



Europass Curriculum Vitae



Personal information

First name(s) / Surname(s) **Nathanail Kortsalioudakis**
Address 24/Daskalogianni St., 73142, P.O. Box 121 Agios Onoufrios, Akrotiri, Chania (Greece)
Telephone(s) +30 28210 37716 (Work)
E-mail(s) nathan@isc.tuc.gr, nathan.kortsalioudakis@gmail.com
Nationality Greek
Date of birth 21 February 1973
Gender Male

Desired employment / Occupational field

Physicist/Academic Education

Work experience

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| Dates | 02 January 2012 → |
| Occupation or position held | Physicist |
| Main activities and responsibilities | Teaching laboratory Physics, Scientific staff of Matter Structure and Laser Physics Laboratory |
| Name and address of employer | Technical Univeristy of Crete, Department of Sciences - Physics Division, Structure of Matter and Laser Physics Laboratory Technical Univeristy of Crete Campus, GR 73142 Chania (Greece) |
| Type of business or sector | Education |
| Dates | 07 January 2009 - 01 January 2012 |
| Occupation or position held | Head of Division of Planning and Development of Research Projects- Research Committee Secretariat |
| Main activities and responsibilities | |
| Name and address of employer | Technical University of Crete - Research Committee/Special Account for Research Grants Agiou Titou Sqr, 73132 Chania (Chania) |
| Type of business or sector | Public Administration/University |
| Dates | 01 October 2010 - 30 June 2011 |
| Occupation or position held | College / university teaching professional |
| Main activities and responsibilities | Laboratory Teaching Assistant under contract by fee hourly, Course: Metrology Laboratory |
| Name and address of employer | Technological Institution of Crete (TEI) - Branch of Chania 3/Romanou St., 73135 Chania (Greece) |
| Type of business or sector | Education |
| Dates | 23 June 2010 - 31 December 2010 |
| Occupation or position held | Scientific collaborator |
| Main activities and responsibilities | Scientific collaborator in the project entitled "Analysis and definition of project management processes of Research Committee and processing methods for continuous quality control of the 2010" sponsored by the Special Account for Research of the TUC, the following deliverables: 1) Evaluation of the Framework Operation Secretariat of the Special Account for Research and reform proposals and 2) Improvement and Reform of the services provided to users of Special Account for Research |

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| Name and address of employer | Technical University of Crete Ag. Titou Sqr., 73132 Chania (Greece) |
| Type of business or sector | Education |
| Dates | 01 September 2006 - 06 January 2009 |
| Occupation or position held | Physicist |
| Main activities and responsibilities | Scientific, technical and administrative support of the Physics Laboratory |
| Name and address of employer | Technical University of Crete - Matter Structure and Laser Physics Laboratory Panagouli St. and Delligiannaki St. corner, 73100 Chania (Greece) |
| Type of business or sector | Education |
| Dates | 01 November 2006 - 31 December 2008 |
| Occupation or position held | Researcher |
| Main activities and responsibilities | Researcher position under contract in the research program of the General Secretariat for Research and Technology (GSRT) of the Ministry of Development: Priority 4, Measure 4.6, Action 4.6.1., Sponsored by the CSF project entitled " REGIONAL INNOVATION POLE CRETE - (i4Crete) »Act ST1 (training staff)," The application of biotechnology ozone (O3) in the modern development and standardization of fresh agricultural products' |
| Name and address of employer | Technical University of Crete, Matter of Structure and Laser Physics Laboratory Panagoulli and Delligiannaki corner, 73100 Chania (Greece) |
| Type of business or sector | Education |
| Dates | 01 November 2006 - 31 December 2008 |
| Occupation or position held | Researcher |
| Main activities and responsibilities | Researcher position under contract in the research program of the General Secretariat for Research and Technology (GSRT) of the Ministry of Development: Priority 4, Measure 4.6, Action 4.6.1., Sponsored by the CSF project entitled " REGIONAL INNOVATION POLE OF CRETE - (i4Crete) Act A1, entitled" Study on application technology of ozone (O3) in the postharvest stage of processing (decontamination, maintenance, maturation, storage) of selected fresh agricultural products of Crete to create high quality modern units of packaging, storage and standardization " |
| Name and address of employer | Technical University of Crete - Matter Structure and Laser Physics Laboratory Panagouli St. and Delligiannaki St. corner, 73100 Chania (Greece) |
| Type of business or sector | Professional, scientific and technical activities |
| Dates | 01 May 2004 - 31 August 2006 |
| Occupation or position held | Researcher |
| Main activities and responsibilities | Researcher position under contract in research program EPEAEK II "Pythagoras-Environment-Research Groups in the TUC" entitled "Interaction of laser radiation with the atmosphere - Applications to Air Pollution |
| Name and address of employer | Technical University of Crete- Matter Structure and Laser Physics Laboratory Panagouli St. and Delligiannaki St. corner, 73100 Chania (Greece) |
| Type of business or sector | Professional, scientific and technical activities |
| Dates | 01 September 2003 - 31 August 2009 |
| Occupation or position held | College / university teaching professional |
| Main activities and responsibilities | Laboratory Teaching Assistant under contract by fee hourly, Courses: Metrology Laboratory, Physics Laboratory, Applied Electromagnetics Laboratory, Laser Technology |
| Name and address of employer | Technological Institution of Crete (TEI) - Branch of Chania 3/Romanou St., 73135 Chania (Chania) |
| Type of business or sector | Education |
| Dates | 01 September 2002 - 31 August 2006 |
| Occupation or position held | College / university teaching professional |
| Main activities and responsibilities | Laboratory Teaching Assistant on a contractual basis with the P.D.407/80: Teaching laboratory from |

