

## Curriculum Vitae - Dr. Ing. Miroslav Marjanovic

University of Belgrade – Faculty of Civil Engineering,  
Bulevar kralja Aleksandra 73, 11000 Belgrade, Serbia

**Phone:** +381 11 3218 551, **Mobile:** +381 65 2233 939

**E-mail:** [mmarjanovic@grf.bg.ac.rs](mailto:mmarjanovic@grf.bg.ac.rs), [miregrf@yahoo.com](mailto:miregrf@yahoo.com)

**Skype:** miroslavmarjanovi

**Networks:** [Google Scholar](#), [ResearchGate](#), [ORCID](#), [LinkedIn](#)



## PERSONAL INFORMATION

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**Date of Birth:** 08-January-1986

**Residence:** Belgrade

**Nationality:** Serbian

**Marital Status:** Married, 1 child

## ACADEMIC CAREER

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**2016 – Assistant Professor – Engineering Mechanics and Theory of Structures**

**University of Belgrade - Faculty of Civil Engineering**

Courses: Theory of Composite Structures, Structural Analysis, Matrix Structural Analysis

**2010 - 2016 Teaching Assistant - Engineering Mechanics and Theory of Structures**

**University of Belgrade - Faculty of Civil Engineering**

Courses: Structural Analysis, Matrix Structural Analysis, Application of Computer Programs in Design of Structures

**2007-2008 Student-Demonstrator at University of Belgrade - Faculty of Civil Engineering**

Courses: Structural Analysis, Introduction to Computer Applications

## EDUCATION

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**2010-2016 PhD Studies – Study Program Civil Engineering**

**University of Belgrade - Faculty of Civil Engineering; GPA 100%**

Thesis: Nonlinear Analysis of Laminated Composite Plates and Shells with Delaminations using Finite Element Method (Advisors: Dj. Vuksanović, G. Meschke)

**2009-2010 MSc Studies – Module Structural Engineering**

**University of Belgrade - Faculty of Civil Engineering; GPA 97.1%**

Thesis: Application of Composite Structures in Multi-Storey Car Parks (in Serbian)

**2005-2009 BSc Studies – Module Structural Engineering**

**University of Belgrade - Faculty of Civil Engineering; GPA 95.6%**

Thesis: Design of Double-Nave Industrial Hall (in Serbian)

## AWARDS

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**2018 Award of the Faculty of Civil Engineering in Belgrade** for the outstanding research results

**2018 Award of the Association of Structural Engineers of Serbia** for the best scientific achievement in structural engineering in 2016-2017

**2009 Award of the Faculty of Civil Engineering in Belgrade** (Professor Dušan Krajčinović Foundation) for the outstanding results in subjects of the Chair of Engineering Mechanics and Theory of Structures

**2009 Award of the Regional Chamber of Commerce Užice**

## RESEARCH EXPERIENCE

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2019	Summer School " <b>Fatigue and Failure Analysis of Composite Structures</b> " – TU Delft
2019	Study visit at <b>Politecnico di Milano</b> (1 week) – Erasmus+ KA1 Action
2016	Study visit at <b>Politehnica Universitatea Timișoara</b> (1 week) – Erasmus+ KA1 Action
2012-2015	Research stays at <b>Ruhr-Universität Bochum</b> - Lehrstuhl für Statik und Dynamik (7 months, advisor: Prof. Dr.-techn. Günther Meschke)
2011	Workshop " <b>Scientific Presentation</b> " – Ruhr-Universität Bochum – Research School
2010	Summer School " <b>Model Validation and Simulation</b> " – Bauhaus Universität Weimar
2009 & 2010	Summer School " <b>Vibrations of Structures due to Rail-Road Traffic</b> " – Faculty of Civil Engineering - University of Belgrade & Technische Universität München

