

Curriculum vitae

14/10/2018 Seltivi Remo

PERSONAL INFORMATION

Alessio Settineri



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POSITION

Physics PhD Student at Messina's University (Supervisor: Prof. S. Savasta)

EDUCATION AND TRAINING

2007-2012

High Schoc Diploma 100/100

Archimede Scientific High School, Messina (Italy)

2012-2015

Three-year Degree in Physics 107/110

Messina's University, Messina (Italy)

Thesis: Inclusion Complex for the Drug Delivery: Stability and thermic behaviour.

Relator: Prof. Valentina Venuti

2015-2017

Master Degree in Physics 110L/110

Messina's University, Messina (Italy)

Thesis: Characterization of the plasmonic behaviour of nano-structured gold films

Relator: Prof. Salvatore Patané

2018-Present

PhD in Physics

Università di Messina

PhD in Quantum Physics: Quantum Optics and Open quantum systems in the Ultra-Strong

coupling regim a

Tutor: Prof. Salvatore Savasta

WORK EXPERIENCE

03/11/2014-18/12/2014

University Internship

- IR-Raman Spectroscopy and SERS
- Scanning Probe Microscopy and Nanotechnologies.
- Deposition and nanomachining techniques.

02/11/2016-Present

University Tutor

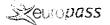
- From 2 to 24 November 2016 Didactic Tutoring at Messina's University: Preparation of the students for the tests
- From 11 May to 30 November 2017 Specialistic Tutoring at Messina's University: Laboratory Assistant

20/01/2018-20/02/2018

Research Student at RIKEN (Wako)

Study of new approaches to describe the dynamics of Open Hybrid Quantum systems in the ultra-

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strong coupling regime.

 Development of a Dressed Master equation Approach for the description of Open Hybrid Quantum Systems

29/08/2018-29/09/2018

Research Student at RIKEN (Wako)

Study of new approaches to describe the dynamics of Open Hybrid Quantum systems in the ultra strong counting regime.

Development of a Quantum Trajectory Method in the ultra strong coupling regime

15/01/2019-15/03/2019

Research Student at RIKEN (Wako)

- Study of Quantum Homodyne/Heterodyne Detection.
- Quantum ir reference setups.

PERSONAL SKILLS

Mother tongue(s)

Italian

Foreign language(s)		UNDERSTANDING		SPEAKING		WRITING
		Listening	Reading	Spoken interaction	Spoken production	
	English	B2	B2	B1	B1	В1
	German	A1	A1	A1	Ai	A1

Levels: A1 and A.: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user Common Europe; in Framework of Reference for Languages

Communication skills

- Ability to relate to work and study colleagues and teamwork skills, quality gained during years of study, university labs, and internship periods.
- Ability to expose concepts and personal knowledge learned during: lectures, presentations in Italian
 and English and conferences.

Organisational / managerial skills

- Organizational, planning and co-ordination skills.
- Good level of flexibility and adaptation to different situations, aptitude to make timely decisions and consistent with the goals set and to tackle and resolve stress situations.

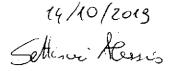
Job-related skills

- Experimental and theoretical knowledge on the study of material properties through
 Spectroscopic Techniques related to the experience gained during laboratory activities and university studies
- Experimental and theoretical knowledge optical microscopy and scanning probe microscopy (SNOW, AFM) related to the experience gained during the master thesis internship.
- Theoretical knowledge in Solid State Physics and semiconductor physics
- Theoretical knowledge in Materials Physics (alloys, plastics and ceramics)
- Private lessons for high school students in subjects of a predominantly scientific nature such as Mathematics. Physics, Chemistry.
- Experience as: Laboratory assistant and University Tutor. A) provision of basic individual and/or
 group coaching, guidance, and assistance to students in the review of course material, solving of
 problems, and preparation for tests and examinations: B) development and preparation of tutoring
 plans: C) administration of tests; D) research and selection of learning materials and applications;

Digi ta l skills	4	SELF-ASSESSMENT			
	formation rocessin;	Communication	Content creation	Safety	Problem- solving

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Curriculum vitae



Alessio Settineri

Proficient user | Proficient user | Independent user | Independent user | Proficient user |

