

CURRICULUM VITAE

NAME: Cartoixà Soler, Xavier
DATE: 18/11/2016
SIGNATURE:

FAMILY NAME: Cartoixà Soler
FIRST NAME: Xavier
ESPECIALITY (UNESCO CODE/S): 221125 Semiconductors (see 330714)
330714 Semi-conductor devices (see 221125)
ESPECIALITY (KEYWORD/S): 2D materials
spintronics
Nanoelectronics
Rashba effect
Nanotechnology
graphene
Physics of semiconductor devices
Heat Transport

CURRENT PROFESSIONAL STATUS:

INSTITUTION: Universitat Autònoma de Barcelona
FACULTY, SCHOOL OR INSTITUTE: School of Engineering
DEP./SEC./UNITY STR.: Department of Electrical Engineering
PROFESSIONAL CATEGORY AND STARTING DATE: Associate Professor (12/05/2011) (Tenured – Titular de Universidad)
ADDRESS: Edifici Q

PHONE NUMBER: 34-93-581 3479

E-MAIL: Xavier.Cartoixa@uab.es

STAFF: X OTHERS STATUS:
NON PERMANENT: DEDICATION: FULL TIME X
FELLOW: PART TIME
TEMPORARY:

ACADEMICAL BACKGROUND

DEGREE/ENGINEERING	INSTITUTION	DATE
Llicenciat en Física	Universitat Autònoma de Barcelona (UAB)	15/06/1996

DOCTORATE	INSTITUTION	DATE
Física Aplicada	California Institute of Technology	17/09/2002

PREVIOUS SCIENTIFIC OR PROFESSIONAL ACTIVITIES

DATES	PLACE	INSTITUTION
2004 / 2004	Postdoctoral Researcher	Lawrence Berkeley National Laboratory

2002 / 2004	Postdoctoral Researcher	University Illinois Urbana-Champaign
1997 / 2002	PhD Student	California Institute of Technology

LANGUAGES OF SCIENTIFIC INTEREST (R = Low, B = Medium, C = High)

LANGUAGE	SPEAKS	READS	WRITES
Catalan	C	C	C
English	C	C	C
French	C	C	C
Spanish	C	C	C

