Panagiotis Kotetes – Curriculum Vitae

Contact information

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Professional experience

05. 2011 – present:	Postdoctoral Researcher, Karlsruhe Institute of Technology, Germany (Group of Prof. G. Schön).
10. 2010 – 05. 2011:	Early Stage Researcher (Marie Curie NanoCTM), Karlsruhe Institute of Technology, Germany. – http://www.physics.lancs.ac.uk/nanoctm/
10. 2008 – 12. 2009:	Teaching Assistant (Ph. D. student), National Technical University of Athens, Greece.
06. 2006 – 11. 2008:	Scientific Research for the European program CoMePhS (Controlling Mesoscopic Phase Separation). – http://www.physics.ntua.gr/comephs/
10. 2002 – 06. 2003:	Internship, National Center of Scientific Research “Demokritos”, Athens, Greece. – http://www.demokritos.gr/

Academic education

06. 2007 – 05. 2011:	Ph. D. in Physics, National Technical University of Athens, Greece Supervisor: Assoc. Prof. G. Varelogiannis.
10. 2005 – 04. 2007:	M. Sc. : “Physics and technological applications”, National Technical University of Athens, Greece.
10. 2000 – 07. 2005:	Diploma (B.Sc. + M.Sc.), School of Applied Mathematical and Physical Sciences, National Technical University of Athens, Greece.

Theses

06. 2007 – 05. 2011:	Ph. D., “Topological density waves in unconventional superconductors”, National Technical University of Athens, Greece.
10. 2006 – 04. 2007:	M. Sc., “Collective electronic transport in quasi-1D incommensurate density waves”, Supervisor: Assoc. Prof. G. Varelogiannis, National Technical University of Athens, Greece.
10. 2004 – 07. 2005:	Diploma, “Chern-Simons theories and unconventional superconductivity” Supervisor: Assoc. Prof. G. Varelogiannis, National Technical University of Athens, Greece.

Supervising experience

05. 2013 – present:	- Daniel Mendler, Ph.D. candidate in the group of Prof. G. Schön.
05. 2013 – 12. 2014:	- Andreas Heimes, former Ph.D. candidate in the group of Prof. G. Schön. Succeeded in his Ph.D. exam with distinction.
03. 2012 – 04. 2013:	- Daniel Mendler, Diploma thesis: "Topological phases in systems with coexisting density waves and superconductivity", Karlsruhe Institute of Technology, Germany.
10. 2008 – 10. 2010:	- Stefanos Kourtis, Diploma thesis: "Coexistence and competition of superconductivity, density waves and Pomeranchuk instabilities". Currently postdoctoral researcher in Dr. Castelnovo's group, Cambridge.
	- George Livanas, Diploma thesis: "Multiband superconductivity and lattice Bogoliubov – de Gennes method". Currently Ph.D. candidate in NTU Athens, Greece (group of Assoc. Prof. G. Varelogiannis).
	- George Giannopoulos, Master thesis: "Nematic density waves". Currently postdoctoral researcher in NCSR Demokritos, Greece.
	The last three theses took place at NTU Athens (Greece) in the group of Assoc. Prof. G. Varelogiannis.

Teaching experience

04. 2015 – 08.2015:	Tutor of the graduate course "Theoretical Condensed Matter Physics II", Karlsruhe Institute of Technology, Germany.
10. 2014 – 02. 2015:	Assistant of seminars on: "Concepts and building blocks of quantum computers", Karlsruhe Institute of Technology, Germany.
04. 2014 – 08. 2014:	Tutor of the undergraduate course "Quantum Mechanics I", Karlsruhe Institute of Technology, Germany.
10. 2013 – 02. 2014:	Tutor and guest lecturer (on topological insulators and superconductors) of the undergraduate course "Theoretical Condensed Matter Physics I", Karlsruhe Institute of Technology, Germany.
04. 2013 – 08. 2013:	Teaching assistant of the postgraduate course "Theoretical Optics", Karlsruhe Institute of Technology, Germany.
10. 2011 – 02. 2012:	Tutor of the undergraduate course "Quantum Mechanics II", Karlsruhe Institute of Technology, Germany.
10. 2008 – 01. 2009:	Teaching assistant of the undergraduate course "Quantum Mechanics II", National Technical University of Athens, Greece.
10. 2008 – 12. 2009:	Lab assistant and supervisor of undergraduate students, National Technical University of Athens, Greece.

