

PERSONAL INFORMATION

Mihai GABOR



- 📍 Technical University of Cluj-Napoca, Center for Superconductivity Spintronics and Surface Science, Str. Memorandumului No. 28 RO-400114 Cluj-Napoca, ROMANIA
- ☎ +40-264-401475
- ✉ mihai.gabor@phys.utcluj.ro
- 🌐 <https://c4s.utcluj.ro/Mihai.html>

WORK EXPERIENCE

Associate Professor

Department of Physics and Chemistry, Faculty of Materials and Environmental Engineering, Technical University of Cluj-Napoca, Str. Memorandumului No. 28 RO-400114 Cluj-Napoca, ROMANIA

- Teaching and research activities

EDUCATION AND TRAINING

- 2011 **Ph.D. in Physics and Materials Engineering**
 Awarded by "Henri Poincaré" University, Nancy, France and Technical University of Cluj-Napoca, Romania
 Thesis title: "Spintronics with alternative materials: full-Heusler alloys and dilute magnetic oxides"
- 2007 **M.Sc. in Physics**
 Awarded by "Babeş-Bolyai" University, Cluj-Napoca, Romania
 Subject: Solid State Physics
- 2006 **M.Sc. in Physics**
 Awarded by "Joseph Fourier, University, Grenoble, France
 Subject: Physics of Materials and Nanostructures
- 2005 **B. Sc. in Physics**
 Awarded by "Babeş-Bolyai" University, Cluj-Napoca, Romania
 Subject: Physics

RESEARCH INTERNSHIPS AND TRAINING COURSES

- 2005-2011 **Research internships for approx. 24 months**
 - (1) - ENEA, Frascati, Rome, Italy (research internship- Pulsed Laser Deposition of oxide multilayers, low temperature magnetic and magneto-transport measurements);
 - (2) - CEA-SPINTEC, Grenoble, France (master internship – numerical modeling of exchange bias in nanostructures);
 - (3) -LPM, University "Henri Poincaré" Nancy, France (doctoral thesis research internships – growth of thin films and heterostructures by molecular beam epitaxy, magneto-electrical characterizations, numerical methods);

Training courses

- (1) - Bruker AXS, Karlsruhe, Germany (High Resolution and Powder X-ray diffraction, Stress and texture).
- (2) - UJF-INPG, Grenoble, France, Experimental methods for nanotechnologies.
- (3) - *Sumer schools*: European School of Magnetism ESM 2007, Cluj-Napoca, Romania; European School of Magnetism ESM 2009, Timisoara, Romania.

RESEARCH PROJECTS
COORDINATOR

- 2021-2024 PN-III-P4-ID-PCE-nr. 182/2021 - Spin-orbit torque driven field-free artificial synapses and neurons (SPINSYNE), Financing organization MRI-UEFISCDI, Val. 250 kEuro
- 2018-2020 PN-III-P1-1.1-TE nr. 24/02.05.2018 - "Spin-orbitronic devices for non-volatile magnetic memories", Financing organization MRI-UEFISCDI, Val. 100k Euro. <https://c4s.utcluj.ro/SOTMEM/sotmem.html>
- 2015-2017 PN-II-RU-TE nr. 255/01.10.2015 - "Advanced spintronic devices for communication and data storage technologies based on Heusler compounds", Financing organization MRI-UEFISCDI, Val. 125k Euro. <https://c4s.utcluj.ro/SPINCOD/spincod.html>
- 2014-2015 TUCN – Research grant (2014 –2015), TE-29317/2014 "Advanced materials with applications for spintronic devices for information storage technologies", Financing organization TUCN, Val. 7k Euro.
- 2008 (3 months) EURATOM-ENEA, Rome, Italy Research fellowship (2008) „Growth and characterization of magnetic multilayers structures”, Val. 3k Euro.

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2
French	B2	B2	B2	B2	B2

Research subjects Nanoelectronics, spintronic and spin-orbitronic devices.

Research skills Thin films and multilayers deposition by means of molecular e-beam epitaxy (MBE) and sputtering. Structural (XRD), morphological (AFM, XRR), magnetic static (MFM, VSM, SQUID) and dynamic (FMR) characterization of thin films and multilayers. Patterning of devices by UV lithography and ion beam etching. Analytical and numerical methods for modelling magnetism and transport in spin-orbitronic structures. Micromagnetic simulations.

IT skills LabView visual programming language and Python, C/C++ programming in Linux/Windows, Micromagnetic Simulations in MuMax3, numeric/symbolic calculations Mathematica, Matlab.

Publications 94 ISI papers, **1667 citations**, Hirsch index **h=23** (ISI WoK), ([Scopus Author ID: 57188785992](https://scopus.com/authors/details/mihai-gabor)), **2092 citations** , Hirsch index **h=25** (Google Scholar) (<https://scholar.google.ro/citations?user=eFyqRPAAAAAJ&hl=en>), coauthor of 2 books and 2 national patents.

Invited lectures 11th International Conference On Physics Of Advanced Materials (ICPAM-11) 8-14 September 2016, Cluj-Napoca, Romania; 15-17 June 2017 Spin Currents and Spin-Orbit Torques Workshop, SPINTEC, CEA-INAC / CNRS / University Grenoble Alpes, Grenoble, France; 23-25.2022 Spins, waves and interactions, TU Desden, Greifswald, Germany.

- Honors / awards / other** 2014 – Excellence in research prize awarded by TUCN.
2016 – Invited professor University Paris 13, Paris, France.
2017 – Invited researcher at SPINTEC-CEA, Grenoble, France.
2017 – Jury member of a PhD thesis University Grenoble Alpes, Grenoble, France.
2019 – Jury member of a PhD thesis University Grenoble Alpes, Grenoble, France.
- Reviewer activity** Nature Communications, Physical Review Letters, Physical Review B, Physical Review Materials, Advanced Materials, Advanced Science, Small, Applied Physics Letters, Journal of Applied Physics, APL Materials, Nanotechnology, ACS Photonics, Journal of Magnetism and Magnetic Materials etc.
- Evaluator activity** Evaluator for *National Science Center of Poland* și *Czech Science Foundation*.

Cluj-Napoca,
19.06.2024

Dr. Mihai GABOR