

Dr Marija Nefovska-Danilović

Curriculum Vitae

1 CONTACT DETAILS

Current employer	University of Belgrade, Faculty of Civil Engineering Chair of Engineering Mechanics and Theory of Structures
Work address	Bulevar kralja Aleksandra 73 11000 Belgrade Serbia
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2 EDUCATION

1997	Dipl. Ing. in Structural Engineering, Faculty of Civil Engineering, University of Belgrade
2003	MSc degree, Faculty of Civil Engineering, University of Belgrade MSc thesis: <i>“Elastic-plastic analysis of steel frames with flexible connections”</i>
2013	PhD degree, Faculty of Civil Engineering, University of Belgrade PhD thesis: <i>“Dynamic analysis of soil-structure system using spectral element method”</i>

3 ACADEMIC CAREER

2018 – to date	Associate Professor University of Belgrade, Faculty of Civil Engineering
2013 – 2018	Assistant Professor University of Belgrade, Faculty of Civil Engineering
1997 – 2013	Teaching Assistant University of Belgrade, Faculty of Civil Engineering

4 TEACHING

1998 – 2013	Teaching Assistant in Structural Analysis 1 and 2, Theory of Plates and Shells, Finite Element Method
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2013 – to date	Finite Element Method, Matrix Analysis of Structures (BSc level) Supervisor of BSc and MSc theses Advanced Finite Element Method (MSc level)
2018 – to date	Analysis of Structures subjected to Dynamic Loads (MSc level)
23 th – 27 th May 2016	Course “ <i>Application of the dynamic stiffness method in the vibration analysis of structures</i> ” held at the Polytechnical University of Timisoara within the ERASMUS+ KA1 mobility between University of Belgrade and Polytechnical University of Timisoara
3 rd – 11 th October 2009	Participation in the summer school „ <i>Vibrations of Structures Due to rail-Road Traffic: Vibration Measurements – Predictions with Computer Models</i> “ organized by the Faculty of Civil Engineering, University of Belgrade and Technical University of München, supported by DAAD
3 rd – 11 th October 2010	Participation in the summer school „ <i>Vibrations of Structures Due to Rail-Road Traffic: Mechanisms-Prediction-Serviceability</i> “, organized by the Faculty of Civil Engineering, University of Belgrade and Technical University of München, supported by DAAD

5 RESEARCH

MAIN RESEARCH INTERESTS

- Traffic-induced vibration
- Vibration of plates and shells
- Dynamic stiffness method
- Dynamic soil-structure interaction
- Isogeometric analysis

RESEARCH PROJECTS

2006 - 2010	Co-investigator in <i>ON 144037</i> Research projects of national interest: „ <i>Mechanics of deformable bodies - Theoretical investigations</i> “
2011 – to date	Co-investigator in <i>TR 36046</i> : „ <i>Towards development of sustainable cities: influence of traffic induced vibrations on buildings and humans</i> “
2004 – 2017	Participation in the “SEEFORM” international project supported by DAAD
2018 – 2020	Academic coordinator of ERASMUS+ KA1 mobility project between University of Belgrade and Politecnico di Milano

SUPERVISOR AND EXAMINER OF PhD THESES

- 2016: Supervision of PhD thesis entitled „*Vibration and buckling of plates and shells using dynamic stiffness method*“ by Nevenka Kolarevic, (in Serbian)
- 2016: Member of the Defense Committee of PhD thesis entitled „*Nonlinear Analysis of Laminated Composite Plates and Shells with Delaminations using Finite Element Method*“ by Miroslav Marjanovic
- 2018: Member of the Defense Committee of PhD thesis entitled „*ITM-based dynamic analysis of foundations resting on a layered halfspace*“ by Marko Radisic

6 MEMBERSHIP

- Serbian Society of Mechanics
- Serbian Society of Structural Engineers

7 PEER-REVIEWING WORK

- Engineering Structures
- Thin-Walled Structures
- International Journal of Structural Stability and Dynamics
- International Journal for Mechanical Sciences
- Shock and Vibration
- Structural Engineering and Mechanics
- Mechanics Based Design of Structures and Machines
- Advances in Structural Engineering
- Gradjevinar

