Ime i prezime:	Gordan Jelenić

Ustanova zaposlenja:	Građevinski fakultet Sveučilišta u Rijeci
Datum zaposlenja:	1. ožujka 2004

Znanstveno-nastavno/nastavno zvanje:	Profesor
Datum zadnjeg izbora:	22.5.2018
Grana, područje izbora:	Tehnička mehanika (mehanika krutih i deformabilnih tijela), Tehničke znanosti

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Poznavanje stranih jezika:	engleski, slovenski, talijanski, rusinski (čita, piše, govori); španjolski, francuski, ruski (čita)

Životopis	- **rođenje, državljanstvo:** 12.7.1962, Rijeka, RH - **fakultet:** Sveučilište u Rijeci, Građevinski fakultet (1981-1986) - **magisterij:** Univerza v Ljubljani, Fakulteta za gradbeništvo in geodezijo (1986-1990) - **doktorat:** Univerza v Ljubljani, Fakulteta za gradbeništvo in geodezijo (1990-1993) - **dodatno obrazovanje:** Imperial College London, Department of Aeronautics (1993-2004) - **podaci o prethodnim zaposlenjima:** Građevno projekti zavod Rijeka (1987-1990), Univerza v Ljubljani, Fakulteta za gradbeništvo in geodezijo (1990-1993), Imperial College London, Department of Aeronautics (1993-2004)

Popis radova objavljenih u znanstveno-istraživačkim časopisima	Popis radova objavljenih u časopisima citiranima u bazi Current Contents : 1. Saje, Miran; Jelenić, Gordan. Finite deformations of linear elastic space beams. Zeitschrift fur Angewandte Mathematik und Mechanik. 74 (1994); T298-T300 2. Saje, Miran; Jelenić, Gordan. Finite element formulation of hyperelastic plane frames subjected to nonconservative loads. Computers and structures. 50 (1994); 177-189 3. Jelenić, Gordan; Saje, Miran. A kinematically exact space finite strain beam model - finite element formulation by generalized virtual work principle. Computer Methods in Applied Mechanics and Engineering. 129 (1995), 1-2; 131-161 4. Crisfield, M.A.; Moita, G.F.; Jelenić, Gordan; Lyons, L.P.R. Enhanced lower-order element formulations for large strains. Computational mechanics. 17 (1995), 1/2; 62-73 5. Jelenić, Gordan; Crisfield, M. A. Non-linear 'master-slave' relationships for joints in 3-D beams with large rotations. Computer Methods in Applied Mechanics and Engineering. 135 (1996), 3-4; 211-228 6. Crisfield, M. A.; Jelenić, Gordan; Mi, Y.; Zhong, H-G.; Fan, Z. Some aspects of the non-linear finite element method. Finite Elements in Analysis and Design. 27 (1997), 1; 19-40 7. Crisfield, M. A.; Galvanetto, U.; Jelenić, Gordan. Dynamics of 3-D co-rotational beams. Computational Mechanics. 20 (1997), 6; 507-519 8. Jelenić, Gordan; Crisfield, M. A. Interpolation of rotational variables in nonlinear dynamics of 3D beams. International Journal for Numerical Methods in Engineering. 43 (1998), 7; 1193-1222 9. Jelenić, Gordan; Crisfield, M. A. Geometrically exact 3D beam theory: Implementation of a strain-invariant finite element for statics and dynamics. Computer Methods in Applied Mechanics and Engineering. 171 (1999), 1-2; 141-171 10. Crisfield, M. A.; Jelenić, Gordan. Objectivity of strain measures in geometrically exact 3D beam theory and its finite element implementation. Proceedings of the Royal Society of London Series A - Mathematical Physical & Engineering Sciences. 455 (1999), 1983; 1125-1147 11. Jelenić, Gordan; Crisfield, M. A. Dynamic analysis of 3D beams with joints in presence of large rotations. Computer Methods in Applied Mechanics and Engineering. 190 (2001), 32-33; 4195-4230

12. Jelenić, Gordan; Crisfield, M. A. Problems associated with the use of Cayley transform and tangent scaling for conserving energy and momenta in the Reissner-Simo beam theory. Communications in Numerical Methods in Engineering. 18 (2002), 10; 711-720

13. Graham, E.; Jelenić, Gordan; Crisfield, M. A. A note on the equivalence of some recent time-integration schemes for N-body problems. Communications in Numerical Methods in Engineering. 18 (2002), 9; 615-620

14. Munoz, J. J.; Jelenić, Gordan; Crisfield, M. A. Master-slave approach for the modelling of joints with dependent degrees of freedom in flexible mechanisms. Communications in Numerical Methods in Engineering. 19 (2003), 9; 689-702