## PARTICIPATION IN PROJECTS

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2015 - 2017	Erasmus+ KA1 Action: Faculty of Civil Engineering, University of Belgrade & Politehnica Universitatea Timișoara ( <b>Department Coordinator</b> )
2011 - 2020	<b>TR-36048</b> Research on condition assessment and improvement methods of civil engineering structures in view of their serviceability, load-bearing capacity, cost effectiveness and maintenance - Ministry of Education, Science and Technological Development of the Republic of Serbia ( <b>Researcher</b> )

## SCHOLARSHIPS

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2011-2015	<b>SEEFORM</b> – Scholar of the South East European Graduate School for Master and PhD Formation, financed by DAAD
2009	Scholarship of the <b>Foundation for the Development of Scientific and Artistic Youth</b> of the Republic of Serbia
2008 & 2009	<b>DOSITEJA</b> - Scholarships of the Foundation for Young Talents of the Republic of Serbia
2006-2010	Scholarship of the Serbian Business Club " <b>Privrednik</b> " (Delta M Co. Belgrade)
2006-2009	Scholarship of the <b>City of Užice</b>
2005-2010	Scholarship of the <b>Ministry of Education and Sport</b> of the Republic of Serbia
2005-2010	Scholarship of the " <b>AD PUTEVI Užice</b> "

## OTHER

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<b>Software</b>	MATLAB, python, Abaqus, SAP2000, ETABS, MS Office, AutoCAD
<b>Languages</b>	<b>English</b> (B2), <b>Russian</b> (A1), <b>Serbian</b> (native)
<b>Interests</b>	Theory of laminated composite plates and shells, Structural vibration, Finite element and dynamic stiffness methods, Fracture mechanics, Non-linear structural analysis, Application of smart materials in civil engineering
<b>Memberships</b>	IKS – Serbian Chamber of Engineers, <b>SSM</b> - Serbian Society of Mechanics, <b>ASES</b> - Association of Structural Engineers of Serbia
<b>Reviewer</b>	Engineering Structures ( <b>8</b> ), Journal of Composite Materials ( <b>4</b> ), International Journal of Mechanical Sciences ( <b>3</b> ), International Journal of Mechanics and Materials in Design ( <b>2</b> ), Results in Physics ( <b>2</b> ), Sensors ( <b>2</b> ), Shock and Vibration ( <b>2</b> ), Structures, Materials, Journal of the Brazilian Society of Mechanical Sciences and Engineering, Earthquake Engineering and Engineering Vibration, Journal of Vibration and Acoustics – ASME, European Journal of Mechanics - A/Solids ( <b>2</b> ), Structural Engineering and Mechanics, Scientia Iranica,

**Reviewer**

Iranian Journal of Science and Technology - Transactions of Mechanical Engineering, Wind and Structures, Applied Sciences, Science and Engineering of Composite Materials, , International Journal of Acoustics and Vibration, Mechanics of Advanced Materials and Structures, Chinese Journal of Aeronautics, ZAMM - Zeitschrift für Angewandte Mathematik und Mechanik, Applied Acoustics, Computers and Mathematics with Applications, AIAA Journal, Thin-Walled Structures, Computers & Structures.

