

# Roupen Vartian

## PERSONAL DATA

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FIRST NAME: Roupen  
LAST NAME: Vartian  
DATE OF BIRTH: 12-12-1999  
NATIONALITY: Greek  
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## EDUCATION

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UNDERGRADUATE DEGREE: School of Applied Mathematical and Physical Sciences (SAMPS),  
*Department of Physics*, National Technical University of Athens

DURATION: 5 years' studies (October 2017 - October 2022)

DEGREE LEVEL: Integrated Master

GPA: 9.40 / 10 (classification 'Excellent')

FIELDS OF INTEREST: Advanced Technological Materials &  
Theoretical and Computational Physics

DIPLOMA THESIS: **"Vibrational Spectroscopy on Flexible Metal-Organic Frameworks"**  
Raman and Fourier Transform far-IR spectroscopy measurements on ZIFs and RE-MOFs samples with emphasis on their response to temperature variations as well as on characterizing their intrinsic framework structure. Raman and FTIR spectroscopy measurements took place in NCSR "Democritos" and National Hellenic Research Foundation facilities, respectively.

## AWARDS & HONOURS

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2018 - 2019 Winner of "Christos Papakyriakopoulos" award for holding best grades in mathematics courses among entrants of '17.

2021 - 2022 Granted the excellence award by the State Scholarship Foundation as the first ranked graduate among all graduates of SAMPS of the academic year.

## WORK EXPERIENCE

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JANUARY 2023 -  
DECEMBER 2024

**Research Fellow** at the Institute for Organic Synthesis and Photoreactivity (ISOF) of the National Research Council of Italy (CNR) in Bologna.

Worked on Hyperspectral Dark-Field Microscopy Imaging applied on human red blood cells under normal and oxidative stress conditions. The study also focused on developing a protocol to distinguish between healthy and autistic red blood cells samples based on their scattering spectra features.

JANUARY 2025 -  
NOW

**Research Associate** at the Institute of Nanoscience and Nanotechnology (INN) of the National Center for Scientific Research "Demokritos".

Working on the development of hybrid and flexible thermoelectric generators using solution-processed chalcogenide thin films.

## INTERNSHIP EXPERIENCE

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SEPTEMBER 2022 -  
OCTOBER 2022

2-months' internship at "ThetaMetrisis", a high-tech spin-off company of NCSR "Demokritos" based in Peristeri, Greece, which deals with the non-destructive characterization of coatings in micro- and nano-scale.

Conducted various coating reflectance measurements in order to build an algorithm that will evaluate coating's thickness using interference order data. For the purposes of this study, matlab was used extensively and algorithm's results were compared with those of Levenberg-Marquardt algorithm.

## INTERNATIONAL CONFERENCES

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2024

Kontos, A.G.; Falaras, P.P.; Vartian, R; Palles, D.; Romanos, G.Em.; Steriotis, T.A.; Trikalitis, P.N.; Angeli, G.K.; Raptis, Y.S., "Vibrational effects in Metal-Organic Frameworks induced by CO<sub>2</sub> uptake", International Conference on Raman Spectroscopy, ICORS 2024, 28 July - 2 August, Rome (Oral Presentation)

## LANGUAGES

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GREEK:

Native Language

ENGLISH:

level C2

FRENCH:

level B2

ARMENIAN:

Native Language

## TECHNICAL SKILLS

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GENERAL

MATLAB, FORTRAN, Java, Origin, Microsoft Office, LibreOffice, ENVI (NV5), WiRE (Renishaw)

## WORKSHOPS

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DECEMBER 2020

### **"Computational Materials Science"**

A two-days' online workshop held at 19-20/12 by the Department of Materials Science and Technology of University of Crete and Hellenic Society for the Science and Technology of Condensed Matter (HSSTCM), regarding the most recent advances in the field of Computational Materials Science.