

## PERSONAL INFORMATION

## Marko Perčić



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## POSITION

Teaching Assistant and PhD student at the Faculty of Engineering, University of Rijeka, Croatia, Member of the Centre for Micro and Nano Sciences and Technologies, University of Rijeka, Croatia

## WORK EXPERIENCE

- 2014–Present **Science and teaching staff**  
Faculty of Engineering, University of Rijeka, Rijeka (Croatia)  
Teaching mechanical engineering drafting, modelling, design, and visualization using CAD systems at the Department of Mechanical Engineering Design  
PhD student in the field of nanotechnologies, nano-scale friction, experimental research using AFM and numerical modelling
- 2011–2014 **Project Associate**  
Faculty of Engineering, University of Rijeka, Rijeka (Croatia)  
•Associate for design of energy systems at the Faculty of Engineering University of Rijeka, Department of Thermodynamics and Energy Engineering
- 2000–2006 **Mechanical engineering technician**  
Institute IGH d.d., Rijeka (Croatia)  
•Engineering technician involved in drafting, data analysis, and laboratory work.

## EDUCATION AND TRAINING

- 2012–Present **PhD student of Mechanical Engineering Design** EQF level 8  
Faculty of Engineering, University of Rijeka, Rijeka (Croatia)  
Nanotechnology, nano-friction, experimental research using atomic force microscope
- 2006–2012 **M. Sc. in Mechanical Engineering** EQF level 7  
Faculty of Engineering, University of Rijeka, Rijeka (Croatia)
- 1996–2000 **High School Diploma** EQF level 4  
Technical High School for Mechanical Engineering and Shipbuilding, Rijeka (Croatia)
- 1988–1996 **Elementary School** EQF level 4  
Elementary School "Podmurvice", Rijeka (Croatia)

**PERSONAL SKILLS**

Mother tongue(s) Croatian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C1	C1	C2
Italian	B2	B2	A2	A2	A2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user  
Common European Framework of Reference for Languages

Communication skills Communication skills obtained through my work experience as a teaching assistant, organizer of scientific congresses, and as a technical editor of scientific journals.

Organisational / managerial skills Member of Organizing Committees of various international scientific congresses. Technical editor of scientific journal "Strojarstvo".

Job-related skills Modelling and computer simulations of physical systems, involving scientific and engineering visualization, scientific and engineering data processing. Modelling and design of mechanical components and systems. Working with various rapid prototyping systems (3D printers) and 3D scanning equipment. Experience as a Chief Designer of various energy systems for buildings. Numerical modelling using control volume method, finite element method, and lattice Boltzmann method, with parallel execution using MPI. Statistical and stochastic analysis of data, statistical physics, molecular dynamics, multivariate optimization, evolutionary algorithms, parametric model analysis and optimization, design of experiments, sampling methods, experimental work on atomic force microscope, scanning electron microscope, x-ray photoelectron spectroscopy, atomic layer deposition, pulsed laser deposition, thermogravimetry, differential scanning calorimetry, nanofluids and colloids experimentation and modelling. Quantitative characterisation of mechanical properties of thin films, force spectroscopy. Member of the Croatian Chamber of Mechanical Engineers (HKIS), author as a principal designer of more than 25 engineering projects of building energy systems and renewable energy systems (solar thermal, geothermal, PV, heat pumps, etc.).

**Digital competence**

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Digital competences - Self-assessment grid

Proficient in linux and windows operating systems. Expert usage of 2D and 3D modelling and CAD software; AutoCAD, CATIA, PTC Creo, Solidworks, etc. Solid modelling of parts and complex assemblies, rendering and animation. Proficient in using numerical modelling methods via softwares; Ansys, Matlab, Mathematica. Parallel computing using OpenMPI and MPICH in windows and linux environments. Linux scripting and programming of molecular dynamics code in parallel on linux for supercomputer usage. Scientific visualization using Paraview and other opensource software. Active web administrator, html user. Proficient desktop publishing user, preparing publications (books, journals, conference proceedings...).

Other skills Knowledge of aeronautic technologies, propulsion and aerodynamics. Hobby designer of radio control airplanes, and model engines (jet and piston), aeronautical and ship static modelling. Also, plays guitar in free time, using electric, acoustic and bass guitars.

Driving licence B1, B, BE