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Montevideo, May 19, 2011

# CURRICULUM VITAE

JUAN ANDRÉS MUNIZ SILVA

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## ADDRESS

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## PERSONAL DETAILS

Date of birth: 2<sup>nd</sup> of December, 1987  
Place of birth: Montevideo, Uruguay  
Present Citizenship: Uruguayan and Italian  
Document: 4:345.253-9 (I.C)

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## WORKING CONTACT INFORMATION

Address: 565 Julio Herrera y Reisig, 4th floor  
Physics Department, School of Engineering  
University of the Republic UDELAR

Phone: +598-2-711-09-05  
Homepage: <http://www.fing.edu.uy/if>

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## EDUCATION

- 02/2006–12/2009 **Undergraduate Studies in Physics** at the School of Science from the University of the Republic (UDELAR), Uruguay.  
Degree obtained: Bachelor in Physics, Major: Physics
- 03/2010– **M.Sc. studies in Physics** at the School of Science from the University of the Republic (UDELAR), Uruguay. Graduate Program administered by PEDECIBA (Basic Science Development Program)

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**Specialization:** Quantum Mechanics, Quantum Information, Quantum Optics, Quantum field theory.

**Project title:** *Relational time in Quantum Mechanics: real clocks model*; Supervisor: Prof. Dr. Rodolfo Gambini.

**Sponsorship:** Sectoral Scientific Research Commission (CSIC-UDELAR).

09/2011–

**Ph.D. studies in Physics** at the California Institute of Technology, USA.

**Specialization:** Quantum Physics, Quantum Optics, Quantum Information.

**Sponsorship:** International Fulbright Science and Technology Award Fellow (IIE); Robert A. Millikan Fellowship and Special Tuition Award (California Institute of Technology)

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## DEGREE

**Bachelor in Physics, Major Physics. School of Science-UDELAR (2009).**

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## WORKING EXPERIENCE

04/2009–

Teaching Assistant of the Physics Department, School of Engineering, University of the Republic UDELAR.

Courses: Analytical mechanics and Waves; General Physics 2.

03/2010–07/2010

Teaching Assistant of the Physics Department, School of Science, University of the Republic UDELAR.

Courses: Laboratory of Modern Physics and Classical Mechanics.

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## RESEARCH PROJECTS AND SCHOLARSHIPS

I receive a PEDECIBA-Physics (Basic Sciences Development Program) scholarship for initiation to research (2008-2009) to work with Prof. Dr. Arturo Martí in Complex Networks and Synchronization. We are working in order to submit an article to some international journal.

Participation in the project “Dynamics of coupled maps with delayed interaction” financed by CSIC (February- April 2009). Coordinator Prof. Dr. Arturo Martí.

I received a grant from CSIC (Sectoral Scientific Research Commission) for UDELAR’s faculty staff to fund my master’s studies (September 2010- )

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I receive the International Fulbright Science and Technology Award (2010-2011) administered by the Institute of International Education (IIE)-USA. Accepted at the California Institute of Technology to start a Ph.D. in Fall 2011.

I receive the Robert A. Millikan Fellowship and Special Tuition Award from California Institute of Technology.

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#### PARTICIPATION IN CONFERENCES, MEETINGS AND SCHOOLS

08/2007	X SUF Meeting (Uruguayan Physical Society-Sociedad Uruguaya de Física). Carmelo, Uruguay.
09/2008	93th AFA (Argentina Association of Physics) Meeting and XI SUF Meeting (First Joint Meeting AFA-SUF); exhibition of the poster: "Dynamics of Bernoulli maps on complex networks with delayed interactions: exact results and simulation". Buenos Aires, Argentina.
12/2008	XVI Conference on Nonequilibrium Statistical Mechanics and Nonlinear Physics-Medynol'08; exposition of the poster: "Dynamics of Bernoulli maps on complex networks with delayed interactions: exact results and simulations" Punta del Este, Uruguay.
01/2009	VII Summer School in Complex Systems, Valparaíso Complex Systems Institute ISCV. Valparaíso, Chile.
09/2009	II Quantum Information School and Workshop. Paraty, Brazil
01/2011	Accepted at II Summer School on Optics and Photonics, CEFOP- University of Concepción, Chile. Failure to attend for personal reasons.

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#### LANGUAGE KNOWLEDGE

<b>Spanish</b>	Native
<b>English</b>	Good Fluency. First Certificate in English-FCE 2007 Grade C. Certificate in Advanced English- CAE Course done. Exam not taken. TOEFL (iBT) exam taken (May 2010) Grade 98/120. IELTS Academic exam taken (December 2010) Grade 7.5/9 (Overall score). Intensive English Program, University of California, Riverside (August 2011)
<b>Portuguese</b>	Beginner, Reading capacity

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## SOCIAL SERVICES AND COMMUNITY ACTIVITIES

Student delegate in the Physics Department, School of Science, UDELAR.

Member of the Uruguayan Scout Movement (MSU), member of the World Organization of the Scout Movement.

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## COMPUTER SKILLS

Advanced Knowledge. Programming in: Fortran and Matlab. Use of Linux and Windows.

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## INTERESTS

Currently I am interested in Quantum Optics, Foundations of Quantum Mechanics, Quantum Information and Open Quantum Systems Theory, especially the study of dynamics of entanglement and the decoherence program in Quantum Optics. I have taken some courses on these topics: Quantum Computation, Quantum Optics and Open Quantum Systems. Now, I started my work and postgraduate studies on this rich field, with a special focus on the measurement theory. In Caltech I expect to join H. Jeff Kimble's group in Quantum Optics.

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## PROFESSIONAL AND ACADEMIC REFERENCES

These persons are familiar with my professional qualifications and my character:

**Prof. Dr. Arturo Lezama**

Titular Professor at the Physics Department, School of Engineering (UDELAR-Uruguay).  
Phone: (+598) 2711-09-05  
E-mail: alezama@fing.edu.uy

**Prof. Dr. Rodolfo Gambini**

Titular Professor at the Physics Department, School of Sciences (UDELAR-Uruguay)  
Phone: (+598) 2525-86-24.  
E-mail: rgambini@fisica.edu.uy

**Prof. Dr. Arturo Martí**

Full Professor at the Physics Department, School of Sciences (UDELAR-Uruguay)  
Phone: (+598) 2525-86-24.  
E-mail: marti@fisica.edu.uy

**Prof. Dr. Gonzalo Abal**

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