

EUROPEAN
CURRICULUM VITAE
FORMAT



PERSONAL INFORMATION

Name **DE MICHIELIS MARCO**
Address **3, VIA PASSIRANO, 20871, VIMERCATE (MB), Italy**
Phone **+39 340 2416033**
E-mail(s) dedemdm@yahoo.it, marco.demichielis@mdm.imm.cnr.it
Nationality **Italian**
Date of birth **4-12-1980**

WORK EXPERIENCE

- Dates (from – to) Since 15-7-2016
- Name and address of employer CNR-IMM, Sezione di Agrate Biranza, Via Olivetti 2, Agrate Brianza (MB), Italy
- Type of business or sector Quantum computation and nanoelectronics
- Occupation or position held **Temporary researcher**
- Main activities and responsibilities Simulation of low-dimensional devices for quantum computation in CMOS devices.
 - **Work package leader of MOS-QUITO, H2020 ICT European Project, 2016-2019**Contributions to IONS4SET European projects.

- Dates (from – to) 4-7-2010 – 14-7-2016
- Name and address of employer Laboratorio MDM, IMM-CNR, Via Olivetti 2, Agrate Brianza (MB), Italy
- Type of business or sector Nano electronics, physics and quantum computation
- Occupation or position held **Post. doctoral fellow**
- Main activities and responsibilities Simulation of low-dimensional devices for ultimate nanoelectronics and quantum computation. Study of the energy band structure changes under strong confinement due to material interfaces, applied electric and magnetic fields and presence of donors. Use and development of simulators based on Full Configuration Interaction methods, Density Functional methods, k^*p techniques and Constant Interaction models.
 - Work package leader of MOS-QUITO, H2020 ICT European Project, 2016-2019
 - Work package leader of QuDec, Italian project co-funded by Ministero della Difesa, 2012-2014Contributions to IONS4SET and AFSiD European projects and ELIOS Italian project.

- Dates (from – to) 1-1-2009 – 30-6-2010
- Name and address of employer Department of electrical, management and mechanical engineering (DIEGM), University of Udine, Via delle Scienze 208, Udine, Italy
- Type of business or sector Micro and nano electronics
- Occupation or position held **Post. doctoral fellow**
- Main activities and responsibilities Development of Multi Subband Monte Carlo-based simulators for silicon n- and p-MOSFETs to investigate the effects of the channel thickness and mechanical stress on the charge transport at low and high electric field regimes.

- Dates (from – to) 09-2005 – 12-2005
- Name and address of employer DIEGM, University of Udine, Via delle Scienze 208, Udine, Italy
- Type of business or sector Micro and nano electronics
- Occupation or position held **Contract researcher**
- Main activities and responsibilities Development of analytical models for the charge transport in ballistic n-MOSFET based on silicon, gallium arsenide and germanium with an arbitrary crystallographic orientation.

EDUCATION AND TRAINING

- Dates (from-to) 1-1-2006 – 31-12-2008 (2 years in Italy + 1 year in France)
- Name and type of organization DIEGM, University of Udine (Udine, Italy) & IMEP-LAHC, INP Grenoble (Grenoble, France)
- Principal subjects/occupational skills covered Development of a numerical k*p method and an analytical model for the silicon valence band; simulation by Monte Carlo techniques of the charge transport in p-MOSFETs, modeling of electronic devices with commercial TCAD programs (Sentaurus) and circuit simulation (PSPICE); electrical characterization of CMOS devices: static I-V and dynamic C-V characteristics at room and cryogenic temperatures. Contributions to SINANO, PULLNANO and NANOSIL European projects.
- Title of qualification awarded 22-5-2009: **Ph.D. in industrial and information engineering (French-Italian double title)** with a dissertation entitled: "Modeling and Optimization of Carrier Transport in Nanoscale MOSFETs".

- Dates (from – to) 1999 – 2005
- Name and type of organization University of Udine, Via delle Scienze 208, Udine, Italy
- Principal subjects/occupational skills covered Analog and digital electronics, electronics for telecommunications, electrical communications, electronic devices, electronic device fabrication, quantum physics and computer science.
- Title of qualification awarded 19-4-2005: **Laurea degree in electronic engineering** with a thesis entitled: "Studio Teorico dei Margini di Miglioramento della Corrente Massima in Transistori MOS Nanometrici" ("Theoretical Study of the Maximum Current Improvements in Nanometric MOS Transistors").
- Level in national classification 110 / 110

PERSONAL SKILLS AND COMPETENCES

MOTHER TONGUE

ITALIAN

OTHER LANGUAGES

ENGLISH

FRENCH

- Reading skills
- Writing skills
- Verbal skills

excellent
good
good

good
basic
basic

SOCIAL SKILLS

I am used to working in a multi-cultural environment and I am very effective in the team working.

TECHNICAL SKILLS AND COMPETENCES

Very good C, C++, Matlab, COMSOL and Mathematica programming skills; basics of Fortran and knowledge of x86 assembly; use of Torque, a PBS-like program for managing high performance computations; knowledge of commercial EDA software L-Edit and Elphy for designing optical and electron beam lithography masks; Office-like program packages and LaTeX language are well known; very good knowledge of windows and linux operating systems and bash scripting.

DRIVING LICENCE(S)

Cat. B cars

ATTACHMENT(S)

List of publications, conferences and contributions

Agrate Brianza, 26 July 2016

I authorize the treatment of my personal data, according to the current law

Morco De Michielis