Name of teacher:	Leo Škec

Employed at: **Since:**	Faculty of Civil Engineering, University of Rijeka 01/02/2009

Title: **Since:** **In:**	Full professor 01/02/2025 technical sciences / basic technical sciences / applied mechanics

e-mail address, web page	leo.skec@uniri.hr; https://portal.uniri.hr/Portfelj/Details/846

Knowledge of foreign languages	English, Italian

Qualifications	**- date of birth, nationality:** 15/01/1985, Croatian **- First degree obtained at:** Faculty of Civil Engineering, University of Rijeka (2003-2008) **- Ph.D. degree obtained at:** Faculty of Civil Engineering, University of Rijeka (2009-2014) **- previous employments:** Faculty of Civil Engineering, University of Rijeka: teaching assistant (2009-2014), postdoc (2014-2015), assistant professor (2015-2022), asociate professor (2022-2025); Brunel University London: postdoc (2016-2018)

List of papers published in scientific journals	[1] Hlača, Ivan, Škec, Leo, Ribarić, Dragan, Grbac, Marin (2024). Investigation of the influence of the loading arrangement on the measured mode-I fracture resistance. Journal of Adhesion Science and Technology, 38(3), 397-424. https://doi.org/10.1080/01694243.2023.2230654 [2] Škec, Leo, Alfano, Giulio (2024). Characterisation of mode-I fracture resistance of adhesive layers with imperfections. Engineering Fracture Mechanics, 301, 110028. https://doi.org/10.1016/j.engfracmech.2024.110028 [3] Škec, Leo, Alfano, Giulio (2023). Experimental and numerical study of rate-dependent mode-I failure of a structural adhesive. The Journal of Adhesion, 99(8), 1323-1355. https://doi.org/10.1080/00218464.2022.2106132 [4] Ranjbar, Maedeh, Škec, Leo, Jelenić, Gordan, Ribarić, Dragan (2023). Mixed-mode delamination of layered structures modeled as Timoshenko beams with linked interpolation. International Journal for Numerical Methods in Engineering, 124(8), 1773-1797. https://doi.org/10.1002/nme.7187 [5] Siciliano, Alfio Francesco, Škec, Leo, Jelenić, Gordan (2023). Closed-form solutions for two-layer Timoshenko beams with interlayer slip, uplift and rotation compliance. Meccanica, 58(5), 893-918. https://doi.org/10.1007/s11012-023-01655-4 [6] Siciliano, Alfio Francesco, Škec, Leo, Jelenić, Gordan (2021). Closed-form solutions for modelling the rotational stiffness of continuous and discontinuous compliant interfaces in two-layer Timoshenko beams. Acta Mechanica, 232(7), 2793-2824. https://doi.org/10.1007/s00707-021-02958-x [7] Siciliano, Alfio Francesco, Škec, Leo, Fossetti, Marinella, Jelenić, Gordan (2021). Experimental and numerical study on the compressive behaviour of partially accessible concrete columns strengthened by a layer of high-performance concrete. Structures, 34, 4100-4112. https://doi.org/10.1016/j.istruc.2021.09.048 [8] Škec, Leo, Alfano, Giulio, Jelenić, Gordan (2019). Enhanced simple beam theory for characterising mode-I fracture resistance via a double cantilever beam test. Composites Part B: Engineering, 167, 250-262. https://doi.org/10.1016/j.compositesb.2018.11.099 [9] Škec, Leo (2019). Identification of parameters of a bi-linear cohesive-zone model using analytical solutions for mode-I delamination. Engineering Fracture Mechanics, 214, 558-577. https://doi.org/10.1016/j.engfracmech.2019.04.019 [10] Škec, Leo, Alfano, Giulio, Jelenić, Gordan (2019). Complete analytical solutions for double cantilever beam specimens with bi-linear quasi-brittle and brittle interfaces.

