-05

Summary

I am a motivated research engineer keen to take on new challenges both independently and as part of a team. From my background as an Electrical Engineer, I have really enjoyed learning and applying technical tools as a researcher in optical remote sensing and geophysics.

Education

2015 **PhD. Application of DOAS, FTIR and MULTI-GAS for studies of evolving volcanic activity. Chalmers University of Technology, Göteborg.**

2011 **M.Sc. Radio and Space Science, Chalmers University of Technology, Göteborg**

2005 **Electrical Engineering, Universidad de El Salvador, San Salvador**

Work Experience

2010-2015 Optical Remote Sensing, Chalmers University of Technology: My research work had the aim of performing studies of evolving volcanic gas emissions using remote sensing techniques based on UV-DOAS and FTIR spectroscopy. Some specific task included building and upgrading the hardware/software of the spectroscopic instruments. Through several field works, I was also responsible for the instrument installations in Central America, Mexico, Chile and Iceland, this task included setting up local telemetry and data transfer to the servers in Göteborg. The resulting data set add a puzzle to the still- growing global volcanic CO₂ /SO₂ catalogue, and by using signal processing and time series analysis it was possible to constrain measurement errors and possible links to other geophysical parameters.

2005-2009 Research Engineer in volcanic monitoring, Universidad de El Salvador: Initially, I provided technical support for the monitoring network of volcanic CO₂.emissions based on IR-spectroscopy. Eventually I participated in a few projects applying embedded and handheld acquisition systems with the purpose of developing low cost geophysical instrumentation.

Technical skills

FTIR spectroscopy	Geophysics
DOAS Spectroscopy	Atmospheric Science
Scientist computing	Wireless communications
Signal Processing	C/C++
Data processing and acquisition	MATLAB
Remote Sensing	Python
Microcontrollers	Electronic instrumentation
Linux	Labview

Participation in international projects

Network for Observation of Volcanic and Atmospheric Change (NOVAC): An 18-partner research project founded by the European Union aimed to develop and install a network of spectroscopic instruments on the most active volcanoes in the world.

<http://www.novac-project.eu/>

FUTURE-VOLC: A 26 partner EU project aiming to establish a multi-disciplinary network with the purpose to monitor volcanic hazards in Iceland. My participation in this project helped to upgrade our optical sensors in order to perform atmospheric UV measurements in northern latitudes.

<http://futurevolc.hi.is/>

Deep Earth Carbon Degassing (DECADE): International research collaboration aimed to quantify worldwide volcanic CO₂ emissions by combining in situ infrared instrument and UV remote sensing. My participation in this project helped to integrate both measurement techniques and to ensure their endurance under harsh conditions.

<https://deepcarbon.net/content/deep-carbon-observatory-launches-decade-initiative>

Publications

Linking SO₂ and seismicity by continuous wavelet transform: Implications for volcanic surveillance at San Cristobal volcano

Vladimir Conde, Stefan Bredemeyer, J. Armando Saballos, Bo Galle, Thor H. Hansteen. International Journal of Earth Sciences(2015) doi: 10.1007/s00531-015-1264-1

Measurements of volcanic SO₂ and CO₂ fluxes by combined DOAS, Multi-GAS and FTIR observations: a case study from Turrialba and Telica volcanoes

Vladimir Conde, Philippe Robidoux, Geoffroy Avard, Bo Galle, Alessandro Aiuppa, Angélica Muñoz, Gaetano Giudice International Journal of Earth Sciences(2014) doi: 10.1007/s00531-014-1040-7

A rapid deployment instrument network for temporarily monitoring volcanic SO₂ emissions – a case study from Telica volcano

V. Conde, D. Nilsson, B. Galle, R. Cartagena, A. Muñoz. Geoscientific Instrumentation, Methods and Data Systems(2014) doi:10.5194/gi-3-127-

Relatively short-term correlation among deformation, degassing, and seismicity: a case study from Concepción volcano, Nicaragua

José Armando Saballos, Vladimir Conde, Rocco Malservisi, Charles B. Connor, Julio Álvarez, Angélica Muñoz. Bulletin of Volcanology(2014) doi:10.1007/s00445-014-0843-5

SO₂ degassing from Turrialba Volcano linked to seismic signatures during the period 2008–2012

Vladimir Conde, Stefan Bredemeyer, Eliecer Duarte, Javier F. Pacheco, Sebastian Miranda, Bo Galle, Thor H. Hansteen. International Journal of Earth Sciences(2013) doi: 10.1007/s00531-013-0958-5

Gas measurements from the Costa Rica–Nicaragua volcanic segment suggest possible along-arc variations in volcanic gas chemistry

A. Aiuppa, P. Robidoux, G. Tamburello, V. Conde, B. Galle, G. Avard, E. Bagnato, J.M. De Moor, M. Martínez, A. Muñoz. Earth and Planetary Science Letters(2014) doi:10.1016/j.epsl.2014.09.041

Environmental pressure from the 2014–15 eruption of Bárðarbunga volcano, Iceland

S.R. Gíslason, G. Stefánsdóttir, M.A. Pfeffer, S. Barsotti, Th. Jóhannsson, I. Galeczka, E. Bali, O. Sigmarsson, A. Stefánsson, N.S. Keller, Á. Sigurdsson, B. Bergsson, B. Galle, V. Conde, S. Arellano, A. Aiuppa, E.B. Jónasdóttir, E.S. Eiríksdóttir, S. Jakobsson, G.H. Guðfinnsson, S.A. Halldórsson, H. Gunnarsson, B. Haddadi, I. Jónsdóttir, Th. Thordarson, M. Riishuus, Th. Högnadóttir, T. Dürig, G.B.M. Pedersen, Á. Höskuldsson, M.T. Gudmundsson. Geochemical Perspective Letters(2015): doi: 10.7185/geochemlet.1509

Language Skills

Spanish: Mother tongue

English: fluent at speech and writing

Swedish: good at understanding, basic in speech (attending SAS training)

References:

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Personal Interests

I enjoy travelling, both for work and leisure, and experience different cultures. Here in Sweden with such privileged nature I enjoy outdoors activities. I enjoy reading popular science articles, literature, history, and I like to build my own electronic/software gadgets.