compulsory courses "Physics I" and "Physical II" offered to first year students in all Departments of TUC. The material covering subjects were: Physics I: Classical Mechanics and Thermodynamics, and Physics II: Geometric and Quantum Optics, Classical Electromagnetism, Key issues electrical circuits, optical experiments with lasers

Name and address of employer Technical University of Crete
University Campus/Kounoupidiana, 73142 Chania (Greece)

Type of business or sector Education

Dates 01 February 2002 - 30 April 2004

Occupation or position held Researcher

Main activities and responsibilities Researcher position with contract funded by the European Union research project entitled: "Suppression over High dynamic range of Ase at the Rising edge of ultra-intense femtosecond Pulses", (SHARP), Contract no: HPRI - CT - 2001 - 50 037, FP5 - EU

Name and address of employer Technical University of Crete - Matter Structure and Laser Physics Laboratory
Panagouli St. and Delligiannaki St. corner, 73100 Chania (Greece)

Type of business or sector Professional, scientific and technical activities

Dates 01 September 1998 - 28 February 1999

Occupation or position held College / university teaching professional

Main activities and responsibilities Laboratory Teaching Assistant on a contractual basis with the P.D.407/80: Teaching laboratory from compulsory courses "Physics I" and "Physical II" offered to first year students in all Departments of TUC. The material covering subjects were: Physics I: Classical Mechanics and Thermodynamics, and Physics II: Geometric and Quantum Optics, Classical Electromagnetism, Key issues electrical circuits, optical experiments with lasers

Name and address of employer Technical University of Crete
University Campus/ Kounoudiana, 73142 Chania (Greece)

Type of business or sector Education

Education and training

Dates 01 December 2000 - 10 July 2006

Title of qualification awarded Doctor of Philosophy (PhD) thesis

Principal subjects / occupational skills covered Laser matter interaction with emphasis to the physical mechanisms take place during propagation of ultrashort high intensity laser pulses in gas and solid media

Name and type of organisation providing education and training Technical University of Crete - Department of Sciences/Physics Division (University)
University Campus/Kounoupidiana, 73142 Chania (Greece)

Level in national or international classification ISCED 6

Dates 01 November 1997 - 29 November 2000

Title of qualification awarded Master of Science (M.Sc) Thesis

Principal subjects / occupational skills covered Applied and Technological Physics and Laser Technology. Master thesis title: "Measurement of infrared emissivity of optically opaque materials at ambient temperature"