## List of References

### 1. PEER-REVIEWED JOURNAL PAPERS

- 1.1. **Marjanović M**, Meschke G, Damjanović E. Object-oriented framework for 3D bending and free vibration analysis of multilayer plates: Application to cross-laminated timber and soft-core sandwich panels. *Composite Structures* 2021; 255: Paper 112859. doi:10.1016/j.compstruct.2020.112859
- 1.2. **Marjanović M**, Marković N, Damjanović E, Cvetković R. Three-dimensional stress analysis and design of cross-laminated timber panels using full-layerwise-theory-based finite element method. *Thin-Walled Structures* 2020; 157: Paper 107156. doi:10.1016/j.tws.2020.107156
- 1.3. **Marjanović M**, Nefovska-Danilović M, Damjanović E. Framework for dynamic-stiffness-based free vibration analysis of plate-like structures. *Shock and Vibration* 2019; Paper 1369235. doi:10.1155/2019/1369235
- 1.4. Stojić D, Nestorović T, Marković N, **Marjanović M**. Experimental and numerical research on damage localization in plate-like concrete structures using hybrid approach. *Structural Control and Health Monitoring* 2018; 25: e2214. doi:10.1002/stc.2214
- 1.5. Damjanović E, **Marjanović M**, Nefovska-Danilović M. Free vibration analysis of stiffened and cracked laminated composite plate assemblies using shear-deformable dynamic stiffness elements. *Composite Structures* 2017; 180: 723-740. doi:10.1016/j.compstruct.2017.08.038
- 1.6. Marković N, Nestorović T, Stojić D, **Marjanović M**, Stojković N. Hybrid approach for two dimensional damage localization using piezoelectric smart aggregates. *Mechanics Research Communications* 2017; 85: 69-75. doi:10.1016/j.mechrescom.2017.08.011
- 1.7. **Marjanović M**, Kolarevic N, Nefovska-Danilovic M, Petronijevic M. Shear deformable dynamic stiffness elements for a free vibration analysis of composite plate assemblies - Part II: Numerical examples. *Composite Structures* 2017; 159: 183-196. doi:10.1016/j.compstruct.2016.09.023
- 1.8. Nefovska-Danilovic M, Kolarevic N, **Marjanović M**, Petronijevic M. Shear deformable dynamic stiffness elements for a free vibration analysis of composite plate assemblies - Part I: Theory. *Composite Structures* 2017; 159: 728-744. doi:10.1016/j.compstruct.2016.09.022
- 1.9. **Marjanović M**, Kolarević N, Nefovska-Danilović M, Petronijević M. Free vibration study of sandwich plates using a family of novel shear deformable dynamic stiffness elements: limitations and comparison with the finite element solutions. *Thin-Walled Structures* 2016; 107: 678-694. doi:10.1016/j.tws.2016.08.002
- 1.10. **Marjanović M**, Meschke G, Vuksanović Dj. A finite element model for propagating delamination in laminated composite plates based on the Virtual Crack Closure method. *Composite Structures* 2016; 150: 8-19. doi:10.1016/j.compstruct.2016.04.044
- 1.11. Kolarevic N, **Marjanović M**, Nefovska-Danilovic M, Petronijevic M. Free vibration analysis of plate assemblies using the dynamic stiffness method based on the higher order shear deformation theory. *Journal of Sound and Vibration* 2016; 364: 110-132. doi:10.1016/j.jsv.2015.11.016
- 1.12. **Marjanović M**, Vuksanović Dj. Free vibrations of laminated composite shells using the rotation-free plate elements based on Reddy's layerwise discontinuous displacement model. *Composite Structures* 2016; 159: 320-332. doi:10.1016/j.compstruct.2015.07.125
- 1.13. **Marjanović M**, Vuksanović Dj, Meschke G. Geometrically nonlinear transient analysis of delaminated composite and sandwich plates using a layerwise displacement model with contact conditions. *Composite Structures* 2015; 122: 67-81. doi:10.1016/j.compstruct.2014.11.028
- 1.14. **Marjanović M**, Vuksanović Dj. Layerwise solution of free vibrations and buckling of laminated composite and sandwich plates with embedded delaminations. *Composite Structures* 2014; 108: 9-20. doi:10.1016/j.compstruct.2013.09.006