8 BIBLIOGRAPHY

Peer-Reviewed Journal Papers

1. Miloš Jočković, Gligor Radenković, Marija Nefovska-Danilović, Matthias Baitsch (2019) Free vibration analysis of spatial Bernoulli-Euler and Rayleigh curved beams using isogeometric approach. *Applied Mathematical Modelling*. **71** (2019), pp. 152-172.
2. Miroslav Marjanović, Marija Nefovska-Danilović, Emilija Damnjanović (2019) Framework for Dynamic-stiffness-based free vibration analysis of plate-like structures. *Shock and Vibration* **2019**, Article ID 1369235, 15 pages.
3. Miroslav Marjanović, Nevenka Kolarević, Marija Nefovska-Danilović, Mira Petronijević (2017) Shear deformable dynamic stiffness elements for a free vibration analysis of composite plate assemblies–Part II: Numerical examples. *Composite Structures*. **159**(), pp.183-196.
4. E. Damnjanović, M. Marjanović, M. Nefovska-Danilović (2017) Free vibration analysis of stiffened and cracked laminated composite plate assemblies using shear-

- deformable dynamic stiffness elements. *Composite Structures*. **180**(), pp.723-740. DOI: <http://dx.doi.org/10.1016/j.compstruct.2017.08.038>
5. Marija Nefovska-Danilović, Nevenka Kolarević, Miroslav Marjanović, Mira Petronijević (2017) Shear deformable dynamic stiffness elements for a free vibration analysis of composite plate assemblies–Part I: Theory. *Composite Structures*. **159**(), pp.728--744.
 6. Nevenka Kolarević, Miroslav Marjanović, Marija Nefovska-Danilović, Mira Petronijević (2016) Free vibration analysis of plate assemblies using the dynamic stiffness method based on the higher order shear deformation theory. *Journal of Sound and Vibration*. **364**(), pp.110--132.
 7. Miroslav Marjanović, Nevenka Kolarević, Marija Nefovska-Danilović, Mira Petronijević (2016) 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*. **107**(), pp.678--694.
 8. Marija Nefovska-Danilović, Mira Petronijević (2015) In-plane free vibration and response analysis of isotropic rectangular plates using the dynamic stiffness method. *Computers and Structures*. **152**(), pp.82--95.
 9. N. Kolarević, M. Nefovska-Danilović, M. Petronijević (2015) Dynamic stiffness elements for free vibration analysis of rectangular Mindlin plate assemblies. *Journal of Sound and Vibration*. **359**(), pp.84--106.
 10. Mira Petronijević, Marija Nefovska-Danilović, Marko Radišić (2013) Analysis of frame structure vibrations induced by traffic. *Građevinar*. **65**(9), pp.811--824.
 11. Marija Nefovska-Danilović, Mira Petronijević and Branko Šavija (2013) Traffic-induced vibrations of frame structures. *Canadian Journal of Civil Engineering*. **40**(2), pp.158--171.
 12. M. Sekulović, M. Nefovska-Danilović (2008) Contribution to transient analysis of inelastic steel frames with semi-rigid connections. *Engineering Structures*. **30**(4), pp.976--989.
 13. M. Sekulović, R. Salatić, M. Nefovska (2002) Dynamic analysis of steel frames with flexible connections. *Computers and Structures*. **80**(11), pp.935--955.
 14. Marija Nefovska-Danilović, Mira Petronijević (2013) Reply to the Discussion by Chen on Traffic-induced vibrations of frame structures. *Canadian Journal of Civil Engineering*. **40**(9), pp.932--933.

Other Journal Papers

1. Emilija Damjanović, Miroslav Marjanović, Marija Nefovska-Danilović, Miloš Jočković, Nevenka Kolarević (2017) Application of dynamic stiffness method in numerical free vibration analysis of stiffened plates. *Građevinski materijali i konstrukcije*. **60**(2), pp.21-32. DOI: 10.5937/grmk1702021D
2. Nevenka Kolarević, Marija Nefovska-Danilović, Mira Petronijević (2016) Dynamic stiffness method in the vibration analysis of circular cylindrical shell. *Građevinski materijali i konstrukcije*. **59**(3), pp.45--61.