Name and type of organisation providing education and training Technical University of Crete - Department of Sciences/Physics Division (National Public University)
University Campus/Kounoupidiana, 73142 Chania (Greece)

Level in national or international classification ISCED 5

Dates 10 September 1992 - 27 November 1997

Title of qualification awarded Bachelor Degree on Physics

Principal subjects / occupational skills covered Physics degree

Name and type of organisation providing education and training University of Crete (National Public University)
Basillika Vouton, 71003 Hraklion (Greece)

Level in national or international classification | ISCED 5

Personal skills and competences

Mother tongue(s) | **Greek**

Other language(s)

Self-assessment
European level ()*

English

| Understanding | | | | Speaking | | | | Writing | |
|---------------|-----------------|---------|-----------------|--------------------|-----------------|-------------------|-----------------|---------|-----------------|
| Listening | | Reading | | Spoken interaction | | Spoken production | | | |
| C2 | Proficient user | C2 | Proficient user | C2 | Proficient user | C2 | Proficient user | C2 | Proficient user |

(*) [Common European Framework of Reference \(CEF\) level](#)

Organisational skills and competences

2005-2006: Technical University of Crete: Chairman of the board of staff on contract association
2006-2008: Technological Institution of Crete/Department of Natural Resources: Representative of Teaching staff with temporary occupation in Department's Faculty Board
1999-2000: Technical University of Crete/Department of Sciences: Postgraduate student representative in Department Faculty Board
1997-98: University of Crete/Department of Physics - Chairman of student board

Technical skills and competences

Research Interests

Theoretical and experimental study of nonlinear optical phenomena (propagation of laser pulses in gases and solids, harmonics generation, etc.)

Theoretical and experimental study of optical properties of materials: Construction of an infrared radiometer for measuring emissivity of opaque materials at room temperature combined by computational model for simulating

Participation on laser-matter interaction and plasma physics experiments via collaboration with the largest laser facilities in Europe such as: a) Foundation of Research and Technology (FORTH) Ultrafast Laser Facility (ULF), Crete, Greece and b) Rutherford Appleton Laboratory (RAL) at Central Laser Facility (CLF) -UK

Experienced user on: large scale pulsed laser systems (gas, liquid and solid state), developing optoelectronic devices, spectroscopes, optical sensors.

Experience in design and operation of opto-electronic and spectroscopic devices in the visible and ultraviolet (UV-Vis), optical sensors (optical amplifiers, photodiode, phototransistor, photomultiplier, etc.), opto-electronic coupling spectral imaging systems, diagnostic on plasma detection, interferometry (Michelson and Nomarsky)

Experience in numerical simulation of physical processes of interaction laser radiation with matter using computer languages such as Basic and Fortran and Mathematica

Computer skills and competences

Operation Systems:

- Microsoft Windows 3.1/95/98/NT/2000/XP/Vista (System Administrator level)
- UNIX, IBM/AIX, SunOS, HPOS (Power User level)
- Linux (Administrator Level)

Computational Languages:

- GWBasic/QBasic/MS Basic
- FORTRAN 77/90

Office Suites:

- Microsoft Office 97/2000/XP (Word, Excel, PowerPoint, Access)
- Open Office 2.0/3.0 (Writer, Calc, Impress, Database)
- Microsoft Frontpage 98/2000 (Web Design)

Operation of special software:

- Mathematica 4.0/4.2/5/5.1/5.2/6 (Numerical Computation and Visualization)
- Origin Lab 6.0/7.0/7.5/8.0 (Data Analysis and Graphing Processing)
- Scion Image 4.02 (Image Analysis)
- FRAN 1.0 (Automatic Fringe Analysis)
- HITRAN (High-Resolution TRANsmiission molecular absorption database)

Additional information

Publications on international journal with referees:

Publications on international journal and conferences with referees:

