ОСНОВНИ ПОДАЦИ

Име и презиме	Марко Топаловић
Година и место рођења	1981 Крагујевац
Звање	Научни сарадник
E-mail	topalovic@kg.ac.rs
Образовно-научно / образовно-уметничко поље	Техничко технолошке науке
Универзитет, факултет, организациона јединица	Универзитет у Крагујевцу, Институт за информационе технологије, Сектор за техничко-технолошке науке
Област и ужа научна област	Машинско инжењерство, (Примењена механика, Примењена информатика и рачунарско инжењерство)

ОБРАЗОВАЊЕ

ОСНОВНЕ СТУДИЈЕ

Година	2006
Место	Крагујевац
Институција	Машински факултет Крагујевац, Универзитет у Крагујевцу

МАСТЕР СТУДИЈЕ

Година	
Место	
Институција	

ДОКТОРСКА ДИСЕРТАЦИЈА

Година	2016
Место	Крагујевац
Институција	Факултет инжењерских наука Универзитета у

	Крагујевцу
Наслов докторске дисертације	Нумеричко моделирање грануларних материјала
Област	Примењена механика, Примењена информатика и рачунарско инжењерство

СТРУЧНА БИОГРАФИЈА – ИЗБОРИ У ИСТРАЖИВАЧКА ОДНОСНО НАУЧНА ЗВАЊА

Датум избора	Институција	Звање
2012	Факултет инжењерских наука Универзитета у Крагујевцу	Истраживач сарадник
2015	Факултет инжењерских наука Универзитета у Крагујевцу	Истраживач сарадник
2017	Факултет инжењерских наука Универзитета у Крагујевцу	Научни сарадник
2022	Институт за информационе технологије, Универзитет у Крагујевцу	Научни сарадник

СТРУЧНА БИОГРАФИЈА - УСАВРШАВАЊЕ

Година	Институција	Трајање

АНГАЖОВАНОСТ У ФОРМИРАЊУ НАУЧНИХ КАДРОВА

УЧЕШЋЕ НА ПРОЈЕКТИМА РЕСОРНОГ МИНИСТАРСТВА

ТР32036 "Развој софтвера за решавање спрегнутих мултифизичких проблема" (01.11.2011 – 31.12.2019)

УЧЕШЋЕ НА МЕЂУНАРОДНИМ ПРОЈЕКТИМА

Bridge technical differences and social suspicions contributing to transform the Adriatic area in a stable hub for a sustainable technological development ADRIA-HUB 2010-2013.

ЧЛАНСТВО У НАУЧНИМ И СТРУЧНИМ АСОЦИЈАЦИЈАМА

члан Српског друштва за механику и Српског друштва за рачунску механику.

ОРГАНИЗАЦИЈА СКУПОВА

IEEE BIBE 2022 The 22nd IEEE International Conference on BioInformatics and BioEngineering **https://bibe2022.asia.edu.tw/program-committee/**

НАУЧНО-ИСТРАЖИВАЧКИ РАД*

Списак резултата M10 Монографије, Монографске студије, Тематски зборници- обавезно навести категорију	**Број**
Списак резултата M20 Радови објављени у научним часописима међународног научног значаја- обавезно навести категорију	**Број** [M21]=5 [M22]=2 [23]=2 [24]=3 Σ[M20]=12
1. [M21] Tijana Djukić, **Marko Topalović**, Nenad Filipović, Numerical simulation of isolation of cancer cells in a microfluidic chip, Journal of Micromechanics and Microengineering, (2015), Vol.25, pp. 084012 (9pp), ISSN: 0960-1317, DOI: 10. 1088/0960-1317/25/8/084012 2. [M21] Aleksandar Nikolic, **Marko Topalovic**, Vladimir Simic, Nenad Filipovic, Turbulent finite element model applied for blood flow calculation in arterial bifurcation, Computer Methods and Programs in Biomedicine, (2021), Vol. 209, pp. 106328, DOI:10.1016/j.cmpb.2021.106328	

3. [M21] **Marko Topalovic**, Aleksandar Nikolic, Vladimir Milovanovic, Snezana Vulovic, Milos Ivanovic, Smoothed particle hydrodynamics for blood flow analysis: development of particle lifecycle algorithm, Computational Particle Mechanics, (2022), DOI:10.1007/s40571-021-00454-6

4. [M21] Vladimir Milovanović, Dušan Arsić, Miroslav Milutinović, Miroslav Živković, **Marko Topalović**, A Comparison Study of Fatigue Behavior of S355J2+N, S690QL and X37CrMoV5-1 Steel, Metals, (2022), Vol. 12 No. 7. pp. :1199 , DOI:10.3390/met12071199