15 MOST SIGNIFICANT PUBLICATIONS: ARTICLES IN JOURNALS

KEY: A=Article, R=Review

1. Xavier Cartoixà, Riccardo Dettori, Claudio Melis, Luciano Colombo and Riccardo Rurali, "Thermal transport in porous Si nanowires from approach-to-equilibrium molecular dynamics calculations", *Appl. Phys. Lett.*, 109 (1), 013107(4 pages), (2016).
2. Eliezer Halpern, Alex Henning, Hadas Shtrikman, Riccardo Rurali, Xavier Cartoixà and Yossi Rosenwaks, "Room Temperature Observation of Quantum Confinement in Single InAs Nanowires", *Nano Lett.*, 15 (1), 481-485, (2015).
3. R. Rurali, X. Cartoixà, L. Colombo, "Heat transport across a SiGe nanowire axial junction: Interface thermal resistance and thermal rectification", *Phys. Rev. B*, 90 (4), 041408(R)(5 pages), (2014).
4. Jean-Pierre Gauyacq, Simeón Moisés Yaro, Xavier Cartoixà and Nicolás Lorente, "Correlation-Mediated Processes for Electron-Induced Switching between Néel States of Fe Antiferromagnetic Chains", *Phys. Rev. Lett.*, 110 (8), 087201(5 pages), (2013).
5. Shibing Long, Xiaojuan Lian, Carlo Cagli, Xavier Cartoixà, Riccardo Rurali, Enrique Miranda, David Jiménez, Luca Perniola, Ming Liu, Jordi Suñé, "Quantum-size effects in hafnium-oxide resistive switching", *Appl. Phys. Lett.*, 102 (18), 183505(4 pages), (2013).
6. X. Cartoixà, R. Rurali and J. Suñé, "Transport properties of oxygen vacancy filaments in metal/crystalline or amorphous HfO₂/metal structures", *Phys. Rev. B*, 86 (16), 165445(5 pages), (2012).
7. A. Miranda-Duran, X. Cartoixà, M. C. Irisson, R. Rurali, "Molecular Doping and Subsurface Dopant Reactivation in Si Nanowires", *Nano Lett.*, 10 (9), 3590-3595, (2010).
8. G. Albareda, H. López, X. Cartoixà, J. Suñé and X. Oriols, "Time-dependent boundary conditions with lead-sample Coulomb correlations: Application to classical and quantum nanoscale electron device simulators", *Phys. Rev. B*, 82 (8), 085301(21 pages), (2010).
9. R. Rurali and X. Cartoixà, "Theory of defects in one-dimensional systems: application to Al-catalyzed Si nanowires", *Nano Lett.*, 9 (3), 975-979, (2009).
10. H. López, X. Oriols, J. Suñé and X. Cartoixà, "Spin-Dependent Injection Model for Monte Carlo Device Simulation", *J. Appl. Phys.*, 104 (7), 073702(6 pages), (2008).
11. D. Jiménez, X. Cartoixà, E. Miranda, J. Suñé, F. A. Chaves and S. Roche, "A simple drain current model for Schottky-barrier carbon nanotube field effect transistors", *Nanotechnology*, 18 (2), 025201(6 pages), (2007).
12. X. Cartoixà, L.-W. Wang, D. Z.-Y. Ting, Y.-C. Chang, "Higher-order contributions to Rashba and Dresselhaus effects", *Phys. Rev. B*, 73 (20), 205341(11 pages), (2006).
13. X. Cartoixà, D. Z.-Y. Ting, Y.-C. Chang, "Suppression of the D'yakonov-Perel' spin-relaxation mechanism for all spin components in [111] zincblende quantum wells", *Phys. Rev. B*, 71 (4), 045313 (5 pages), (2005).
14. X. Cartoixà, L.-W. Wang, "Microscopic dielectric response functions in semiconductor quantum dots", *Phys. Rev. Lett.*, 94 (23), 236804 (4 pages), (2005).
15. X. Cartoixà, D. Z.-Y. Ting and Y.-C. Chang, "A Resonant Spin Lifetime Transistor", *Appl. Phys. Lett.*, 83 (7), 1462-1464, (2003).

CONFERENCES

F. Xavier Alvarez, F. Xavier Bafaluy, P. Torres, A. Torelló, X. Cartoixà. «Hydrodynamic behavior of heat transfer at the micro and nanoscale from finite elements calculations». Poster .*Nanoscale and Microscale Heat Transfer V.:* Santorini (Greece) ,26/09/2016-30/09/2016.

P. Torres, F. Xavier Bafaluy, A. Torelló, X. Cartoixà and F. Xavier Alvarez. «Phonon spectrum in the Kinetic and Collective transport regimes». Oral presentation .*Nanoscale and Microscale Heat Transfer V.:* Santorini (Greece) ,26/09/2016-30/09/2016.

R. Rurali, L. Colombo, X. Cartoixà, Ø. Wilhelmsen, T. T. Trinh, D. Bedeaux, and S. Kjelstrup. «Heat transport through a solid-solid junction: the interface as an autonomous thermodynamic system». Oral presentation .*Nanoscale and Microscale Heat Transfer V.:* Santorini (Greece) ,26/09/2016-30/09/2016.

Pedro C. Feijoo, David Jiménez, Xavier Cartoixà. «A Drift-Diffusion Graphene Field Effect Transistor model to study scaling effects on High Frequency performance». Poster .*Graphene 2016.:* Genoa (Italy) ,19/04/2016-22/04/2016.

Claudio Melis, Riccardo Dettori, Xavier Cartoixà, Riccardo Rurali and Luciano Colombo. «Modelling Heat Transport in Nanoporous Silicon From Atomistic Simulations». Poster .*Porous Semiconductors - Science and Technology (PSST 2016).:* La Pineda, Vila-seca (Spain) ,06/03/2016-11/03/2016.

Xavier Cartoixà, Luciano Colombo and Riccardo Rurali. «Thermal rectification by design in telescopic Si nanowires». Oral presentation .*Nanowires 2015 (2015).:* Barcelona (Spain) ,26/10/2015-30/10/2015.

X. Cartoixà. «Electrical contacts to two-dimensional materials: when less is more». Seminar .*DIPC Seminars.:* Donostia/San Sebastián (Spain) ,24/07/2015-24/07/2015.