## 2. PAPERS IN CONFERENCE PROCEEDINGS

- 2.1. Milojević M, Damnjanović E, Nefovska-Danilović M, **Marjanović M**. Effects of material uncertainties on vibration performance cross laminated timber floors. 16th Congress hosted by Association of Structural Engineers of Serbia. Aranđelovac, Serbia, 13-15.05.2021., 483-490.
- 2.2. Damnjanović E, Milojević M, **Marjanović M**. Probabilistic first-ply failure analysis of composite laminates. 16th Congress hosted by Association of Structural Engineers of Serbia. Aranđelovac, Serbia, 13-15.05.2021., 453-462.
- 2.3. Milojević M, Nefovska-Danilović M, Živanović S, **Marjanović M**. Effects of mechanical uncertainties on dynamic properties of cross-laminated timber floors. XI International Conference on Structural Dynamics EURODDYN 2020. Athens, Greece, 23-26.11.2020., 3519-3526.
- 2.4. **Marjanović M**, Jugović V, Nefovska-Danilović M. Development of frequency curves for cross-laminated timber (CLT) floors using dynamic stiffness method. XI International Conference on Structural Dynamics EURODDYN 2020. Athens, Greece, 23-26.11.2020., 502-509.
- 2.5. Obradović N, Todorović M, **Marjanović M**, Damnjanović E. Diagrams for stress and deflection prediction in cross-laminated timber (CLT) panels with non-classical boundary conditions. International Conference on Contemporary Theory and Practice in Construction XIV. Banja Luka, Republic of Srpska, 11-12.06.2020., 55-62.
- 2.6. **Marjanović M**, Petronijević M. Design of 120m guyed steel mast in Alibunar according to Eurocode. 18th International Symposium of MASE. Ohrid, Macedonia, 02-05.10.2019., 1090-1099, SS-9.
- 2.7. Milojević M, Nefovska-Danilović M, **Marjanović M**. Free vibration analysis of multiple cracked frames using dynamic stiffness method. 7th International Congress of Serbian Society of Mechanics. Sremski Karlovci, Serbia, 24-26.06.2019., S5a.
- 2.8. Damnjanović E, **Marjanović M**. Three-dimensional stress analysis of laminated composite plates using FLWT-based finite elements. 7th International Congress of Serbian Society of Mechanics. Sremski Karlovci, Serbia, 24-26.06.2019., S1c.
- 2.9. **Marjanović M**, Petronijević M (09/2018). Pushover analysis of bridges including soil-structure interaction effects. 15th Congress hosted by Association of Structural Engineers of Serbia. Zlatibor, Serbia, 06-08.09.2018., 166-175.
- 2.10. Petronijević M, **Marjanović M**, Radeka P (06/2018). Seismic Assessment of RC Buildings using N2 Method. Sixth International Conference Earthquake Engineering and Engineering Seismology. Kraljevo, Serbia, 13-15.06.2018., 387-395.
- 2.11. Petronijević M, **Marjanović M**, Milojević D. Pushover Analysis for Seismic Assessment of RC Nišava Bridge. 16th European Conference on Earthquake Engineering. Thessaloniki, Greece, 18-21.06.2018., Paper 10906.
- 2.12. Milojević D, **Marjanović M**, Petronijević M (10/2017). Dynamic Analysis of RC Bridge: Beam versus Shell Deck Model. 17th International Symposium of MASE. Ohrid, Macedonia, Paper SE-13.
- 2.13. **Marjanović M**, Kovačević D (06/2017). Free and forced vibration analysis of delaminated composite plates of arbitrary shape using triangular layered finite elements. 6th International Congress of Serbian Society of Mechanics. Tara, Serbia, Paper S6b.
- 2.14. Damnjanović E, Nefovska-Danilović M, Petronijević M, **Marjanović M** (09/2017). Application of the dynamic stiffness method in the vibration analysis of stiffened composite plates. *Procedia Engineering* 2017; 199: 224-229 (10th International Conference on Structural Dynamics EURODDYN 2017, Rome, Italy).
- 2.15. Damnjanović E, Nefovska-Danilović M, Jočković M, **Marjanović M**, Kolarević N (09/2016). Dynamic stiffness elements for free vibration analysis of stiffened plates. 15th Conference hosted by Association of Structural Engineers of Serbia. Zlatibor, Serbia, 557-566. *ISBN 978-86-7892-839-0*