15. Graham, E.; Jelenić, Gordan. A general framework for conservative single-step time-integration schemes with higher-order accuracy for a central-force system. Computer Methods in Applied Mechanics and Engineering. 192 (2003), 33-34; 3585-3618

16. Munoz, J. J.; Jelenić, Gordan. Sliding contact conditions using the master-slave approach with application on geometrically non-linear beams. International Journal of Solids and Structures. 41 (2004), 24-25; 6963-6992

17. Munoz, J. J.; Jelenić, Gordan. Sliding joints in 3D beams: conserving algorithms using the master - slave approach. Multibody System Dynamics. 16 (2006), 3; 237-261

18. Graham, E.; Jelenić, Gordan. Conservative single-step time-integration schemes with higher-order accuracy for multi-particle dynamics with local two-point potentials. Computer Methods in Applied Mechanics and Engineering. 195 (2006), 37-40; 4917-4952

19. Jelenić, Gordan; Papa, Edita. Exact solution of 3D Timoshenko beam problem using linked interpolation of arbitrary order. Archive of applied mechanics. 81 (2011), 2; 171-183

20. Škec, Leo; Schnabl, Simon; Planinc, Igor; Jelenić, Gordan. Analytical modelling of multilayer beams with compliant interfaces. Structural engineering and mechanics. 44 (2012), 4; 465-485

21. Ribarić, Dragan; Jelenić, Gordan. Higher-order linked interpolation in quadrilateral thick plate finite elements. Finite elements in analysis and design. 51 (2012); 67-80

22. Škec, Leo; Jelenić, Gordan. Analysis of a geometrically exact multi-layer beam with a rigid interlayer connection. Acta mechanica. 225 (2014), 2; 523-541

23. Šćulac, Paulo; Jelenić, Gordan; Škec, Leo. Kinematics of layered reinforced-concrete planar beam finite elements with embedded transversal cracking. International journal of solids and structures. 51 (2014), 1; 74-92

24. Ribarić, Dragan; Jelenić, Gordan. Distortion-immune 9-node displacement-based quadrilateral thick plate finite elements that satisfy constant-bending patch test. International journal for numerical methods in engineering. 98 (2014), 7; 492-517

25. Ribarić, Dragan; Jelenić, Gordan. Higher-order linked interpolation in triangular thick plate finite elements. Engineering computations. 31 (2014), 1; 69-109

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27. Papa Dukić, Edita; Jelenić, Gordan. Exact solution of 3D Timoshenko beam problem: Problem-dependent formulation. Archive of applied mechanics. 84 (2014), 3; 375-384

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29. Schnabl, Simon; Jelenić, Gordan; Planinc, Igor. Analytical buckling of slender circular concrete-filled steel tubular columns with compliant interfaces. Journal of constructional steel research. 115 (2015); 252-262

30. Gaćeša, Maja; Jelenić, Gordan. Modified fixed-pole approach in geometrically exact spatial beam finite elements. Finite elements in analysis and design. 99 (2015); 39-48

31. Jelenić, Gordan. Implicit one-step dynamic algorithms with configuration-dependent

	parameters : Application to central force fields. Meccanica. 51 (2016), 6; 1321-1341
	32. Škec, Leo; Jelenić, Gordan. Geometrically non-linear multi-layer beam with interconnection allowing for mixed-mode delamination. Engineering fracture mechanics. 169 (2017); 1-17
	33. Grbčić, S., Ibrahimbegović, A., Jelenić, G. Variational formulation of micropolar elasticity using 3D hexahedral finite-element interpolation with incompatible modes. *Computers and structures* 205 (2018) 1-14
	34. Škec, L., Alfano, G., Jelenić, G. 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 (2018) 100-122
	35. Čeh, N., Jelenić, G., Bićanić, N. Analysis of restitution in free rocking of single rigid block. *Acta mechanica* 229 (2018) 4623-4642
	36. Krvavica, N., Jelenić, G., Tuhtan, M. Efficient analytical Roe solver for two-layer shallow water systems with accurate treatment for loss of hyperbolicity. *Advances in Water Resources* 122 (2018) 187-205
	37. Škec, L., Alfano, G., Jelenić, G. Enhanced simple beam theory for characterising mode-I fracture resistance via a double cantilever beam test. *Composites Part B* 167 (2019) 250-262
	38. Škec, L., Alfano, G., Jelenić, G. Complete analytical solutions for double cantilever beam specimens with bi-linear quasi-brittle and brittle interfaces. *International journal of fracture* 215 (2019) 1-37
	39. Grbčić, S., Jelenić, G., Ribarić, D. Triangular and quadrilateral 2D linked-interpolation finite elements for micropolar continuum. *Acta Mechanica Sinica* 35 (2019) 1001-1020
	40. Grbčić, S., Jelenić, G., Ibrahimbegović, A. Geometrically non-linear 3D finite-element analysis of micropolar continuum. *International Journal of Solids and Structures* 202 (2020) 745-764

Popis radova koji nastavnika kvalificiraju za izvođenje nastave	Kao i iznad.