Xavier Cartoixà. «D'yakonov-Perel' spin decay in the weak scattering regime and the case of graphene». Poster .*7th International Conference on Unsolved Problems on Noise (UPON 2015).:* Barcelona (Spain) ,13/07/2015-17/07/2015.

P. Torres, F. X. Alvarez and X. Cartoixa. «Ab-initio approach to thermal transport in the kinetic collective model». Poster .*34th Annual International conference on thermoelectrics 13th european conference on thermoelectrics.:* Dresden (Germany) ,28/06/2015-03/07/2015.

F. X. Alvarez, P. Torres, A. Shakouri, C. de Tomás, X. Cartoixa, A. Lopeandia and A. Mohammed. «Thermal transport in the kinetic collective model». Lecture .*34th Annual International conference on*

thermoelectrics 13th european conference on thermoelectrics.: Dresden (Germany)
,28/06/2015-03/07/2015.

Riccardo Dettori, Claudio Melis, Xavier Cartoixà, Riccardo Rurali and Luciano Colombo. «A model for thermal conductivity in nanoporous silicon from atomistic simulations». Poster .*Son et lumière: from microphotonics to nanophononics.*: Les Houches (Borgonya) (France) ,16/02/2015-27/02/2015.

Ferran Jovell, Xavier Cartoixà. «Drift Diffusion Simulation of MoS₂ channel FETs». Poster .*Trends in NanoTechnology 2014 (TNT2014).*: Barcelona (Spain) ,27/10/2014-31/10/2014.

Xavier Cartoixà, K L N Acharya and Juan José Palacios. «Contact resistance in metal/two-dimensional material junctions from first principles». Oral presentation .*Trends in NanoTechnology 2014 (TNT2014).*: Barcelona (Spain) ,27/10/2014-31/10/2014.

J. Sanz, M. Campoy, X. Cartoixa, F. X. Alvarez and A. R. Goñi. «Multiscale modeling of the transport properties of polymer/carbon nanotube composites with high thermoelectric power factor». Poster .*12th European Conference on Thermoelectricity (ECT2014).*: Madrid (Spain)
,24/09/2014-26/09/2014.

F. X. Alvarez, A. Cantarero, A. F. Lopeandia, C. de Tomas, G. Garcia, P. Ferrando, D. Moller, X. Cartoixà, J. and Rodriguez-Viejo . «Thermal Conductivity of Inhomogeneous Materials and Rectification Effects». Lecture .*International Conference on Thermoelectrics - ICT2014.*: Nashville (United States of America) ,07/07/2014-10/07/2014.

X. Cartoixà. «Electronic Transport in Graphene / Ni(111) contacts from first principles». Poster .*Graphene 2014.*: Toulouse (France) ,06/05/2014-09/05/2014.

Ferran Jovell and Xavier Cartoixà. «Band Gap Engineering in Graphene Nanomeshes». Poster .*Graphene 2014.*: Toulouse (France) ,06/05/2014-09/05/2014.

Rurali, R. and Cartoixà, X.. «Thermal rectification in sawtooth nanowires». Poster .*Nanowires 2013 (2013).*: Rehovot (Israel) ,12/11/2013-15/11/2013.

Xavier Cartoixà, Álvaro Miranda and Riccardo Rurali. «Molecular attachment and alkyl passivation in Silicon Nanowires». Guest conference speaker .*Nanowires 2012 (2012).*: Berlin (Germany)
,19/09/2012-21/09/2012.

Shibing Long, Carlo Cagli, Xavier Cartoixà, Riccardo Rurali, Enrique Miranda, David Jiménez, Julien Buckley, Ming Liu, and Jordi Suñé. «Conductance Quantization in Resistive Switching». Poster .*Trends in NanoTechnology 2012 (TNT2012).*: Madrid (Spain) ,10/09/2012-14/09/2012.

Shibing Long, Carlo Gagli, Xavier Cartoixà, Riccardo Rurali, Enrique Miranda, David Jiménez, Julien Buckley, Ming Liu and Jordi Suñé. «Conductance quantization in resistive switching». Oral presentation . *Frontiers in Electronic Materials: Correlation Effects and Memristive Phenomena*.: Aachen (Germany) ,17/06/2012-20/06/2012.