- 2.16. Marjanović M**, Petronijević M (06/2016). Influence of Soil-Structure-Interaction on Nonlinear Time History Seismic Response of RC Frames. Fifth International Conference Earthquake Engineering and Engineering Seismology. Sremski Karlovci, Serbia, 387-398. *ISBN 978-86-88897-08-*
- 2.17. Marjanović M**, Kolarević N, Nefovska-Danilović M, Petronijević M (04/2016). Shear deformable dynamic stiffness elements for free vibration analysis of rectangular isotropic multilayer plates. International Conference Contemporary Achievements in Civil Engineering 2016. Subotica, Serbia, 279-288. *ISBN 978-86-80297-63-7*
- 2.18.** Vuksanović Dj, **Marjanović M**, Kovačević D (03/2016). Finite element modeling of free vibration problem of delaminated composite plates using Abaqus CAE. 6th International Conference Civil Engineering – Science and Practice. Žabljak, Montenegro, 313-320. *ISBN 978-86-82707-30-1*
- 2.19.** Petronijević M, Kovačević D, Marjanović M, Radišić M, Marjanović M (09/2014). Influence of soil-structure interaction on the seismic response of RC buildings. 14th Conference hosted by Association of Structural Engineers of Serbia - ASES. Novi Sad, Serbia, 165-174. *ISBN 978-86-85073-19-9*
- 2.20. Marjanović M**, Vuksanović Dj (07/2014). Transient analysis of laminated composite and sandwich plates with embedded delaminations using GLPT. 9th International Conference on Structural Dynamics EURODDYN 2014. Porto, Portugal, 3373-3380. *ISSN 2311-9020*
- 2.21.** Petronijević M, **Marjanović M**, Radišić M, Marjanović M, Nefovska-Danilović M (05/2014). Comparative seismic analysis of RC buildings under influence of soil-structure interaction. 4th International Conference Earthquake Engineering and Engineering Seismology. Borsko jezero, Serbia, 343-352. *ISBN 978-86-88897-05-1*
- 2.22. Marjanović M**, Vuksanović Dj (04/2014). Geometrically nonlinear transient analysis of delaminated composite plates. International Conference Contemporary Achievements in Civil Engineering 2014. Subotica, Serbia, 465-471. *ISSN 0352-6852*
- 2.23.** Vuksanović Dj, **Marjanović M** (02/2014). Free vibrations of delaminated composite and sandwich plates. 5th International Conference Civil Engineering – Science and Practice. Žabljak, Montenegro, 363-370. *ISBN 978-86-82707-23-3*
- 2.24. Marjanović M**, Vuksanović Dj (06/2013). Linear Analysis of Single Delamination in Laminated Composite Plate using Layerwise Plate Theory. 4th International Congress of Serbian Society of Mechanics. Vrnjačka Banja, Serbia, 443-448. *ISBN 978-86-909973-5-0*
- 2.25. Marjanović M**, Vuksanović Dj (11/2012). Linear Transient Analysis of Laminated Composite Plates using GLPT. First international conference for PhD students in Civil Engineering, Cluj-Napoca, Romania, 169-176. *ISBN 978-973-757-710-8*
- 2.26. Marjanović M**, Vuksanović Dj (09/2012). Transient Response of Cross-Ply Laminated Composite Plates. International Symposium for Students of Doctoral Studies in the fields of Civil Engineering, Architecture and Environmental Protection. Niš, Serbia, 345-352. *ISBN 978-86-88601-05-4*
- 2.27.** Budjevac D, Spremić M, **Pavlović M**, **Marjanović M** (02/2012). Comparative Analysis of Composite Beams in Large Span Floor Structures. 4th International Conference Civil Engineering – Science and Practice. Žabljak, Montenegro, 861-868. *ISBN 978-86-82707-21-9*

