

Alina Maria Cismaru received her **Bachelor's degree in Physics, specializing in Solid State Physics, from the Faculty of Physics, University of Bucharest, Romania**, in 1998, following her undergraduate studies (1994–1998). She subsequently obtained a **Master's degree in Solid State Physics** from the same institution in 2000. In 2005, she earned a **Bachelor's degree in Management from the Faculty of Management, Bucharest University of Economic Studies**. She received her **PhD in Physics from the Faculty of Physics, University of Bucharest, in 2008**. In 2026, she completed the **EDURES Master's programme in International Relations and Economic Affairs at the Bucharest University of Economic Studies**, specializing in interdisciplinary science communication.

In September 1998 she was hired at **National Institute for Research and Development in Microtechnologies (IMT Bucharest)**, as Assistant Researcher **Romania, in 1998**, where she has been involved in research activities in Micromachined Microwave Structures, Circuits and Devices Laboratory (MICROLAB). Throughout her career, she has held successive research positions, and since 2021, she has the position of Senior Scientific Researcher (Researcher). Since 2012 she is the President of the Union "Semiconductorul" from IMT Bucharest.

Between 2002 and 2005, she carried out several research stages (2–4 months each) at the Microwave Microsystem Technology Group (M2T), Institute for Microelectronics and Microsystems, National Research Council (CNR-IMM), Rome, Italy, where she was involved in the modelling and microwave characterization of micromachined magnetostatic wave (MSW) devices. In 2010, she completed a three-week research stage at the University of Pretoria, South Africa.

Her research expertise covers the design, electromagnetic simulation using CST Studio Suite®, fabrication, and microwave characterization of RF, microwave, and millimetre-wave devices using vector network analyzers over the 0.4–110 GHz frequency range. Between 2008 and 2019, she also specialized in the microstructural characterization of microwave devices, MEMS, and microfluidic systems using White Light Interferometry.

She also has expertise in carbon nanotube (CNT)- and graphene-based gas sensors and biosensors for microwave applications, metamaterial-inspired antennas and resonators, RF MEMS devices, tunable microwave magnetic filters based on yttrium iron garnet (YIG) thin films, electromagnetic band-gap (EBG) structures based on permalloy thin films, and the microwave characterization of surface acoustic wave (SAW) and film bulk acoustic resonator (FBAR) devices. She has also performed microwave and DC characterization of graphene- and CNT-based RF MEMS and biosensor devices, as well as advanced on-wafer measurements of microwave and millimetre-wave devices.

Her current research focuses on carbon nanomaterial-based microwave sensors and metamaterial devices for environmental monitoring and biomedical applications. Her interests include CNT/g-C₃N₄ nanocomposite-based microwave sensors for CO₂ detection, CNT-based microwave methane (CH₄) sensors, microwave sensing of volatile organic compounds (VOCs), including acetone and ethanol, humidity and greenhouse gas monitoring, and CNT- and graphene-based metamaterial antennas and resonators for label-free biosensing, particularly DNA detection. She is also actively involved in the development of RF MEMS fractal resonators and reconfigurable RF MEMS antenna platforms incorporating RF switches. Her work combines electromagnetic modelling, microwave measurements, nanomaterials, metamaterials, RF MEMS technologies, and advanced microwave sensing platforms and magnetic films-based microwave filters.

During her doctoral studies, Dr. Cismaru served as Principal Investigator of a CNCSIS research grant. She subsequently carried out postdoctoral research within the European Structural Funds POSDRU project (POSDRU/89/1.5/S/63700), focusing on RF MEMS and RF NEMS circuits. Throughout her career, she has participated as a researcher in 17 international research projects funded by the FP6, FP7, ENIAC, Horizon 2020, and Horizon Europe.

programmes, as well as in 20 national research projects. She has also contributed to several Horizon Europe project proposals as a Work Package Leader, coordinating technical activities and contributing to proposal preparation, consortium building, and project planning.

She is the author of one scientific book published by Printech and co-author of 14 book chapters published by the Romanian Academy between 2005 and 2016. She has co-authored more than 82 scientific papers published in ISI-indexed journals and international conference proceedings (34 peer-reviewed journal papers and 48 conference proceedings). According to Google Scholar, her publications have received more than 900 citations, and she has an h-index of 17.