1. Fragkedaki O., Kortsalioudakis N., Mixelioudakis M., Skoulakis A., Moustazis S., "Microbial and Quality Control of Fruits and Vegetables by Ozone Application", 4th International Conference on Experiments/Process/System/Modeling/Simulation/ Optimization Athens, Greece, 6-9 July, 2011
2. N. Kortsalioudakis, S.D. Moustazis and S.Tzortzakis, "Ozone Concentration Control by Application of Filamented Ultrashort Ultraviolet Laser Pulses", 2nd International Symposium on Filamentation, 22-25 September 2008, Paris, France
3. N. Kortsalioudakis, M. Michelioudakis, S. Moustazis, "Study of the technology of Ozone (O3) in the maintenance of selected fresh agricultural products of Crete in order to create high quality modern units of packaging, storage and standardization", 2nd International Conference on Quality and Marketing of Agricultural Products, 25-27 September 2008, Hersonissos, Heraklion, Crete
4. N.Kortsalioudakis, E.Bakarezos, C.Kalpouzos, S.D.Moustazis, "Development of Table-Top Ultrashort Hybrid Laser by Amplification of a Tuned Ti:Sa Laser Beam in an Excimer Double Cavity", CLEO/QELS 2006, Long Beach Convention Center, 21-26 May 2006, Long Beach, California, USA
5. Kortsalioudakis, N., Tatarakis, M., Vakakis, N., Moustazis, S.D., Franco, M., Prade, B., Mysyrowicz, A., Papadogiannis, N.A., Couairon, A., Tzortzakis, S., "Enhanced harmonic conversion efficiency in the self-guided propagation of femtosecond ultraviolet laser pulses in argon", (2005) Applied Physics B: Lasers and Optics, 80 (2), pp. 211-214. Cited 21 times (updated: February 2011)
6. S.D. Moustazis, M. Tatarakis, A. Skoulakis and N. Kortsalioudakis, "An Innovative Scheme for Fast Charged Particles propagation", Fourth International Conference on Inertial Fusion Sciences and Applications, Biarritz France, September 2005.
7. N. Kortsalioudakis, E. Bakarezos, C. Kalpouzos, S.D. Moustazis, " A New Hybrid Laser System: Amplification of a Ti:Sa Laser Seed Beam in an Excimer Cavity Amplifier with Potential Applications to Atmospheric Pollution Monitoring", Laser Olympics, Athens, Greece Oct. 15-17, 2004
8. S.D.Moustazis, M. Tatarakis, N.Vakakis and N. Kortsalioudakis, Jérôme Gaudin, and Philippe Martin, F. N. Beg, K. Krushelnick and A. E. Dangor, "Quartz induced Luminescence by Neutron impact using a Plasma Focus device", 8th International Conference on Applications of Nuclear Techniques, Crete, Greece Sept. 12-18, 2004
9. M. Tatarakis, M. Bakarezos, N. Papadogiannis, N. Vakakis, N. Kortsalioudakis, S.D. Moustazis, P. Nilson, T. Witting, "Enhancement of the x-ray yield during the interaction of two collinear short pulse UV laser beams with a solid target", 8th International Conference on Applications of Nuclear Techniques, Crete, Greece Sept. 12-18, 2004
10. S. Tzortzakis, N. Kortsalioudakis, M. Tatarakis, N. Vakakis, S.D. Moustazis, M. Franco, B. Prade, A. Mysyrowicz, N. Papadogiannis, A. Couairon, "Self-guided propagation of fs UV laser pulses and

efficient harmonic generation in low pressure argon", CLEO/QELS 2004, The Moscone Center West, 16-22 May 2004, San Francisco, California, USA.

11. Pantinakis, A., Kortsalioudakis, N., "A simple high-sensitivity radiometer in the infrared for measurements of the directional total emissivity of opaque materials at near-ambient temperatures", (2001) *International Journal of Thermophysics*, 22 (6), pp. 1843-1854. Cited 2 times (updated: February 2011)

12. Hatzianastassiou, N., Croke, B., Kortsalioudakis, N., Vardavas, I., Koutoulaki, K., "A model for the longwave radiation budget of the Northern Hemisphere: Comparison with Earth Radiation Budget Experiment data", (1999) *Journal of Geophysical Research D: Atmospheres*, 104 (D8), pp. 9489-9500. Cited 11 times (updated: February 2011)