

CURRICULUM VITAE

Nikolaos Kelaidis

nkelaidis@gmail.com

n.kelaidis@inn.demokritos.gr

1. HIGHER EDUCATION

Degrees

- 2010 PhD, Aristotle University, Department of Solid State Physics
Thesis: The effect of Nitrogen on the electrical characteristics of strained-Si MOS structures
- 2002 MSc in Microelectronics, Departments of Informatics and Physics, University of Athens
- 1996 BSc in Physics, University of Athens, Departments of Physics

Awards

- 2004 - 2008 NCSR 'Demokritos', PhD scholarship
- 1997 – 1998 TMR Marie Currie Fellowship

2. APPOINTMENTS AND EXPERIENCE

- 10/2020 – today Research Associate, NCSR Demokritos
Project: 2D crystalline thin films with non-trivial topology (2D-top)
- 2019 – 9/2020 Research Associate, National Hellenic Research Foundation
Projects: “nanoporous GrAphene membrane for gas Separation-GATES” , EU-H2020 “Harvestore”
- 2017 – 2018 Research Associate, Coventry University
- 2013 - 2016 Post-doctoral Research Assistant, NCSR Demokritos
Projects: “2D-nanolattices”, ERC “Smartgate”, “Top-Electronics”
- 2003 – 2011 Lecturer on contract, Technical Educational Institute of Chalkida (part time)
- 2004 – 2010 PhD fellowship, NCSR Demokritos
- 2001 – 2002 Military service
- 1998 – 1999 Research Assistant, NCSR Demokritos
Project: Enhanced mobile phone with application specific memory system (New Emphasis, EU)
- 1997 – 1998 Training and Mobility of Researchers, Marie Currie Fellow, CNR Italy (Bologna)
Project: Prophecy (EU)

3. CONTRIBUTIONS TO TEACHING

- Technical Educational Institute (T.E.I) of Chalkida. Physics Lab I (General Physics) and II (Electrical Circuits).
- University of Coventry, one-on-one tutoring, student supervision
- NCSR Demokritos, tutoring/collaboration (Msc, PhD students)

4. CONTRIBUTIONS TO ADMINISTRATION AND MANAGEMENT

Contribution to administration and management tasks (deliverables, development of infrastructure, and orders) for the EU-funded research projects “2D-nanolattices”, ERC “Smartgate” and the Hellenic project “Top-Electronics” and currently for the project “*2D crystalline thin films with non-trivial topology (2D-top)*” as a post-doctoral associate at the NCSR “Demokritos”. Additionally, I was member of the team representing NCSR Demokritos at public engagement events such as Researcher’s night and the 78th Thessaloniki International Exhibition, Greece.

5. RESEARCH

Current research is centred in the areas of atomistic simulation of materials for energy applications (mainly photocatalytic materials, transparent oxides, MAX phase ceramics) and 2D materials such as graphene and TI/WSM materials.

My skills include: CASTEP/VASP DFT ab initio simulations, CVD graphene growth, MBE growth, clean room processing, electrical characterization & cryogenics, design of semiconductor devices, installation of infrastructure & maintenance, TCAD electrical device simulation, structural characterization.

I am interested in a broad range of nanoscale phenomena such as electronic, optical, electrochemical, mechanical, catalytic and interfacial properties. Understanding these properties can have important technological implications in energy conversion and storage, electronics, biotechnology and environmental technology. Since October 1st, I have been working with the team of Dr. Dimoulas at NCSR “Demokritos” under the 2D-Top Project. The objective of this project is the the fabrication WSM (Weyl Semimetal metal-oxide-semiconductor) devices in order to prove that the chiral anomaly is present and can be used as a non-volatile storage variable. I have also worked with a number of PhD and MSc students training and supporting them in various experimental processes and research skills.

6. OTHER INFORMATION

Referee in Journals

Journal of Applied Physics, Applied Physics Reviews, Solid State Electronics, Journal of Materials Science: Materials in Electronics, Materials Science in Semiconductor Processing

Languages

Greek (native speaker), English (proficient), Italian (B1/B2 level), French (basics)

Other

Music: classical guitar diploma, National Conservatoire Diploma (Athens, June 2004)

Sports: Greek National High School Basketball Championship (1990).

Links

ORCID ID: <https://orcid.org/0000-0002-7116-4876>

[google scholar profile](#)