1. Marko Radišić, Marija Nefovska-Danilović, Mira Petronijević (2013) Vertical vibrations of 3D structure caused by moving load. *Acta Technica Napocensis: Civil Engineering & Architecture*. **56**(2), pp.15--26.
2. M. Sekulović, M. Nefovska-Danilović (2004) Static inelastic analysis of steel frames with flexible connections. *Theoretical and Applied Mechanics*. **31**(2), pp.101--134.
3. Mira Petronijević, Marija Nefovska-Danilović, Srđan Prodanović (2011) Sustainable development of cities: Effects of traffic induced vibrations on humans. In: *Zbornik radova Građevinsko-arhitektonskog fakulteta, Niš*.
4. M. Sekulović, M. Nefovska-Danilović (2006) Analiza okvira sa polukrutim vezama pri dejstvu zemljotresa. In: *Zbornik radova Građevinskog fakulteta u Subotici*.
5. M. Nefovska-Danilović, B. Kolundžija, Š. Dunica, R. Salatić (2004) Histerezisno ponašanje elemenata pri dejstvu dinamičkog opterećenja. In: *Zbornik radova, Građevinski fakultet Subotica*.
6. M. Petronijević, D. Kovačević, M. Nefovska-Danilović (2014) Simple wall-rigid floor-soil model for prediction of traffic induced vibration in buildings. In: *Zbornik radova Građevinskog fakulteta-Međunarodna konferencija: Savremena dostignuća u građevinarstvu, Subotica*.
7. M. Petronijević, M. Nefovska-Danilović (2012) Vibracije usled saobraćaja: merenje, procena i predviđanje. *Građevinski kalendar*. **44**(), pp.1-41.

Papers in Conference Proceedings

1. Emilija Damnjanović, Marija Nefovska-Danilović, Mira Petronijević, Miroslav Marjanović (2017) Application of the dynamic stiffness method in the vibration analysis of stiffened composite plates. In: *Procedia Engineering-X International conference on Structural Dynamics EUROLYN 2017*.
2. Miloš Jočković, Marija Nefovska-Danilović (2016) Free vibration analysis of beam element using isogeometric analysis. In: *4. međunarodna konferencija "Savremena dostignuća u građevinarstvu", Subotica*.
3. Miroslav Marjanović, Nevenka Kolarević, Marija Nefovska-Danilović (2016) Shear deformable dynamic stiffness elements for free vibration analysis of rectangular isotropic multilayer plates. In: *4. međunarodna konferencija "Savremena dostignuća u građevinarstvu", Subotica*.
4. N. Kolarević, M. Nefovska-Danilović, M. Petronijević (2014) Transverse vibration of rectangular Mindlin plate using spectral element method. In: *International Symposium on Stability, Vibration and Control of Machines and Structures SVCS 2014*.
5. M. Petronijević, M. Marjanović, M. Radišić, M. Marjanović, M. Nefovska-Danilović (2014) Comparative seismic analysis of RC buildings under influence of soil-structure interaction. In: *4th International Conference Earthquake Engineering and Engineering Seismology, Borsko jezero, Serbia*.
6. I. Džolev, Đ. Lađinović, A. Rašeta, M. Petronijević, M. Nefovska-Danilović (2014) Effect of relative length of columns on nonlinear response of RC girder bridge. In: *4th International Conference Earthquake Engineering and Engineering Seismology, Borsko jezero, Srbija*.

