

Curriculum Vitae – Peter Gregorčič

(as of May 2021)

Dr. Peter Gregorčič (age 41) is Associate Professor for Laser Applications at the Faculty of Mechanical Engineering, University of Ljubljana, Slovenia. He was partially employed at the Institute of metals and technology (IMT). Within UL, he works in the field of laser technology and applications, while at IMT he worked on materials and surface engineering and characterization. As a visiting professor at Ruhr–Universität Bochum, Germany (2018–2020) he supported 4 PhD students and contributed in the MSc courses. At UL, he supervised 3 PhD and 27 undergraduate students, where three of them received the Prešern's award (the most important award for the undergraduate diploma thesis at UL). His group for laser surface engineering from both institutions includes 3 postdoctoral researchers.

Dr. Peter Gregorčič (co)authored over 55 scientific papers. His citation index exceeds 1.550 and h-index equals 23 (Google Scholar). He co-authored 2 granted international patents for biomedical laser devices: Cleaning system, EP3127502; and Ophthalmic laser device, EP3068355. He successfully finished over 20 industrial and R&D projects and presented 14 invited lectures at international conferences and foreign universities.

Currently, Dr. Peter Gregorčič leads several research projects that investigate and exploit the benefits of laser micro– and nano–processing for surface functionalization. He has successfully designed and developed new theoretical and experimental knowledge enabling laser functionalization of surfaces for enhanced heat transfer, control of cavitation in the fluid flows, control the corrosion and for development of biocompatible materials and tribological surfaces. His results significantly contribute to the further development of smart surfaces that are important for new sensors, smart biocompatible materials and the cutting–edge technological components.

Personal: Born in Postojna, Slovenia, 1980; father of 4 sons (2004, 2006, 2008, 2011)

Education:

- 2012 PhD in Physics, Faculty of Mathematics and Physics, University of Ljubljana
- 2007 BSc in Physics, Faculty of Mathematics and Physics, University of Ljubljana

Positions & employment:

- 2020 – now Associate Professor and Senior research associate, Faculty of Mechanical Engineering, UL
- 2015-2020 Assistant Professor and Research associate, Faculty of Mechanical Engineering, UL
- 2018-2020 Visiting professor, Ruhr–Universität Bochum, Germany
- 2018-2020 Research associate, Institute of metals and technology (IMT)
- 2012-2015 Postdoctoral research fellow, Faculty of Mechanical Engineering, UL
- 2007-2012 Young researcher (= PhD student), Faculty of Mechanical Engineering, UL

Leadership functions:

- 2021-2022 project leader of research project LIPSS formation on silicon wafers (Silicon Austria Labs – SAL)
- 2019-2022 project leader of research project Laser micro and nano structuring for development of biomimetic metallic surfaces with unique properties (LaMiNaS) (ARRS, J2-1741)
- 2019-2022 leading research activities at Faculty of Mechanical Engineering, UL, research project New Conventional and Additive Manufactured Biodegradable Fe-Mn alloy with Tailored Biodegradability (ARRS, J2-1729)
- 2018-2020 principal investigator in bilateral project between Slovenia and Japan, Examination of nanomaterial production during laser ablation in liquids by optical probes and laser-induced plasma spectroscopy (BI-JP/18-20-004, ARRS)

- 2017-2021 vice president of Commission for Scientific Research Work and International Cooperation, Faculty of Mechanical Engineering, University of Ljubljana
- 2017-2021 mentor to Young Researcher (Slovenian Research Agency – ARRS)
- 2017-2021 project leader in research project Surface functionalization by nanosecond fiber laser texturing (nsFLaT) (SPI Lasers Ltd., UK)
- 2017 coordinator of a student project "By a creative way to practical knowledge," titled Improvement of industrial processes by introduction of laser microprocessing (Yaskawa Slovenia, d.o.o., the project is co-funded by Republic of Slovenia and European Union from the European Social Fund)
- 2016 project leader in industrial project Laser microstructuring of magnet's surfaces (Domel, d.o.o., finished in 2016)
- 2014-2015 principal investigator in bilateral project between Serbia and Slovenia, titled Non-contact observation of laser-induced breakdown and fluorescence in different materials (BI-RS/14-15-037, ARRS)

Awards:

- 2018 Recognition for outstanding achievements in the field of youth research activities in 2018, awarded by the City of Ljubljana Faculty of Mechanical Engineering, University of Ljubljana
- 2018 Golden recognition for supervising the winning research thesis within the field "Astronomy and Physics" titled Laser propulsion. Awarded at 52nd meeting of young researchers in Slovenia 2018
- 2014 Jožef Stefan Golden Emblem for the most recognizable PhD thesis. Awarded by Institute "Jožef Stefan"
- 2012 Recognition for quality publications. Awarded by Faculty of Mechanical Engineering, UL
- 2011 Award for the contribution to sustainable development in 2010. Awarded by Slovene human resources development and scholarship fund
- 2007 Recognition of the Faculty of Mechanical Engineering (Uni. of Lj.) for the successful presentation of scientific research in the international environment in 2007
- 2007 "Prešeren's Award" of the Faculty of Mathematics and Physics (Uni. of Lj.) for the outstanding Diploma work (Master thesis)

Scientific references:

- Scientific research fields: applied physics; laser applications; surface engineering
- > 200 scientific and professional publications
- > 55 papers in peer-reviewed journals
- 2 international patents (granted): Cleaning system, EP3127502; and Ophthalmic laser device, EP3068355.
- > 1.550 citations (according to Google Scholar)
- h-index: 23 (according to Google Scholar)
- 14 invited lectures at international conferences and foreign universities (2x Germany, 2x Japan, 1x USA, 1x Spain, 1x Austria, 1x Croatia, 1x Serbia, 5x Slovenia)
- > 90 contributions on congresses and conferences
- >20 reports for industrial and R&D projects
- Reviewer for > 20 different SCI journals and at 5 research projects

Complete bibliography can be found [here](#).