

Claudia Paz Sánchez Álvarez ✉ pox.sancheza@gmail.com

I am so interested in research related to Complex Systems specially focusing to Volcanoes Dynamics, Acoustics, GeoPhysics, Fluid, Elasticity, Sound Propagation, Optics Metrology and Climate Change Additionally, I'm interested in learning and develop numerical and experimental techniques for metrology in the laboratory and field measurements.

Personal information

Born: [REDACTED]
Degree: Doctor in Physics (23/04/2015)

Education

- 2022 **Diploma in Antarctic Affairs** , *Research center GAIA, University of Magallanes, Chile.*
- 2011-2015 **PhD In Science Physics**, *Department of Physics, Faculty of Science, University of Santiago de Chile (USACH).*
- 2006-2010 **Bachelor Degree in Applied Physics**, *Physics Department, Faculty of Science, University of Santiago de Chile (USACH).*

Professional Experiences

- Oct 2020 - present **Postdoctoral Position**, *University of Tokyo, Earthquake Research Institute, Supervisor: Dr. Mie Ichihara.*
- Jan 2016 - Jan 2020 **Postdoctoral Position**, *University of Firenze, Department of Earth Sciences, Supervisor: Dr. Maurizio Ripepe. Subject: Optical Metrology of Experimental Modeling of Infrasound Emission on Volcano, Laboratory of Experimental Geophysics, Firenze, Italy.*
- 2018 **Tesi di Laurea-Francesco Biagioli**, *"Influenza delle interazioni solido-gas nella propagazione delle onde acustiche"* , *University of Firenze,Italy, Department of Earth Sciences.*
- May -Sept 2015 **Visiting Scientist**, *Ecole Normale Supérieure de Lyon (ENS Lyon) Dra. Valérie Vidal, Laboratoire de Physique, ENS Lyon, France.*
- Nov 2013- August 2014 **PHD mobility**, *Ecole Normale Supérieure de Lyon (ENS Lyon) Dra. Valérie Vidal, subject: Experimental model of bubble bursting on volcanoes: toward the acoustic limit, Laboratoire de Physique, ENS Lyon, France.*
- 2013 **I Congress de Optics and Photons**, *Departament of Physics, USACH, Santiago of Chile.*
- 2013 **Teaching Assistant**, *Física I, Undergraduate Students, Physics Department, University Andrés Bello, Chile .*
- 2012 **Teaching Assistant**, *Lab Electro-Magnetismo, Undergraduate Students, Physics Department, USACH .*
- 2011-2012 **Assistantship**, *Statistical Mechanics, Undergraduate Students, Physics Department, USACH.*
- January 2011 **Research Assistant**, *XLVII Antarctic Scientific Expedition, UV Radiation Measurement, Researcher; Dr. R.Cordero, Región de Magallanes y Antártica Chilena, Base Profesor Escudero, Península Fray Jorge , Project Anillo Antártico 98.*
- 2009-2011 **Research Assistant**, *Subject:ypou, Faculty Science, University of Santiago de Chile .*
- 2010 **Assistantship**, *Técnicas Experimentales I, Undergraduate Students, Physics Department, Faculty of Science, USACH.*
- 2008-2009 **Assistantship**, *Chemistry, Undergraduate Students, Physics Department, Faculty of Science, USACH.*
- 2008 **I Magnetism School**, *Cedenna, USACH, Santiago of Chile.*

Skills

Programming Matlab, Labview
Word Latex, Word, Open Office
Processing

Experimental design
Skill
Image enhancement, data analysis
Data acquisition

Language Skills

Spanish Mother tongue
English Intermediate level
Italian Intermediate level
French Basic level

Publications

- 2022 **Claudia Sánchez, M. Ichihara, O. Kuwano**, "Flow-to-fracture transition of linear Maxwell-type/yield strength fluid by air injection- implications in magma fracture", *Geophysical Research Letters* - e2022GL100918.
- 2021 **Kazuya Yamakawa, M. Ichihara, G. Lacanna, C. Sánchez, M. Ripepe**, "Very-small-aperture 3D infrasonic array for volcanic jet observation at Stromboli volcano", *Geophysical Journal International* 229 (1), 459-471.
- 2019 **C. Sánchez, M. Ripepe, G. Lacanna, P. Poggi**, "Experimental modeling of mass eruption rates from acoustics wave", *The Journal of the Acoustical Society of America* 146 (4), 3076-3076.
- 2019 **Claudia Sánchez, M. Ripepe, G. Ulivieri, P. Poggi**, "Infrasound Mt. Etna: Experimental model of LP signal produced by gravity oscillation", in preparation.
- 2015 **Claudia Sánchez, V. Vidal and F. Melo**, "Acoustic investigation of the aperture dynamics of an elastic membrane closing an overpressurized cylindrical cavity", *Eur. Phys. J. Plus* (2015) 130:175; doi:10.1140/epjp/i2015-15175-4.
- 2014 **Claudia Sánchez, B. Álvarez, F. Melo and V. Vidal**, "Experimental modeling of infrasound emission from slug bursting on volcanoes", *Geophysical Research Letters*; doi:10.1002/2014GL061068.
- Proceeding** **Vidal V., C. Sánchez and F. Melo**, "Éclatement de bulles ou de films minces : vers la limite acoustique", 16e Rencontre du Non-Linaire, Eds. E. Falcon, C. Josserand, M. Lefranc, F. Pétrélis and C.T. Pham, Non-Linéaire Publications p.167-172.