Peer – review activities Reviewer for Physical Review journals and New Journal of Physics, while more recently Grant-Referee.

Scholarships

01. 2009 – 10. 2010: Scholarship by the National Technical University of Athens, Greece.

09. 2006 – 12. 2008: Scholarship by the Greek Scholarships State Foundation.

Prizes and awards

– Poster prize: *"Classification of engineered topological superconductors",* Majorana fermions in Condensed Matter Physics, Erice (Italy) July 2013.

Distinctions and awards during my academic studies

– Award by the National Technical University of Athens (Greece) for having the 2nd highest grade among the graduates of 2005 (9.37 out of 10).

– Awards by the Greek Scholarships State Foundation for achieving a grade belonging to the five highest, among the undergraduate students of the School of Applied Mathematical and Physical Sciences, National Technical University of Athens (Greece) → 2003 – 2004: ranked 1st, 2002 – 2003: ranked 3rd, 2001 – 2002: ranked 2nd, 2000 – 2001: ranked 5th.

– Award by the National Technical Chamber for obtaining grades belonging to the 2% of the highest scores of all the Technical Universities in Greece for the following academic seasons: 2003 – 2004, 2002 – 2003, 2001 – 2002.

– Award by the National Technical University of Athens (Greece) for achieving the highest overall score in the Mathematical courses of the first two years as an undergraduate student of the School of Applied Mathematical and Physical Sciences (2000-2002).

Participation in conferences and workshops – Seminars

2015

Seminar: *"Majorana fermions in topological Shiba chains",* Beijing Computational Science Research Center, Beijing (China) September 2015.

Seminar: *"Majorana fermions in topological Shiba chains",* Beijing Normal University, Beijing (China) September 2015.

Seminar: *"Majorana fermions in topological Shiba chains",* Hangzhou Normal University, Hangzhou (China) September 2015.

Contributed talk: *"Topological superconductivity in Rashba semiconductors without a Zeeman field",* DPG March Meeting, Berlin (Germany) March 2015.

Contributed talk: *"Circular–polarization–sensitive metamaterial based on triple quantum–dots",* DPG March Meeting, Berlin (Germany) March 2015.

Seminar: *"Majorana fermions in topological Shiba chains",* Niels Bohr Institute, Copenhagen (Denmark) March 2015.

Contributed talk: *"Engineering Majorana fermions in atomic chains with collinear magnetic order",* APS March Meeting, San Antonio (USA) March 2015.

2014

Contributed talk: *"Novel Majorana-fermion-platforms relying on supercurrents",* Condensed Matter in Paris, Paris (France) August 2014.

Poster: *"Novel Majorana-fermion-platforms relying on supercurrents",* 27th International Conference on Low Temperature Physics, Buenos Aires (Argentina) August 2014.

Contributed talk: *"Majorana fermions in an antiferromagnetic chain in proximity to a superconductor",* NTTI workshop, Berlin (Germany) July 2014.

Seminar: *"Circular-polarization-sensitive metamaterial based on triple quantum-dot molecules",* Jožef Stefan Institute, Ljubljana (Slovenia) June 2014.

Contributed talk: *"Majorana fermions in quasi-1d Rashba semiconductor/superconductor hetero-structures without the requirement of a Zeeman field",* DPG March Meeting, Dresden (Germany) March 2014.

Contributed talk: *"Tailoring topological superconductivity using supercurrents",* APS March Meeting, Denver (USA) March 2014.

2013

Contributed talk: *"Tailoring topological superconductivity using supercurrents",* NanoCTM Meeting, Wasowo (Poland) September 2013.

Poster: *"Classification of engineered topological superconductors",* Topology and Nonequilibrium in Low-Dimensional Electronic Systems, Dresden (Germany) September 2013.

Seminar: *"Topological quantum computing based on Majorana bound states",* Shanghai Maritime University, Shanghai (China) September 2013.

Poster (prize winner): *"Classification of engineered topological superconductors",* Majorana fermions in Condensed Matter Physics, Erice (Italy) July 2013.

Contributed talk: *"Spinful Kitaev model for spin-singlet topological superconductors and magnetically tunable 4π-periodic Josephson transport",* NanoCTM Meeting, North Uist (UK) May 2013.

