

Curriculum Vitae

Personal Info

Ana-Maria-Raluca Gherman

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Education and Work Experience

Research experience

(present)

scientific researcher (CS level) in the field of Physics, National Institute for Research and Development of Isotopic and Molecular Technologies I N C D T I M, Cluj-Napoca, Romania (April 1st, 2019 – present)

(past)

research assistant (AC level) in the field of Physics, National Institute for Research and Development of Isotopic and Molecular Technologies I N C D T I M, Cluj-Napoca, Romania (July 18th, 2016 – April 1st, 2019)

Formal education

Doctoral student, **Doctoral School of Physics, Faculty of Physics**, Babeş-Bolyai University, Cluj-Napoca, Romania, (2015 – present); scientific coordinator: Prof. Dr. Vasile Chiş; research field: *computational chemistry and molecular modelling*

Biophysics and Medical Physics, Faculty of Physics, Babeş-Bolyai University, Cluj-Napoca, Romania (2013 – 2015) – Master Degree – dissertation: "Molecular structure of biotin molecule (vitamin B7)"

Pedagogical studies programme , field of Medical Physics, Level II, Teacher Training Department, Babeş-Bolyai University, Cluj-Napoca, Romania (2013 – 2015)

Medical Physics, Faculty of Physics, Babeş-Bolyai University, Cluj-Napoca, Romania (2010 – 2013) – Bachelor Degree – thesis: "Study of carbamazepine molecule by experimental and theoretical methods"

Pedagogical studies programme, field of Medical Physics, Level I, Teacher Training Department, Babeş-Bolyai University, Cluj-Napoca, Romania (2010 – 2013)

Grup Şcolar Industrial Luduş (highschool), Mathematics – Informatics profile (2006 – 2010) – Bacalaureat Diploma and Certificate of professional competences (Informatics)

Other scientific activities

⇒ research visit – October 21st – December 21st 2015 – Institut für Physik, TU Chemnitz, Germany (Prof. Dr. DRT Zahn's research group); activities: DFT calculations (geometry optimization and frequency) on intermediate compounds of the synthesis process of the Heme B molecule;

⇒ *Erasmus Mobility for Placement* – October 15th 2014 – February 28th 2015 – Scuola Normale Superiore Di Pisa, Italy, supervisor: prof. Vincenzo Barone; field: *computational chemistry*; activities: geometry optimization and frequency (harmonic and anharmonic level) DFT calculations using Gaussian software package.

Scientific projects

Member:

⇒ "High-throughput nanoscreening platform for SERS monitoring of latest generation antibiotics' activity on antibiotic-resistant pathogens at single-cell level (Antib_resis_SERS)", PN-III-P1-1.1-TE-2019-0910, project manager: Dr. Nicoleta Elena DINA, period: September 15th 2020 – September 14th 2022; <https://sites.google.com/view/antibresissers/>

⇒ „Creşterea capacităţii de transfer tehnologic şi de cunoştinţe a INCDTIM Cluj în domeniul bioeconomiei (TTC-ITIM)", POC 18/2016, project manager: Dr Claudiu FILIP, period: October 2019 – March 31st 2020; <https://www.itim-cj.ro/poc/ttc/>

- ⇒ “Development of a microfluidic portable device for pathogens’ rapid SERS detection (mifSERS)”, PN-III-P2-2.1-PED-2016-0983, project manager: Dr. Nicoleta Elena DINA, period: January 20th 2018 – December 31st 2018; <https://www.itim-cj.ro/pncdi/mifers/>
- ⇒ “Pathogenic microorganisms rapid detection and identification using high sensitive Raman spectroscopy”, PN-II-RU-TE-2014-4-0862, project manager: Dr. Nicoleta Elena DINA, period: July 16th 2016 – November 9th 2017; <https://www.itim-cj.ro/PNCDI/ru381/index.html>

Personal skills and competences

Native language	Română
Foreign languages	English – advanced Français – medium Español – conversational Italiano – beginner Deutsch – beginner
Handling laboratory equipment	I am able to manipulate a DeltaNU Advantage and Renishaw Raman, and a Jasco UV-Vis spectrometer, having experience in recording Raman (powder and liquid), SERS, and absorption spectra of active compounds of pharmaceuticals.
Computational skills	I am an advanced user of Microsoft Office package, Fox Pro, Origin, Gaussian and GaussView, molecular docking software Autodock Vina and Autodock Tools, multivariate analysis softwares The Unscrambler and Solo from Eigenvector, several graphic software (Adobe InDesign, Photoshop), Linux server and the internet (including social networks and blogging platforms). I am a basic user of programming languages C, C++, HTML, java script, CSS, and of Wolfram Mathematica and Matlab software.
Driver’s license	B
Member of scientific communities	Associate member of College of Physicists in Medicine in Romania (CFMR) (July 13 th 2015 – present)
Scientometry	h_{index} : 5 publications in ISI journals: 12 citations: 57 list of publications: https://publons.com/researcher/2979157/ana-maria-raluca-gherman