Meeting Presentation

Oral

- Dic 2022 **I Simposio de Vulcanología, Chile**, *Flow-to-fracture transition of linear Maxwell-type/yield strength fluid by air injection- implications in magma fracture and acoustics emission.*
- May 2022 **JPGU. Chiba, Japan**, *Flow-to-fracture transition of linear Maxwell-type/yield strength fluid by air injection- implications in magma fracture.*
- Dic 2019 **Acoustic society of America. San Diego, United States**, *Experimental modeling of mass eruption rates from acoustic wave.*
- Jan 2019 **Taupo, New Zealand**, *Workshop "PDC transport dynamics- Benchmarking numerical model and future avenues" Taupo, New Zealand.*
- Nov 2016 **Cites on Volcanoes, Puerto Varas, Chile**, *Experimental modeling of infrasound emission produced by gravitational oscillation.*
- April 2015 **Universidad de Santiago de Chile**, *Modelo experimental de la dinámica de estallido y emisión acústica en volcanes.*
- October 2014 **Instituto de Física, PUCV**, *Modelo experimental de burbujas estallando en volcanes.*
- October 2014 **Ciclo de Seminarios SMAT-C, USACH**, *Modelo experimental de burbujas estallando en volcanes.*
- June 2014 **Journé des thésards du Laboratoire de Physique, Ecole Normale Supérieure de Lyon, France**, *Signal acoustique produit par l'ouverture d'une cavité cylindrique en surpression.*
- March 2014 **Rencontre du non-linéaire 2014**, *Acoustic signal produced by the overpressure release of a cylindrical cavity*, Paris, France.

- January 2013 **Seminars PHD Student USACH**, *Modelización de una cavidad volcánica: emisión acústica y sísmica en una cavidad cilíndrica presurizada.*
- September 2012 **Ciclo de Seminarios SMAT-C, USACH**, *Debilitamiento por Cizalle y colapso de burbujas en fluidos viscoelásticos.*
- Poster
- 2021 **Claudia Sánchez, Mie Ichihara**, *Bubble bursting and acoustics in laboratory scale: Flow-to-fracture transition of linear Maxwell-type/yield strength fluid*, ERI-JPGU Meeting 2022, Tokyo, Japan.
- 2021 **Claudia Sánchez, Mie Ichihara**, *Flow-to-fracture transition of linear Maxwell-type/yield strength fluid by air injection; implications in explosive eruptions.*, AGU 2021, New Orleans, USA - Online meeting.
- 2021 **Claudia Sánchez, Osamu Kuwano, Mie Ichihara**, *Flow-to-fracture transition of linear Maxwell-type fluid by air injection*, JpGU 2021- Online meeting.
- 2019 **Claudia Sánchez, P. Poggi, M. Ripepe**, *Experimental modeling of mass eruption rates from acoustic wave*, AGU fall meeting. San Francisco..
- 2014 **Claudia Sánchez, B. Álvarez, F. Melo, V. Vidal**, *Acoustic signal produced by the overpressure release of a cylindrical cavity*, Rencontre du non-linéaire, France.
- 2012 **Claudia Sánchez, B. Álvarez and F. Melo**, *Dynamics and acoustics of bubble bursting and coalescence: Implications for natural hazard*, Sochifi, La Serena Chile.
- 2012 **C. Sánchez, F. Gárate, R.R. Cordero**, *Ground-based Spectral Measurements in the Antarctic Peninsula.*, VIII Chilean Meeting On Antarctic Research, Santiago, Chile, 20 22, October..
- 2010 **Claudia Sánchez, F. Gárate and Raúl Cordero**, *Medición de la Radiancia UV en la Antártica*, Pucón, Chile.

Awards and Grants

- CONICYT 2017-2018 PostDoctoral Becas Chile., CONICYT
- CONICYT Grant PhD., CONICYT Engagement: 21110609
- USACH Grant PhD. VRID-USACH
- Embassy of France Fellowship PhD. for two months, Embassy of France in Chile
- Université Lyon Fellowship PhD. for six months, Lyon, France
- L'Oréal Finisher 2013, Awards L'Oréal Unesco-CONICYT PHD student in Science