Digita skills - Self assessment grid

- Excellent mastery of Windows and Linux operating systems and their applications
- Excellent k lowledge in using data analysis software (Origin, PeakFit)
- Good usage of Graphic Software and 3D modelling (Adobe Photoshop, Rhinoceros, Keyshot and Designer) several 3D models published on international journals (Nature Review Physics (also featured in the index), APS Journals)
- PROGRAMMING LANGUAGES: Python, Mathematica, C ++. Fortran
- Excellent familiarity with Android mobile devices (smartphones and tablets)
- Excellent knowledge of the Microsoft Office package, especially Word, Excel and PowerPoint.
- Experience navigating the Internet using Different browsers (Internet Explorer, Firefox, Chrome)
- Excettent knowledge of e-mail clients (Windows Live Mail, Outlook Express)

Driving licence

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ADDITIONAL INFORMATION

Publications and Conferences

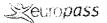
- Publication (Currently submitted in PRA): "Conversion of Mechanical Thermal Noise into photon pairs" Alessio Settineri, Vincenzo Macri, Salvatore Savasta.
- Publication (Published in PRA): "Quantum Coherence in Hybrid quantum Systems: the influence of Temperature" Alessio Settineri. Vincenzo Macri. Alessandro Ridolfo, Omar Di Stefano, Arton Finsk Kockum, Franco Nori, Salvatore Savasta
- Publication (Published in PRL): "Interaction of Mechanical Oscillators mediated by the exchange of Virtual photon Pairs" Omar Di Stefano, Alessio Settineri, Vincenzo Macri. Alessandro Ridolfo. Reberto Stassi, Anton Frisk Kockum, Salvatore Savasta, Franco Nori
- Publication (Recently accepted on Nature Physics): "Resolution of gauge ambiguities in ultrastrong-coupling cavity QED" Omar Di Stefano, Alessio Settineri, Vincenzo Macri, Luigi Garziano, Roberto Stassi, Salvatore Savasta, Franco Nori
- Publication (Published on Scientific Reports): "Near-field imaging of surface-plasmon vortex-modes around a single elliptical nanohole in a gold film" Claudia Triolo, Savasta Salvatore. Alessio Settineri. Sebastiano Trusso, Rosalba Saija, Nisha Rani Agarwal, Salvatore Patanè.
- Presentation Poster: "Plasmon vortices around isolated nanoholes cratered on a gold film: polarization dependent coupling of SPPs and excitation beam" Plasmonica 2017
- Presentation Poster: "Interaction of Mechanical Oscillators Mediated by the Exchange of Virtual Photons "...VQED 2018

Specialization School

- From 19 to 23 September 2016 National Specialization School "Scienza e Beni Culturali: Dail/Analisi non invasiva alla ricostruzione 3D (Cultural Heritage Science: Non invasive analysis for the 3D rec;instruction)"
- From 24 to 29 July 2017 School of Excellence, "Modelli di calcolo ispirati ai meccanismi di funzionamento del cervello (Brain inspired computing)". Project Manager prof. Giovanni Finocchio.
- From 4 June to 8 June 2018 Workshop on Waveguide QED

Seminars

- 30 May 2013 Appenti di Fisica & Young Minds: 7th Day with the Theoretical Physics
- 26 March ::013 Percorso di eccellenza in Fisica PES (Physics excellence program): passing course "Disg 81/08 e problematiche sulla sicurezza" (Disg 81/08 and security issues)
- From 13 to 15 October 2015 International Symposium: Lepton and Hadron Physics at Meson-Factories
- From 6 to 3 November 2013 International Symposium: Entrance Channel Effect on the reaction.
 Mechanism in heavy ion collisions.



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Messina

- 13 May 2016 Symposium on Nanofabrication
- 26 May 2016 9th Day with the Theoretical Physics.
- 16 July 2015 Nanoparticles Engineering by Pulsed Laser Ablation; concepts and applications.

Attachments

copies-of all attestations are available upon request

Autorization

i authorize the processing of my personal \bar{d} ata contained in my curriculum vitae in art. 13 of Legislative Decree 196/2003

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