7. M. Jočković, M. Nefovska-Danilović, M. Petronijević (2014) Free vibration analysis of plate assemblies using dynamic stiffness method. *In: International Symposium on Stability, Vibration and Control of Machines and Structures SVCS 2014, Belgrade, Serbia.*
8. M. Nefovska-Danilović, M. Petronijević (2014) Free in-plane vibration of rectangular plates using spectral element method. *In: IX International conference on structural dynamics - EURODYN.*
9. M. Petronijević, M. Radišić, M. Nefovska-Danilović (2013) Wave propagation due to a moving load. *In: Proceeding 4th International Congress of Serbian Society of Mechanics, Vrnjačka Banja.*
10. M. Nefovska-Danilović, M. Petronijević, M. Radišić (2013) Transverse vibration of plates with edge beams using spectral element method. *In: Proceeding 4th International Congress of Serbian Society of Mechanics, Vrnjačka Banja.*
11. M. Petronijević, M. Nefovska-Danilović, I. Tomović (2012) Influence of soil-structure-interaction on dynamic response of a long bridge. *In: Naučno-stručno međunarodno savetovanje Zemljotresno inženjerstvo i inženjerska seizmologija, Divčibare.*
12. M. Petronijević, M. Nefovska-Danilović (2012) Assessment of traffic-induced vibrations on humans and buildings according to BS and DIN standard. *In: 4. Internacionalni naučno-stručni skup građevinarstvo - nauka i praksa, Žabljak, Crna Gora.*
13. Marija Nefovska-Danilović, Mira Petronijević, Marko Radišić (2011) Analysis of traffic induced building vibrations using spectral element method. *In: Third Serbian Congress of Theoretical and Applied Mechanics.*
14. M. Petronijević, M. Nefovska-Danilović (2011) Ongoing Research in Structural Dynamics at the University of Belgrade. *In: 14. Symposium, EMPA-Dübendorf.*
15. M. Radišić, M. Nefovska-Danilović, M. Petronijević (2011) Application of integral transform method to calculate impedance functions. *In: Third Serbian Congress on Theoretical and Applied Mechanics.*
16. M. Petronijević, S. Brčić, M. Nefovska-Danilović (2009) Train-induced vibrations: moving load modelling. *In: 13th International Symposium of MASE, Ohrid, Macedonia.*
17. S. Brčić, M. Petronijević, M. Nefovska-Danilović (2009) Train-induced vibrations: a case study. *In: 13th International Symposium of MASE, Ohrid, Macedonia.*
18. M. Petronijević, M. Nefovska-Danilović (2007) Traffic-Induced Building Vibrations in Belgrade. *In: 12th International Symposium of MASE, Struga, Macedonia.*
19. M. Petronijević, M. Nefovska, S. Zlatković, N. Jokić (2003) Design of supplementary water tank "JULINO BRDO" Belgrade. *In: 10th Symposium of Macedonian Association of Structural Engineers, Ohrid, Macedonia.*
20. M. Petronijević, M. Nefovska (2003) Water Pipes-Bridge Structure Interaction. *In: 10th Symposium of Macedonian Association of Structural Engineers, Ohrid, Macedonia.*
21. M. Nefovska, M. Petronijević (2002) The influence of spatial variations of ground motion and backfill soil on earthquake response of bridges. *In: 8th Symposium on Theoretical and Applied Mechanics, Skopje, Macedonia.*

22. M. Sekulović, R. Salatić, M. Mandić, M. Nefovska (2002) Energy dissipation in steel frames with semi-rigid connections. *In: 12th European Conference on Earthquake Engineering, London.*
23. M. Petronijević, M. Nefovska, S. Brčić (2002) Multiple-support seismic analysis of bridges including soil-structure interaction. *In: 12th European Conference on Earthquake Engineering, London.*
24. B. Pujević, M. Sekulović, M. Nefovska (2000) Nonlinear analysis of thin-wall cylindrical liquid storage reservoirs under seismic action. *In: 12th World Conference on Earthquake Engineering, Auckland, New Zealand.*
25. R. Salatić, R. Mandić, M. Nefovska (1999) Dynamic analysis of frames with semi-rigid and viscous connections. *In: 8th International Symposium, Macedonian Association of Structural Engineers, Ohrid, Macedonia.*
26. B. Pujević, M. Sekulović, M. Nefovska (1998) Contribution to theoretical analysis of cylindrical liquid storage reservoirs subjected to earthquakes. *In: 11th European Conference on Earthquake Engineering, Paris.*
27. Mira Petronijević, Marija Nefovska-Danilović, Marko Radišić, Miloš Jočković (2018) Istraživanje dejstva vibracija na ljude i objekte u cilju održivog razvoja gradova. *In: Simpozijum 2018 Društva građevinskih konstruktera Srbije, Zlatibor.*
28. Emilija Damjanović, Marija Nefovska-Danilović, Miloš Jočković, Miroslav Marjanović, Nevenka Kolarević (2016) Slobodne vibracije ploča sa ukrućenjima primenom metode dinamičke krutosti. *In: Simpozijum 2016 Društva građevinskih konstruktera Srbije.*
29. M. Petronijević, M. Nefovska-Danilović, M. Radišić (2012) Procena vibracija od saobraćaja. *In: DGKS Simpozijum 2012, Vrnjačka Banja.*
30. Stanko Brčić, Mira Petronijević, Marija Nefovska-Danilović (2010) Vibracije železničke stanice Beograd-Centar usled prolaska vozova: Deo 1. *In: TEIK 2010, Niš, 2010.*
31. Mira Petronijević, Stanko Brčić, Marija Nefovska-Danilović (2010) Vibracije železničke stanice Beograd-Centar usled prolaska vozova: Numerička analiza. *In: TEIK 2010, Niš, 2010.*
32. M. Radišić, M. Nefovska-Danilović, M. Petronijević (2010) Dinamička krutost pravougaonog temelja. *In: Zbornik radova 13. kongresa DGKS, Zlatibor-Čigota.*
33. B. Šavija, M. Nefovska-Danilović, M. Petronijević (2010) Modalna analiza ramovskih konstrukcija primenom metode spektralnih elemenata. *In: Zbornik radova 13. kongresa DGKS, Zlatibor-Čigota.*
34. R. Salatić, R. Mandić, M. Nefovska (1999) Računarski program za statičku i dinamičku analizu ramova sa polukrutim ekscentričnim vezama. *In: V Simpozijum o primeni CAD tehnologije "CAD Forum '99.*

