



Nikitas Siannas

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🌐 nikitassiannas

Born 02 November 1991

EDUCATION

2020 – present

Philosophy of Doctor in Physics

National & Kapodistrian University of Athens, Physics Department, Greece, Athens

- **Sector:** Material Science – Ferroelectricity – Neuromorphic Computing.
- **PhD Thesis:** Non volatile **Hf(Zr)O₂** based ferroelectric memory devices for neuromorphic applications.
- **Grade:** (pending)

2015 – 2017

Master of Physics

National & Kapodistrian University of Athens, Physics Department, Greece, Athens

- **Sector:** Basic Physics – Material Physics.
- **Master Thesis:** Characterization of Electric Properties of Amorphous Silicon Nitride Insulating Thin Films as a function of Stoichiometry.
- **Grade:** 9.44 / 10

2009 – 2015

Bachelor of Physics

National & Kapodistrian University of Athens, Physics Department, Greece, Athens

- **Sector:** Solid State Physics and Condensed Matter.
- **Bachelor Thesis:** Characterization of Electric Properties of the Insulator "Silicon Nitride".
- **Grade:** 6.88 / 10

2009

High School Diploma

4th Lyceum of Petroupolis, Petroupoli, Greece, Athens

- **Sector:** Science of Technology.
- **Grade:** 16.1 / 20

WORK EXPERIENCE

Sep 2020 – present

Executive Researcher - Collaborator

National Centre of Scientific Research "DEMOKRITOS", Greece, Athens

- Institute of Nanoscience and Nanotechnology.
- Epitaxy and Surface Science Laboratory (ESSL)

Sep 2018 – 2020

Secondary Education Professor

Lathouraki's Special Education Private School of Zefuri, Greece, Athens

- Physics, Maths & Chemistry Classes.

2010 – present

Freelance Tutor

Private Education, Greece, Athens

- Physics, Maths & Chemistry Classes.
- Preparation for Exams – Tests.

Feb 2018 – Sep 2018

Secretary Assistant (In context of military duty)

Battalion of war Material and Ammunition, Kapota Military Camp, Greece, Athens

- Secretary of Military commander, Grammis Konstantinos (Colonel).
- Administrator of Military Communication Network "Purseia".
- Administrator - Distributor of secret military documents.
- Answered phones, responded to executive email.

Publications

Oct 2021 P.Tsipas, P.Pappas, E.Symeonidou, S.Fragkos, C.Zacharaki, E.Xenogiannopoulou, N.Siannas, A. Dimoulas, "Epitaxial HfTe₂ Dirac semimetal in the 2D limit", *APL Materials* 9, 101103, 2021, <http://doi.org/10.1063/5.0065839>

July 2017 M.Koutsourelis, N.Siannas, G. Papaioannou, "Temperature accelerated discharging processes through the bulk of PECVD silicon nitride films for MEMS capacitive switches", *Microelectronics Reliability*, 2017, ISSN 0026-2714, <http://dx.doi.org/10.1016/j.microrel.2017.07.018>.

- Measurement Method - Kelvin Probe Force Microscopy.
- Presented on ESREF 2017, Université de Bordeaux, France.
- "Best Paper Award to ISTFA 2017".

Presentations

January 2021 **Horizon2020 – BeFerroSynaptic virtual meeting**

- N. Siannas, P. Tsipas, S. Chaitoglou, C. Zacharaki, A. Dimoulas, "Thickness and Area Scaling of HZO Ge MFS – FTJ".

June 2021 **Physics Department PhD Students Conference**

- N. Siannas, C. Zacharaki, P. Tsipas, S. Chaitoglou, L. Begon-Lours, A. Dimoulas, "Σμίκρυνση πάχους του σιδηροηλεκτρικού Hf_{1-x}Zr_xO₂ για μη πτητικές μνήμες τύπου Ferroelectric Tunnel Junctions (FTJ)".

September 2021 **ESSDERC – IEEE 15th European Solid State Device Research Conference**

- N. Siannas, P. Tsipas, S. Chaitoglou, C. Zacharaki, L. Begon-Lours, A. Dimoulas, "Scaling ferroelectric HZO thickness for low power Ge MFS – FTJ memories".

September 2021 **European Materials Research Society – 2021 Fall Meeting Virtual Conference**

- N. Siannas, P. Tsipas, S. Chaitoglou, C. Zacharaki, L. Begon-Lours, C. Istrate, L. Pintille, A. Dimoulas, "Scaling of HZO ferroelectric in Ge MFS for low power FTJ non-volatile memories".

Seminars

September 2021 **European Materials Research Society – 2021 Fall Meeting Virtual Conference**

September 2021 **ESSDERC – IEEE 15th European Solid State Device Research Conference**

July 2016 **4th Hellenic Forum for Science Technology & Innovation, NCSR Democritos**

Sep 2015 **Researcher's Night 2015, National (Metsovian) Technical University of Athens**

Jun 2015 **18th Seminar on Quantum Information & Topology, National and Kapodistrian University of Athens**

Feb 2015 **Speech about Gravitational Waves, Eugenidou Foundation, Greece, Athens**

Technical skills

Computer Software

- Windows
- Linux (Ubuntu)

Text Formatting

- LaTeX
- Microsoft Word
- Microsoft Powerpoint

Data Aquisition - Management

- Labview
- Origin 8/9/9.1 (Origin Lab)
- Mathematica
- Microsoft Excel

Experiment Simulator

- Interactive Physics

Teaching

- Proof of Teaching profession - Protocol No.49721/2018-09-24 (National Organisation for the Certification of Qualifications & Vocational Guidance)

Personal skills

Hard Skills

- Academic writing.
- Public Speaking.
- Ability to organize work schedule.
- Ability to work under pressure.
- Ability to work individually as well as in a team.
- Excellent logical, analytical and computational skills.
- Creative thinking.

Soft Skills

- Time management.
- Good manners - Friendliness.
- Verbal communication.
- Organizational.
- Observant.
- Positive attitude - Optimistic.

Languages Known

- Greek (Mother Language)
- English (Proficiency Level)
- Spanish (Basic Level)
- French (Basic Level)

Volunteering

- Teacher of Martial Arts (Karate - Judo - Ju-jitsu), Summer Sports Camp of Petroupolis, Greece, Athens.
- Teacher of Traditional Dances (Crete), Cretan Dance Club of Metamorfofi, Greece, Athens.
- Environmental activities - exhibitions of Petroupolis municipality, Greece, Athens.

Interests

- Reading (Science, History Books).
- Playing Chess (Chess team of Petroupolis municipality).
- Cycling.
- Traditional Dances (Founding member of "Grupēs" cretan dance team).
- Martial Arts (Muai thai, Brajilian ju-jitsu).
- Travels.