X. Oriols, F.L.Traversa, G.Albareda, A.Benali, A. Alarcón, S. M. Yaro, X. Cartoixà. «Multi-time measurement and displacement current in time-dependent quantum transport». Guest conference speaker . *15th International Workshop on Computational Electronics (IWCE-15)*.: Madison, WI (United States of America) ,22/05/2012-25/05/2012.

. «». Others . *Graphene 2012*.: Brussels (Belgium) ,10/04/2012-13/04/2012.

X. Cartoixà, A. Miranda-Durán and R. Rurali. «Doping and sensing in silicon nanowires». Oral presentation . *Trends in NanoTechnology 2011 (TNT2011)*.: Tenerife (Espanya) ,21/11/2011-25/11/2011.

A. Miranda, X. Cartoixà, E. Canadell and R. Rurali. «NH₃ Molecular Doping of Silicon Nanowires in the [112], [110], [100] and [111] directions». Poster . *Trends in NanoTechnology 2011 (TNT2011)*.: Tenerife (Espanya) ,21/11/2011-25/11/2011.

M. Yaro, Xavier Cartoixà. «Local strains and gap formation in graphene». Poster . *Graphene 2011*.: Bilbao (Spain) ,11/04/2011-14/04/2011.

Xavier Cartoixà, Moisés Yaro, Riccardo Rurali. «Substitutional doping in MoS₂». Poster . *NanoSpain Conf 2011*.: Bilbao (Spain) ,11/04/2011-14/04/2011.

F. L. Traversa, G. Albareda, A. Alarcón, A. Benali, A. Padró, X. Cartoixà, R. Rurali and X. Oriols. «The BITLLES simulator for nanoscale devices». Poster . *14th International Workshop on Computational Electronics (IWCE-14)*.: Pisa (Italy) ,27/10/2010-29/10/2010.

X. Cartoixà and R. Rurali. «Theory of Doping in Silicon Nanowires». Guest conference speaker . *Villa Conference on Interaction Among Nanostructures (VC-IAN 2010)*.: Santorini (Greece) ,21/06/2010-25/06/2010.

X. Cartoixà , Y. Gebremichael, A. Sánchez, X. Borrisé, R. Rurali, J. Suñé, M. Schmidt, M. I. Alonso, A. R. Goñi and F. Pérez-Murano. «Fabrication of arrays of silicon nanowires». Oral presentation . *NanoSpain 2010 Workshop*.: Malaga (Spain) ,23/03/2010-26/03/2010.

R. Rurali and X. Cartoixà. «Theory of Doping in Silicon Nanowires». Oral presentation . *Trends in NanoTechnology 2009 (TNT2009)*.: Barcelona (Spain) ,07/09/2009-.

Alvaro Miranda, Xavier Cartoixà, Miguel Cruz-Irison and Riccardo Rurali. «Molecular doping in Silicon Nanowires: an ab-initio study». Poster . *Trends in NanoTechnology 2009 (TNT2009)*.: Barcelona (Spain) ,07/09/2009-.

A. Alarcón, X. Cartoixà and X. Oriols. «Explicit computation of Coulomb and exchange interactions for N-electrons in open quantum systems using Bohm trajectories». Poster . *Trends in NanoTechnology 2009 (TNT2009)*.: Barcelona (Spain) ,07/09/2009-.

X. Cartoixà. «Actividades del grupo NANOCOMP». Oral presentation . *Encuentro de investigadores de nanoestructuras semiconductoras*.: Castelló de la Plana (Spain) ,19/06/2009-19/06/2009.

X. Cartoixà and R. Rurali. «Theory of defect formation energies in one-dimensional systems: dopant activation in Si nanowires». Oral presentation . *NanoSpain 2009 Workshop*.: Zaragoza (Spain) ,09/03/2009-12/03/2009.

X. Cartoixà and R. Rurali. «Theory of defects in one-dimensional systems». Oral presentation . *CECAM Workshop on Structural, electronic and transport properties of quantum wires*.: Lyon (France) ,09/06/2008-12/06/2008.

X. Cartoixà, R. Rurali, I. Fernández-Cuesta, F. Pérez-Murano and J. Suñé. «From quantum wire arrays to 2D superlattices through nanohole patterning». Guest conference speaker . *Villa Conference on Interaction Among Nanostructures (VC-IAN)*.: Orlando (United States of America) ,03/02/2008-07/02/2008.