Popis znanstveno-istraživačkih projekata u svojstvu voditelja	1. Nonlinear finite element method for mechanical problems with spatial rotations, Engineering and Physical Sciences Research Council (UK), 1.1.1999-31.12.2003 (GBP 153,338.00) 2. Nonlinear finite element techniques for the design of flexible mechanisms, Engineering and Physical Sciences Research Council (UK), 1.10.2000-30.9.2003 (GBP 63,000.00) 3. Improved accuracy in non-linear beam elements with finite 3D rotations, Ministry of Science, Education and Sports (HR), 1.1.2007-31.12.2009 (€28,000.00) 4. Non-linear numerical modelling of 3D reinforced concrete frame stuctures subject to reinforcement corrosion, Ministry of Science, Education and Sports (HR) and Agency of Research Affairs (SI), 1.1.2009-31.12.2010 (€2,800.00) 5. Configuration-dependent approximation in non-linear finite-element analysis of structures, Croatian Science Foundation (HR), 1.9.2014-31.8.2018 (€130,000.00) 6. Carrer development of young researchers – education of new doctors of sciences (PhD Studentship) – 2014. call, Croatian Science Foundation (HR), 1.1.2015-31.12.2018 (€60,000.00) 7. Degraded bending and buckling strength of multi-walled carbon nanotubes due to interface compliance, Ministry of Science, Education and Sports (HR) and Agency of Research Affairs (SI), 1.1.2016-31.12.2017 (€2,000.00) 8. Carrer development of young researchers – education of new doctors of sciences (PhD Studentship) – 2015. call, Croatian Science Foundation (HR), 1.10.2016-30.9.2020 (€65,000.00) 9. Experimental study of large-span structure considering multiple support excitation, Ministry of Science and Education (HR) and Ministry of Education (People's Republic of

	China), 1.2.2018-31.1.2020 (€8,000.00) 10. Fixed-pole concept in numerical modelling of Cosserats' continuum, Croatian Science Foundation (HR), 1.1.2019-31.12.2022 (€130,000.00) 11. Carrer development of young researchers – education of new doctors of sciences (PhD Studentship) – 2018. call, Croatian Science Foundation (HR), 15.3.2019-14.3.2023 (€65,000.00) 12. Rigid-body rocking on a flexible structure – non-smooth contact-dynamics approach and experimental validation, Ministry of Science and Education (HR) and German Office for Academic Exchange (Federal Republic of Germany), 1.1.2019-31.12.2020 (€6,000.00) 13. Computational and experimental procedures for assessment of material parameters in Cosserats' continuum, University of Rijeka. 1.1.2019-31.12.2021 (€18,500.00) 14. Joint training on numerical modelling of highly flexible structures for industrial applications, EU Commission (H2020 MSCA ITN-ETN 2019), 1.10.2019-30.9.2023 (€237,367.08) 15. Carrer development of young researchers – education of new doctors of sciences (PhD Studentship) – 2020. call, Croatian Science Foundation (HR), 1.1.2021-31.12.2024 (€65,000.00)
Popis znanstveno-istraživačkih projekata u svojstvu suradnika	1. Finite element techniques for rigid and flexible mechanical systems, Engineering and Physical Sciences Research Council (UK), 1.10.1994-1.4.1998 2. Finite elements in non-linear dynamics, Engineering and Physical Sciences Research Council (UK), 1.4.1997-1.10.1997 3. Evidence Based Characterisation of Dynamic Sensitivity for Multiblock Structures – Computational Simulation and Experimental Validation, Unity through Knowledge Fund, 1.11.2013-31.10.2015 4. Assumed strain method in finite elements for layered plates and shells with emphasis on the layer delamination problem, Croatian Science Foundation (HR), 1.3.2017-28.2.2021 5. Experimental study of bridge structures considering the asymmetric effect under multiple support excitation, Ministry of Science and Education (HR) and Ministry of Education (People's Republic of China), 1.1.2020-31.12.2021

Broj mentorstava na magistarskim radovima	0

Broj mentorstava na doktorskim radovima	9

Broj članstava u komisijama za ocjenu i obranu magistarskih radova	1

Broj članstava u komisijama za ocjenu i obranu doktorskih radova	8