### 3. PAPERS IN MONOGRAPHS

- 3.1. Marjanović M**, Damnjanović E. Bending analysis of cross-laminated-timber (CLT) panels using layered finite elements. In: Prašćević Ž, Pejović R, Salatić R, Nefovska-Danilović M (Eds.): "Theory of Civil Engineering Structures", Faculty of Civil Engineering, University of Belgrade, Faculty of Civil Engineering, University of Montenegro, Academy of Engineering Sciences of Serbia. Belgrade, 2019, 91-100. *ISBN 978-86-7518-208-5*
- 3.2.** Meschke G, Vuksanović Dj, **Marjanović M** (2016). Finite Element Analysis of Propagating Delamination in Laminated Composite Plates. In: Petronijević M, Stevanović B, Rakočević M (Eds.):

"Contemporary Problems of Theory of Structures", Faculty of Civil Engineering, University of Belgrade, Faculty of Civil Engineering, University of Montenegro. Belgrade, 2016, 1-10. ISBN 978-86-86363-69-5

- 3.3. Petronijević M, Nefovska-Danilović M, Kolarević N, **Marjanović M**, Jočković M (2016). Dynamic Stiffness Method in Dynamic Analysis of Plate Assemblies – Part 1: Theory. In: Petronijević M, Stevanović B, Rakočević M (Eds.): "Contemporary Problems of Theory of Structures", Faculty of Civil Engineering, University of Belgrade, Faculty of Civil Engineering, University of Montenegro. Belgrade, 2016, 79-90. ISBN 978-86-86363-69-5
- 3.4. Petronijević M, Nefovska-Danilović M, Kolarević N, **Marjanović M**, Jočković M (2016). Dynamic Stiffness Method in Dynamic Analysis of Plate Assemblies – Part 2: Applications. In: Petronijević M, Stevanović B, Rakočević M (Eds.): "Contemporary Problems of Theory of Structures", Faculty of Civil Engineering, University of Belgrade, Faculty of Civil Engineering, University of Montenegro. Belgrade, 2016, 91-100. ISBN 978-86-86363-69-5

#### 4. THESES

- 4.1. **Marjanović M**. Nonlinear Analysis of Laminated Composite Plates and Shells with Delaminations using Finite Element Method. Doctoral Dissertation, University of Belgrade, Faculty of Civil Engineering, 2016, 1-251.
- 4.2. **Marjanović M**. Application of Composite Structures in Multi-Storey Car Parks. MSc Thesis (in Serbian), University of Belgrade, Faculty of Civil Engineering, 2010, 1-275.
- 4.3. **Marjanović M**. Design and verification of two-bay industrial building. BSc Thesis (in Serbian), University of Belgrade, Faculty of Civil Engineering, 2009, 1-111.

#### 5. OTHER JOURNAL PAPERS

- 5.1. Milojević M, Damnjanović E, Nefovska-Danilović M, **Marjanović M**. Effects of material uncertainties on vibration performance of cross laminated timber floors. *Građevinski materijali i konstrukcije* 2021; 64(3): 153-157. **doi:10.5937/grmk2103153M**
- 5.2. **Marjanović M**, Nefovska-Danilović M, Petronijević M. Development of dynamic stiffness method for free vibration analysis of plate structures. *Scientific Journal of Civil Engineering* 2019; 8(2): 69-74.
- 5.3. Damnjanović E, **Marjanović M**, Nefovska-Danilović M, Jočković M, Kolarević N. Application of dynamic stiffness method in numerical free vibration analysis of stiffened plates. *Građevinski materijali i konstrukcije* 2017; 60(2): 21-32. **doi:10.5937/grmk1702021D**
- 5.4. Vuksanović Dj, **Marjanović M**. Application of layered finite elements in the numerical analysis of laminated composite and sandwich structures with delaminations. *Građevinski materijali i konstrukcije* 2015; 58(1): 59-76. **doi:10.5937/grmk1501059V**
- 5.5. **Marjanović M**, Vuksanović Dj. Linear Transient Analysis of Laminated Composite Plates using GLPT. *Acta Technica Napocensis: Civil Engineering & Architecture* 2013; 56(2): 58-71.