Poster: *"Classification of engineered topological superconductors",* NanoCTM Meeting, North Uist (UK) May 2013.

Contributed talk: *"Spinful Majorana fermions and magnetoelectricity in junctions of semiconductor / superconductor heterostructures",* APS March Meeting, Baltimore (USA) March 2013.

Contributed talk: *"Effective spinful Kitaev model and Majorana-fermion-mediated magnetoelectric phenomena",* DPG March Meeting 2013, Regensburg (Germany) March 2013.

2012

Seminar: "*Spinful Majorana fermions and magnetoelectric phenomena in 1D junctions of topological superconductors"*, National Technical University of Athens (Greece) November 2012.

Contributed talk: *"Spinful Majorana fermions and magnetoelectricity in junctions of 1D quantum wire – superconductor heterostructures",* Nanoelectronics meeting, Cargèse (France) October 2012.

Contributed talk: "*Topological spin transport in semiconductor – superconductor heterostructures",* Annual semiconductor-spintronics (SPP 1285) meeting, Hannover (Germany) October 2012.

Contributed talk: *"Engineering and manipulating topological qubits in 1D quantum wires",* International Conference of Magnetism 2012, Busan (S. Korea) July 2012.

Poster*: "Engineering and manipulating Majorana bound states in 1D quantum wires",* Electronic Correlations and Disorder in Quantum Matter, Karlsruhe (Germany) March 2012.

Contributed talk: *"Engineering and manipulating Majorana bound states in 1D quantum wires",* DPG March Meeting 2012, Berlin (Germany) March 2012.

Poster*: "Engineering and manipulating Majorana bound states in 1D quantum wires",* Fundamentals of Nanoelectronics, Tenerife (Spain) February 2012.

2011

Poster: "*Small-q Phonon Mediated Unconventional Superconductivity in the Iron Pnictides",* Phase Diagrams and Competing Orders in Iron-based Superconductors, Karlsruhe (Germany) October 2012.

Poster: "*Giant anomalous Nernst effect in Topological insulators",* Workshop and School on Topological Aspects of Condensed Matter Physics, Trieste (Italy) July 2011.

Contributed talk: "*Berry phase mediated anomalous thermoelectric and magnetic response in 2D Topological insulators",* Nanoelectronics beyond the roadmap, Balaton (Hungary) June 2011.

Contributed talk: *"Chirality Induced Tilted-Hill Giant Nernst Signal",* DPG March Meeting 2011, Dresden (Germany) March 2011.

2010

Seminar: "*Chiral condensates in strongly correlated electronic matter",* Max Planck Institute for Solid state research (Germany), June 2010.

Seminar: "*Chiral condensates in strongly correlated electronic matter",* Karlsruhe Institute of Technology (Germany), June 2010.

Poster: "*Hidden Topological Order in URu_2Si_2",* Interactions, Disorder, and Topology in Quantum Hall Systems, Dresden (Germany), June 2010.

2009

Attended: 5th Aegean summer school: From gravity to thermal Gauge Theories: the AdS/CFT correspondence, Milos (Greece) September 2009.

Poster: "*Hidden order and Itinerant Metamagnetism in URu_2Si_2",* Quantum Criticality and Novel Phases, Dresden (Germany) August 2009.

Attended: Mini-Workshop on application of AdS/CFT to condensed matter problems, Heraklion (Greece) May 2009.

2008

Contributed talk: "*Berry phase and topological spin transport in the chiral d-density wave state",* 2nd CoMePhS WorkShop on Phase Separation in Electronic Systems, Nafplio (Greece), September 2008.

Poster: "*Enhanced diamagnetism and Nernst signal from a chiral d-density wave state in the pseudogap regime of the cuprates", 25th International Conference on Low Temperature Physics,* Amsterdam (The Netherlands) August 2008.

Poster: "*Obligatory multi-phase coexistence in unconventional condensates",* Competing Orders,

Pairing Fluctuations and Spin – Orbit effects in Novel unconventional Superconductors, Dresden (Germany) July 2008.

2006

Poster: "*Spontaneous Quantum Hall effect in chiral d-density waves",* 1st CoMePhS WorkShop on Phase Separation in Electronic Systems, Aghia–Pelaghia (Greece) November 2006.