X. Cartoixà and R. Rurali. «Pyridine- and C₁₀H₁₀BN-based nanotubes: A route to always semiconducting NTs». Poster . *Trends in NanoTechnology 2007 (TNT2007)*.: San Sebastian (Spain) ,03/09/2007-07/09/2007.

X. Cartoixà, R. Rurali, I. Fernández-Cuesta, F. Pérez-Murano, J. Suñé. «Novel approach to the fabrication of ordered arrays of quantum wires». Oral presentation . *International Conference on Nano Science and Technology (ICN+T 2007)*.: Stockholm (Sweden) ,02/07/2007-06/07/2007.

R. Rurali, J. Suñé and X. Cartoixà. «From quantum wire arrays to 2D superlattices through nanohole patterning». Oral presentation . *Semiconducting and Insulating Materials Conference XIV (SIMC-XIV)*.: Fayetteville (United States of America) ,15/05/2007-20/05/2007.

Riccardo Rurali, Jordi Suñé, and Xavier Cartoixà. «Ordered arrays of nanowires through hole patterning: ab initio and empirical calculations». Oral presentation .*4th NanoSpain Workshop*.: Sevilla (Spain) ,12/05/2007-15/05/2007.

R. Rurali, J. Suñé and X. Cartoixà. «From quantum wire arrays to 2D superlattices through nanohole patterning». Oral presentation .*Condensed Matter and Materials Physics 2007 (CMMP2007)*.: Leicester (United Kingdom) ,12/04/2007-13/04/2007.

R. Rurali, J. Suñé and X. Cartoixà. «Electronic decoupling in mechanically connected nanowire arrays». Poster .*13th International Workshop on Computational Physics and Materials Science: Total Energy and Force Methods*.: Trieste (Italy) ,11/01/2007-13/01/2007.

X. Cartoixà, L.-W. Wang, D. Z.-Y. Ting and Y.-C. Chang. «Higher-order contributions to Rashba and Dresselhaus effects». Poster .*Spin and Charge Effects in Nanostructures (SCEN'06)*.: Pisa (Italy) ,01/06/2006-09/06/2006.

D. Jiménez, X. Cartoixà, E. Miranda, J. Suñé, F. A. Chaves and S. Roche. «A drain current model for Schottky-barrier CNT-FETs». Poster .*11th International Workshop on Computational Electronics (IWCE-11)*.: Wien (-) (Àustria) ,25/05/2006-28/05/2006.

H. López, A. N. Chantis, J. Suñé and X. Cartoixà. «Eigenstate fitting in the k,p method». Poster .*11th International Workshop on Computational Electronics (IWCE-11)*.: Wien (-) (Àustria) ,25/05/2006-28/05/2006.

X. Cartoixà, L.-W. Wang, D. Z.-Y. Ting and Y.-C. Chang. «Tight-binding theory with full spin-orbit effects». Poster .*3rd NanoSpain Workshop*.: Pamplona (Spain) ,20/03/2006-23/03/2006.

X. Cartoixà and L.-W. Wang. «Microscopic dielectric response function in semiconductor quantum dots». Poster .*Trends in NanoTechnology 2005 (TNT2005)*.: Oviedo (Spain) ,29/08/2005-02/09/2005.

X. Cartoixà and D. Z.-Y. Ting. «Omnidirectional spin lifetime enhancement for spin device applications». Oral presentation .*12th International Conference on Narrow Gap Semiconductors (NGS-12)*.: Toulouse (France) ,03/07/2005-07/07/2005.

X. Cartoixà, D. Z.-Y. Ting and J. Suñé. «[111] heterostructures for Rashba spin injectors and resonant spin lifetime transistors». Oral presentation .*2nd NanoSpain Workshop*.: Barcelona (Spain) ,14/03/2005-17/03/2005.

X. Cartoixà, D. Z.-Y. Ting and Y.-C. Chang. «Gate control of the spin lifetime in [111] and [110] zincblende heterostructures and application to spin devices». Poster .*3rd International Conference on Physics and Applications of Spin-Related Phenomena in Semiconductors (PASPS III)*.: Santa Barbara (United States of America) ,21/07/2004-23/07/2004.

