

## PERSONAL INFORMATION



📍 Laboratory of Atomic Physics, Vinca Institute of Nuclear Sciences, P.O. Box 522, 11000 Belgrade, Serbia

☎ +381 (0) 11 340 83 96  
☎ (fax): +381 (0) 11 80 66 425

✉ [nevenar@vin.bg.ac.rs](mailto:nevenar@vin.bg.ac.rs)

📅 Date of birth: 05. 01. 1985.

## WORK EXPERIENCE

2012 – 2015 **Research Assistant**

Vinca Institute of Nuclear Science (Belgrade)

*Laboratory for atomic physics*

**Project:** Photonics of micro and nanostructured materials

- Determination of classical optical sensor sensitivity using Fisher information
- Experimental characterization of fibre bend radius sensor based on Long Period Grating
- Analytical and numerical modelling of Mach-Zehnder interferometer coated with thin dielectric film and its optimization for liquid concentration sensing
- Analytical and numerical modelling of planar optical waveguide coated with thin dielectric film and its optimization for gas concentration sensing
- Implementation of numerical techniques (in Matlab) for mode determination and propagation such as: Finite Difference, FD Beam Propagation Method
- Use of COMSOL software package for modelling of mode formation and propagation along tapered optical fibre

2010-2012 **Research Assistant**

Helmut Schmidt Universität (Hamburg)

*Fakultät für Elektrotechnik Experimentalphysik und Materialwissenschaften*

**Project:** Evanescent field fiber-optic sensor

- Experimental work: Characterization of nano-layers by prism-coupling technique: thickness, refractive index and damping; prism and fibre polishing; fibre tapering and splicing; evanescent field gas sensor characterization
- Analytical modelling of modes in optical fibers coated with thin dielectric film
- Numerical modelling of mode propagation in pencil shaped fibres (FD-BPM in Matlab)

2009-2010 **Research Assistant**

Vinca Institute of Nuclear Science (Belgrade)

*Laboratory for atomic physics*

**Project:** Linear and nonlinear wave propagation in waveguide lattices with lattice period smaller than wavelength

- Characterization of nano-layers by prism-coupling technique: refractive index
- Analytical modelling of Whispering Gallery Modes (WGM)

**Project:** Physics of complex phenomenon in plasma, condensed matter and nonlinear optics

- Analytical derivations of WGM

## EDUCATION AND TRAINING

---

### 2009 – 2015 Phd studies

Faculty of Electrical Engineering, University of Belgrade

*Group for Nanoelectronics and Photonics*

### 2008-2009 Master studies

Faculty of Electrical Engineering, University of Belgrade

*Department of Nanoelectronics, Optoelectronics and Laser Technique*

### 2003-2007 Undergraduate studies

Faculty of Electrical Engineering, University of Belgrade

*Department of Physical Electronics*

## PERSONAL SKILLS

---

Language	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	B2	B2	B2
German	B2	B2	B1	B1	B1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user  
Common European Framework of Reference for Languages

### Job-related skills

Programming and technical computing skills :

- Matlab, COMSO

Numerical programming methods:

- Finite Difference Method
- Beam Propagation Method

Experimental experience:

- Characterization of Long Period Grating sensors; Characterization of nano-layers by prism-coupling technique: thickness, refractive index and damping; prism and fibre polishing; fibre tapering and splicing; evanescent field gas sensor characterization;

### Computer skills

Software:

- good command of Microsoft Office™ tools and CorelDraw

### Other Activities

- teaching assistant in Petnica Science Center (2009-20010)
- participant of Science festival in Belgrade (2009)