	International Journal of Fracture, 215(1-2), 1-37. https://doi.org/10.1007/s10704-018-0324-5 [11] Škec, Leo, Alfano, Giulio, Jelenić, Gordan (2019). Complete analytical solutions for double cantilever beam specimens with bi-linear quasi-brittle and brittle interfaces. International Journal of Fracture, 215(1-2), 1-37. https://doi.org/10.1007/s10704-018-0324-5 [12] Škec, Leo, Alfano, Giulio, Jelenić, Gordan (2018). On Gc, Jc and the characterisation of the mode-I fracture resistance in delamination or adhesive debonding. International Journal of Solids and Structures, 144-145, 100-122. https://doi.org/10.1016/j.ijsolstr.2018.04.020 [13] Škec, Leo, Jelenić, Gordan (2017). Geometrically non-linear multi-layer beam with interconnection allowing for mixed-mode delamination. Engineering Fracture Mechanics, 169, 1-17. https://doi.org/10.1016/j.engfracmech.2016.11.003 [14] Škec, Leo, Jelenić, Gordan, Lustig, Nikola (2015). Mixed-mode delamination in 2D layered beam finite elements. International Journal for Numerical Methods in Engineering, 104(8), 767-788. https://doi.org/10.1002/nme.4939 [15] Škec, Leo, Jelenić, Gordan (2014). Analysis of a geometrically exact multi-layer beam with a rigid interlayer connection. Acta Mechanica, 225(2), 523-541. https://doi.org/10.1007/s00707-013-0972-5 [16] Šćulac, Paulo, Jelenić, Gordan, Škec, Leo (2014). Kinematics of layered reinforced-concrete planar beam finite elements with embedded transversal cracking. International Journal of Solids and Structures, 51(1), 74-92. https://doi.org/10.1016/j.ijsolstr.2013.09.011 [17] Škec, Leo, Bjelanović, Adriana, Jelenić, Gordan (2013). Glued timber-concrete beams – analytical and numerical models for assessment of composite action. Engineering Review, 33(1), 41-49. http://er.riteh.hr/index.php/ER/article/view/297 [18] Skec, L., Schnabl, S., Planinc, I., Jelenic, G. (2012). Analytical modelling of multilayer beams with compliant interfaces. Structural Engineering and Mechanics, 44(4), 465-485. https://doi.org/10.12989/sem.2012.44.4.465

List of publications which serve as a proof of teaching qualifications	All the aforementioned publications.

Leader of the following research projects	[1] *Mechanical performance evaluation and design optimisation of a novel composite support structure for large-capacity offshore wind turbines* (OWT-ENO), European Commission, HORIZON-MSCA-2024-PF-01-01 MSCA, Seal of Excellence 101211741, funded through DIGIT project of the Ministry of Science, Education and Youth of the Republic of Croatia, 2025-2027 [2] *Investigation of the mechanical property and environmental reliability of the adhesive interface in battery modules for electric vehicles under complex service conditions*, Ministry of Science, Education and Youth of the Republic of Croatia, Croatian-Chinese scientific and technological cooperation, 2025 [3] *Efficient and Robust Computational Modeling of Delamination in Spatial Layered Structures*, University of Rijeka, Project for experience scientists (uniri-iskusni-tehnic-23-300 3294), 2024 [4] *Numerical and experimental investigation of mode-II rate-dependent delamination,* University of Rijeka, Initial support for young researchers *(17.06.2.2.01), 2019* [5] *Stability of multilayer composite columns with interlayer slip and uplift* (in Croatian), National Foundation for Science, Higher Education and Technological Development of the Republic of Croatia, Fellowships for Doctoral Students (03.01/59), 2009-2010

Participant in the following research projects	[1] *Dynamic characterisation of rigid blocks with cohesive contacts,* University of Rijeka, Project for experience scientists *(uniri-iskusni-tehnic-23-280), 2024* [2] *Development of a shell finite element on the linked interpolation concept with application on layered structures*, Ministry of Science and Education of the Republic of Croatia and Research Agency of the Republic of Slovenia, bi-lateral project, 2020-2021 [3] *Optimising Design for Inspection* (ODIN), COST Action CA18203, 2019-2023

	[4] *Assumed strain method in finite elements for layered plates and shells with application on layer elamination problem* (ASDEL), Croatian Science Foundation – Research Projects (IP-2016-06-4775), 2017-2021 [5] *Modelling mixed-mode rate-dependent delamination in layered structures using geometrically nonlinear beam finite elements (MOLAY-STRUDEL),* MSCA-IF-2015-EF - Marie Skłodowska-Curie Individual Fellowships (IF-EF), Project ID: 701032, 2016-2018 [6] *Configuration-dependent Approximation in Non-linear Finite-element Analysis of Structures (CANFAS),* Croatian Science Foundation – Research Projects (IP 11-2013-9068), 2014-2018 [7] *Investigation of slender beam-like space structures with an accent to model validation* (in Croatian), University of Rijeka Research Support, 2014-2016 [8] *Non-linear numerical modelling of 3D reinforced concrete frame stuctures subject to reinforcement corrosion*, Ministry of Science, Education and Sports of the Republic of Croatia and Research Agency of the Republic of Slovenia bi-lateral project, 2009-2010 [9] *Improved accuracy in non-linear beam elements with finite 3D rotations*, Ministry of Science, Education and Sports of the Republic of Croatia (project No 114-0000000-3025), 2007-2009

Supervision of PhD theses	2 finished (co-supervisor), 1 ongoing

Examination of PhD theses	1