D. Z.-Y. Ting and X. Cartoixà. «Device Concepts Based on Spin-Dependent Transmission in Semiconductor Heterostructures». Poster .*3rd International Conference on Physics and Applications of Spin-Related Phenomena in Semiconductors (PASPS III)*.: Santa Barbara (United States of America) ,21/07/2004-23/07/2004.

X. Cartoixà, D. Z.-Y. Ting and Y.-C. Chang. «Spin Lifetime Tuning in Zincblende Heterostructures and Applications to Spin Devices». Oral presentation .*MRS Spring Meeting*.: San Francisco (United States of America) ,12/04/2004-16/04/2004.

B.-H. Lee, X. Cartoixà, R. Martin and N. Trivedi. «Magneto-Optical Properties of Dilute Magnetic Semiconductors». Oral presentation .*APS 2004 March Meeting*.: Montreal (Canada) ,22/03/2004-26/03/2004.

. «». Poster .*30th International Symposium on Compound Semiconductors*.: San Diego (United States of America) ,25/08/2003-27/08/2003.

X. Cartoixà, D. Z.-Y. Ting and T. C. McGill. «An efficient multiband envelope function approximation method for spintronics». Poster .*Trends in NanoTechnology 2002 (TNT2002)*.: Santiago de Compostela (Spain) ,09/09/2002-13/09/2002.

X. Cartoixà, D. Z.-Y. Ting and T. C. McGill. «Theoretical Investigations of Spin Splittings and optimization of the Rashba coefficient in Asymmetric AlSb/InAs/GaSb Heterostructures». Oral presentation .*8th International Workshop on Computational Electronics (IWCE-8)*.: Urbana-Champaign (United States of America) ,15/10/2001-18/10/2001.

D. Z.-Y. Ting, X. Cartoixà, T. C. McGill, D. L. Smith and J. N. Schulman. «Modeling Spin-Dependent Transport in InAs/GaSb/AlSb Resonant Tunneling Structures». Oral presentation .*8th International Workshop on Computational Electronics (IWCE-8)*.: Urbana-Champaign (United States of America) ,15/10/2001-18/10/2001.

X. Cartoixà, D. Z.-Y. Ting, E. S. Daniel and T. C. McGill. «Investigations of Spin Splittings in Asymmetric AlSb/InAs/GaSb/AlSb Heterostructures». Poster .*1st International Conference and School on Spintronics and Quantum Information Technology (Spintech-I)*.: Maui (United States of America) ,15/05/2001-18/05/2001.

X. Cartoixà, D. Z.-Y. Ting, E. S. Daniel and T. C. McGill. «Spin-Dependent Transport in Interband

Tunnel Structures». Poster .*Spins in Semiconductors Workshop.*: Santa Barbara (United States of America) ,05/01/2000-07/01/2000.

EVENTS: COMITTEES

Local Organizing Committee . Co-organizer . *7th International Conference on Unsolved Problems on Noise (UPON 2015)*.: Barcelona (Spain) ,13/07/2015-17/07/2015.

Organising committee . Member . *Trends in NanoTechnology 2014 (TNT2014)*.: Barcelona (Spain) ,27/10/2014-31/10/2014.

Organising committee . Co-organizer . *Trends in NanoTechnology 2012 (TNT2012)*.: Madrid (Spain) ,10/09/2012-14/09/2012.

Organising committee . Member . *Trends in NanoTechnology 2011 (TNT2011)*.: Tenerife (Espanya) ,21/11/2011-25/11/2011.

Organising committee . Co-organizer . *Trends in NanoTechnology 2010 (TNT2010)*.: Braga (Portugal) ,06/09/2010-10/09/2010.

Organising committee . Member . *Trends in NanoTechnology 2009 (TNT2009)*.: Barcelona (Spain) ,07/09/2009-.

Programme committee . Member . *Trends in NanoTechnology 2009 (TNT2009)*.: Barcelona (Spain) ,07/09/2009-.

Local Organizing Committee . Co-organizer . *Trends in NanoTechnology 2009 (TNT2009)*.: Barcelona (Spain) ,07/09/2009-.

Session . President . *Semiconducting and Insulating Materials Conference XIV (SIMC-XIV)*.: Fayetteville (United States of America) ,15/05/2007-20/05/2007.

