

George Alexandru BOLDEIU

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married

Professional Experience

2019 – present IDT II at Micromachined structures, Microwave Circuits and Devices Laboratory, National Institute for Research and Development for Microtechnologies Bucharest

- performing thermal, mechanical and electromagnetic simulation using Ansys and Comsol
- simulate MEMS device, simulate devices based on acoustic wave
- simulate electromagnetic field in low and high frequency
- create design for simulation
- create design for 3D printing
- electric measurements
- SAW devices on thin III-nitride layers
- microwave characterization of SAW devices,
- SAW temperature and magnetic sensors; simulations and characterization
- interaction of surface acoustic waves with spin waves

2017 - 2019 thermal simulation engineer at Continental Automotive Romania (ADAS)

- performing thermal simulation using Ansys, Ansys Icepak
- thermal modelling for electronic components, PCB, housing using FEA, CFD.
- coupled thermal-structural to find effect of thermal stress
- coupled thermal-electric for different effects, such: Peltier effect and Seebeck effect
- import and prepare geometry to simulated
- interact with mechanical engineers and system engineers to find good solution for thermal management, cooling

2007 – 2017 engineer at Simulation, Modelling and Computer- Aided Design Laboratory, National Institute for Research and Development for Microtechnologies Bucharest

- performing thermal, mechanical and electromagnetic simulation using Ansys and Comsol
- simulate MEMS device
- simulate electromagnetic field in low and high frequency
- create design for simulation

- create design for 3D printing
- electric measurement

2004 – 2007

databases administrator at Internet/Intranet Laboratory, National Institute for Research and Development for Microtechnologies Bucharest

2001-2004

junior researcher at Nano-Scale Structuring and Characterization, National Institute for Research and Development for Microtechnologies Bucharest

Education

• 2019 – present

PhD student at Doctoral School of Electronics, Telecommunications & Information Technology, University Politehnica of Bucharest

• 2011-1014

Bachelor of Physics from Faculty of Physics, University of Bucharest, Bucharest

• 1996-2001

Bachelor of Mathematical engineering from Faculty of Electrical Engineering, University Politehnica of Bucharest

Core Competencies

- Create 2D/3D models for preparing simulation
- Developing and updating analysis for various designs
- Linear and Non linear FEA
- CAD and CAE
- Design Optimization
- Stress Analysis
- Electromagnetical analysis
- Thermal analysis

Professional Competencies

- Identification and adequate using of physical law and principles in a given context
- Using of dedicate software package for data analysis and processing
- Ability to solve physical problems in given conditions, by using numerical and statistical methods
- Ability to use knowledge in physics in related fields and performing experiments by using standard laboratory equipments
- Ability to communicate and analyse information in the field of Physics, for scientific, didactic and popularizations proposes

Transversal Competencies

- To be able to accomplish professional tasks efficiently, by observing the specific legislation and ethics principles under qualified assistance
- To be able to use efficient work techniques in a multidisciplinary team, on various hierarchical positions
- To be able to use efficiency information, communication and professional resources

Research experience

- analysis and simulation of thermal effect coupled with fluid
- analysis and simulation in electrostatic field for super-capacitors, low frequency electromagnetic, thermal and mechanical analysis
- MEMS design simulation for coupled phenomena: electromechanical, thermal-electric, structural-thermal-electric and structural-thermal analysis
- design for rapid-prototyping
- electrical measurements

Reserch Interest

- classical mechanics
- solid state physics
- mechanical strength
- quantum mechanics
- mechanical statistic
- electromagnetic

Languages

- English

Computer Skills

- CAD/CAE: **Ansys APDL &** Ansys Workbench, **Icepak, COMSOL**
- CAD: Solidworks, Catia
- Numerical calculus: Matlab
- Operating system: Windows and Linux
- Text Editing: LaTeX