

María Marta Jacob

Curriculum Vitae

☎ (407)882-2288
✉ maria.jacob@conae.gov.ar



Education

- 2000–2009 **Licentiate Physics**, *Facultad de Matemática, Astronomía y Física (Fa.M.A.F.), Universidad Nacional de Córdoba (U.N.C.), Córdoba, U.S. equivalency: Bachelor's and Master's degree. Approved by WES.*
- 2011–Present **Licentiate Computer Science**, *Facultad de Matemática, Astronomía y Física (Fa.M.A.F.), Universidad Nacional de Córdoba (U.N.C.), Córdoba, Not Finished.*

Licentiate in Physics Thesis

- Title *Molecular Dynamics Study of Ammonia Passage Through Water/Vapor Interface. [J. Phys. Chem. A 112, (2008)]*
- Supervisors Marcelo Carignano - Eldo E. Avila
- Description The passage of a single ammonia molecule from an infinitely dilute gas through the watervapor interface is studied by constrained molecular dynamics simulations. The free energy of the system as a function of the distance between the ammonia and the interface has a minimum in the interfacial region. It is found that the preference of the ammonia for the interface is mainly due the disruption of the solvent structure caused by the ammonia in the bulk region, which results in an increase of the solvent internal energy.

Current Position

June 2009 - Present **Employee of the company Servicios Tecnológicos Integrados Inc., under contract of CoNAE., S.T.I. - CoNAE**, Instituto Mario Gulich (UNC-CONAE), Centro Espacial Teófilo Tabanera, Falda del Carmen, Córdoba, Argentina. Tel: +54 3547 431000.

Performing the following activities:

2009 – Present: Application Development Level 1 (Brightness Temperature) (Brightness Temperatures) of the CoNAE Sensor MWR, for the satellite mission SACDAquarius.

2009 – Present: Development of the Calibration Process of the CoNAE sensor MWR for the satellite mission for SACDAquarius, and the corresponding documentation.

2009 – Present: Development of the Cross-calibration Process of the CoNAE sensor MWR for the satellite mission for SACDAquarius, and the corresponding documentation.

2009 – Present: Collaboration in the development of geophysical retrievals of the CoNAE sensor MWR for the satellite mission SACD/Aquarius, and the corresponding documentation.

2011 – Present: Responsible for coordinating the meetings of the group in charged of the institutional visits at Centro Espacial Teófilo Tabanera (CETT).

2010 – 2011: Flight Engineer of the Flight Engineering for Operations Group (FEOG) of the SACD/Aquarius satellite.

2009 – 2011: Collaboration with the Thesis of the student Martín Labanda, entitled *Study of Microwave Radiometer Calibration on Satellites*. Fa.M.A.F. - U.N.C.

Experience

November 2007 - May 2009 **Laboratory Technician, Physics and Chemical Laboratory in Institute San José S.R.L., Córdoba.**

March 2007 - August 2007 **Teacher Assistant, Fa.M.A.F., Córdoba, Algebra I.**

August 2007 - February 2008 **Teacher Assistant, Fa.M.A.F., Córdoba, Análisis Matemático II.**

February 2008 **Teacher Assistant, Fa.M.A.F., Córdoba, Curso de Nivelación.**

March 2008 - August 2008 **Teacher Assistant, Fa.M.A.F., Córdoba, Física General II (laboratorio).**

August 2008 - February 2009 **Teacher Assistant, Fa.M.A.F., Córdoba, Física General I (laboratorio).**

February 2009 **Teacher Assistant, Fa.M.A.F., Córdoba, Curso de Nivelación.**

Languages

Spanish **Native**

English **CEFR - B2 (Intermediate Speaker)** *Can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.*

Publications

- 1 **S. Farrar, M.F. Labanda, M.M. Jacob, S.M. Masuelli, S.K. Biswas, H. Raimondo, W.L. Jones**, *An Empirical Correction for the MWR Brightness Temperature Smear Effect*, IEEE International Geoscience and Remote Sensing Symposium (2012).
- 2 **M.A. Carignano, M.M. Jacob and E.E. Avila**, *On the uptake of ammonia by the water/vapor interface*, J. Phys. Chem. A 112, 3676-3679 (2008).

Conferences & Meetings

- 1 90 Reunión Nacional de Física, La Plata, Buenos Aires, September 26-29, 2005.
- 2 91 Reunión Nacional de Física, Merlo, San Luis, September 25-29, 2006.
- 3 5th Aquarius SAC-D Science Meeting, Buenos Aires, Argentina, October 21-23, 2009.
- 4 7th Aquarius SAC-D Science Meeting, Buenos Aires, Argentina, April 11-13, 2012.
- 5 Congreso Argentino de Teledetección, Córdoba, Argentina, September 18-21, 2012