COURSES TAUGHT

- California Institute of Technology, "Introduction to Solid State Physics (APh 114)", PhD Applied Physics, Grader, 1997/98
- California Institute of Technology, "Physics of Semiconductor Devices (APh183)", PhD Applied Physics, Grader, 1999/2002
- Universitat Autònoma de Barcelona, "Electronic Transport and Simulation", PhD Electrical Engineering, Theory, 2004/05
- Universitat Autònoma de Barcelona, "Electronic and Photonic Devices", BSc Electrical Engineering, Lab, 2004/07
- Universitat Autònoma de Barcelona, "Nanoelectronic Devices", MSc Micro and Nanoelectronic Engineering, Theory, 2005/11
- Universitat Autònoma de Barcelona, "Nanoelectronics", BSc Physics, Problems, 2005/07
- Universitat Autònoma de Barcelona, "Circuit Analysis", BSc Telecommunications Engineering, Problems, 2005/06
- Universitat Autònoma de Barcelona, "Nanoelectronics", BSc Physics, Problems, 2005/09
- Universitat Autònoma de Barcelona, "Materials Simulation at the Nanoscale", MSc Materials Science and Technology / Nanotechnology, Theory, 2007/14
- Universitat Autònoma de Barcelona, "Electronic Devices", BSc Physics, Theory, 2007/09
- Universitat Autònoma de Barcelona, "Laboratory of Electronics I", BSc Telecommunications Engineering, Lab, 2008/10
- Universitat Autònoma de Barcelona, "Electronics", BSc Physics, Theory, 2009/13
- Universitat Autònoma de Barcelona, "Electronics", BSc Computer Engineering, Theory and Problems, 2009/17
- Universitat Autònoma de Barcelona, "Nanotechnology for ICT", BSc Nanoscience and Nanotechnology, Theory and Problems, 2013/17
- Universitat Autònoma de Barcelona, "Simulation Techniques", MSc Advanced Nanoscience and Nanotechnology, Theory, 2014/17
- Universitat Autònoma de Barcelona, "Electronic Devices", Telecommunications Engineering, Problems, 2014/17
- Universitat Autònoma de Barcelona, "Electronics", BSc Physics, Problems, 2014/17

PARTICIPATIONS IN SCIENTIFIC BOARDS AND PANELS

Universitat Autònoma de Barcelona .PhD Jury Committee, Sr. Dinh Van Tuan, Secretary
.30/09/2014.

Universitat Autònoma de Barcelona .PhD Jury Committee Sr. Ingmar Neumann, Secretary
.21/05/2014.

Universitat Autònoma de Barcelona .PhD Jury Committee Sr. Miquel López Suárez, Secretary
.30/04/2014.

Universitat Politècnica de Catalunya .PhD Jury Committee Sr. Ricardo Morales Carbajal, Secretary
.09/10/2013.

Universitat Politècnica de Catalunya .PhD Jury Committee Sr. Michael Riss, Spokesman
.08/07/2013.

Universitat Autònoma de Barcelona .PhD Jury Committee Sra. Ioana Carmen Marcus, Secretary
.13/04/2012.

PARTICIPATION IN THE AIDS FOR THE FINANCING OF THE INVESTIGATION

TEC2015-67462-C2-1-R. *Transporte de electrones y fonones en nanodispositivos para aplicaciones de bajo y cero consumo* . Oriols Pladevall, Xavier Cartoixà Soler, Xavier , Pri. Oriols Pladevall, Xavier; Abadal Berini, Gabriel; Jiménez Jiménez, David; Cartoixà Soler, Xavier; Group. Ministerio de Economía y Competitividad (MINECO) .01/01/2016-31/12/2018.

H2020-696656GrapheneCore1. *Graphene-based disruptive technologies (GRAPHENE CORE1)* . Jiménez Jiménez, David , Pri. Cartoixà Soler, Xavier; Chaves Romero, Ferney Alveiro; Oriols Pladevall, Xavier; Feijoo Guerra, Pedro Carlos; Jiménez Jiménez, David; Group. Comisión Europea .01/04/2016-31/03/2018.

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OTHER MERITS

Co-editor special issues of Nanoscale Research Letters for the proceedings of the Trends in NanoTechnology 2010 i Trends in NanoTechnology 2011 conferences.

Referee for the "Researcher Rating" program, for National Research Foundation (South Africa).

Two NASA mentions for technology transfer.

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