Papers in Monographs

1. Mira Petronijević, Marija Nefovska-Danilović, Marko Radišić, Dragan Kovačević (2017) Numerički modeli za predviđanje vibracija. *In: Mira Petronijević (eds.) Vibracije od saobraćaja: nastanak, merenje, predviđanje i procena njihovog dejstva na objekte i ljude.* Građevinski fakultet Beograd, Akademska misao, pp.67-130.

2. Mira Petronijević, Marija Nefovska-Danilović (2017) Nastanak i dejstvo vibracija od saobraćaja na objekte i ljude. In: Mira Petronijević (eds.) *Vibracije od saobraćaja: nastanak, merenje, predviđanje i procena njihovog dejstva na objekte i ljude*. Građevinski fakultet Beograd, Akademska misao, pp.1-9.
3. Mira Petronijević, Marija Nefovska-Danilović (2017) Procena dejstva vibracija na objekte i ljude. In: Mira Petronijević (eds.) *Vibracije od saobraćaja: nastanak, merenje, predviđanje i procena njihovog dejstva na objekte i ljude*. Građevinski fakultet Beograd, Akademska misao, pp.35-51.
4. Mira Petronijević, Marija Nefovska-Danilović, Nevenka Kolarević, Miroslav Marjanović, Miloš Jočković (2016) Metoda dinamičke krutosti u dinamičkoj analizi sistema ploča - deo 1: teorija. In: Petronijević M., Stevanović B., Rakočević M. (eds.) *Savremeni problemi teorije konstrukcija*. Univerzitet u Beogradu - Građevinski fakultet, Univerzitet Crne Gore - Građevinski fakultet u Podgorici, pp.79-90. [M45]
5. Mira Petronijević, Marija Nefovska-Danilović, Nevenka Kolarević, Miroslav Marjanović, Miloš Jočković (2016) Metoda dinamičke krutosti u dinamičkoj analizi sistema ploča - deo 1: teorija. In: Petronijević M., Stevanović B., Rakočević M. (eds.) *Savremeni problemi teorije konstrukcija*. Univerzitet u Beogradu - Građevinski fakultet, Univerzitet Crne Gore - Građevinski fakultet u Podgorici, pp.79-90.
6. Mira Petronijević, Marija Nefovska-Danilović, Nevenka Kolarević, Miroslav Marjanović, Miloš Jočković (2016) Metoda dinamičke krutosti u dinamičkoj analizi sistema ploča - deo 2: primena. In: Petronijević M., Stevanović B., Rakočević M. (eds.) *Savremeni problemi teorije konstrukcija*. Univerzitet u Beogradu - Građevinski fakultet, Univerzitet Crne Gore - Građevinski fakultet u Podgorici, pp.91-100.
7. M. Petronijević, M. Nefovska-Danilović (2008) Analiza interakcije cevovoda i konstrukcije mosta. In: Đorđe Vuksanović (eds.) *Teorija konstrukcija, Monografija posvećena uspomeni na pokojnog akademika prof. Dr. Milana Đurića*. Građevinski fakultet Univerziteta u Beogradu, Katedra za tehničku mehaniku i teoriju konstrukcija, pp.161-168.
8. M. Sekulović, M. Nefovska-Danilović (2008) Energetski pristup u dinamičkoj analizi okvira sa fleksibilnim vezama. In: Đorđe Vuksanović (eds.) *Teorija konstrukcija, Monografija posvećena uspomeni na pokojnog akademika prof. Dr. Milana Đurića*. Građevinski fakultet Univerziteta u Beogradu, Katedra za tehničku mehaniku i teoriju konstrukcija, pp.41-46.