5. [M21] Tijana Djukic, **Marko Topalovic**, Nenad Filipovic, Validation of lattice Boltzmann based software for blood flow simulations in complex patient-specific arteries against traditional CFD methods, Mathematics and Computers in Simulation, (2023), Vol. 203. pp. 957–976, DOI:10.1016/j.matcom.2022.07.027

6. [M22] Ljudmila Kudrjavčeva, Milan Mićunović, **Marko Topalović**, Simon Sedmak, Thermomechanics of soft inelastics bodies with application to asphalt behavior, Thermal Science, (2014), Vol.18, No. Suppl. 1, pp. 221-228, ISSN: 0354-9836, DOI: 10.2298/TSCI130812184K

7. [M22] Cristiano Fragassa, **Marko Topalovic**, Ana Pavlovic, Snezana Vulovic, Dealing with the Effect of Air in Fluid Structure Interaction by Coupled SPH-FEM Methods, Materials, (2019), Vol. 12, No. 7, pp. E1162, DOI: 10.3390/ma12071162

8. [M23] Radovan Petrović, Miroslav Živković, **Marko Topalović**, Radovan Slavković, Analytical, numerical and experimental stress assessment of the spherical tank with large volume, Tehnicki Vjesnik = Technical Gazette, (2015), Vol.22, No.5, pp. 1135-1140, DOI:10.17559/TV-20130905131504

9. [M23] Milan Blagojević, Dragan Rakić, **Marko Topalović**, Miroslav Živković, Optical coordinate measurements in automotive industry, Tehnicki Vjesnik = Technical Gazette, (2016), Vol.23, No.5, pp. 1541-1546, DOI: 10.17559/TV-20130918160442

10. [M24] **Marko Topalovic**, Aleksandar Nikolic, Snezana Vulovic, Vladimir Milovanovic, FSI Analysis with Continuous Fluid Flow Using

FEM and SPH Methods in LS-DYNA, Journal of the Serbian Society for Computational Mechanics, (2021), Vol. 15, No. 2, pp. 93-100 DOI: 10.24874/jsscm.2021.15.02.09

11. [M24] Aleksandar Nikolic, **Marko Topalovic**, Vladimir Simic, Milan Blagojevic, Blood Flow in Arterial Bifurcation Calculated by Turbulent Finite Element Model, Journal of the Serbian Society for Computational Mechanics, (2021), Vol. 15, No. 2, pp. 79-92, DOI: 10.24874/jsscm.2021.15.02.08

12. [M24] Dragoljub Stevanović, **Marko Topalović**, Miroslav Živković, Improvement of the Sparse Matrices Storage Routines for Large FEM Calculations, Journal of the Serbian Society for Computational Mechanics, (2021), Vol. 15, No. 1, pp. 81-97, DOI: 10.24874/jsscm.2021.15.01.06

Списак резултата М30 Зборници међународних научних скупова- обавезно навести категорију	**Број** [M33]=35 [M34]=1 Σ[M30]=36

1. [M33] Miroslav Živković, **Marko Topalović**, Radovan Slavković, Vladimir Dunić, Abaqus subroutine development and implementation for Neo-Hook hyperelastic material model, The 3rd International Conference of Serbian Society of Mechanics (IConSSM 2011), Vlasinsko Jezero, (2011), 5-8 Jul, pp. 889-896, ISBN 978-86-909973-3-6
2. [M33] **Marko Topalović**, Miroslav Živković, Nenad Busarac, Snežana Vulović, Improvement and integration of FEM solution used for R&D into FEMAP, Conference on Mechanical Engineering Technologies and Applications - COMETa 2012, Jahorina, Bosna i Hercegovina, (2012), 28-30 November, pp. 255-262, ISBN 978-99938-655-4-4
3. [M33] Milan Blagojević, Miroslav Živković, **Marko Topalović**, Registration and surface inspection of automotive pressed parts based on point cloud generated by optical measuring techniques, International Congress Motor Vehicles & Motors 2012 - MVM2012, Kragujevac, (2012), 3-5 Oktober, pp. 334-339, ISBN 978-86-86663-91-7
4. [M33] Miroslav Živković, Miloš Janošević, Snežana Vulović, Nenad Busarac, **Marko Topalović**, Thermal analysis of high power reduction gearbox, Conference on Mechanical Engineering Technologies and Applications - COMETa 2012, Jahorina, Bosna i Hercegovina, (2012), 28-30 November, pp. 355-358, ISBN 978-99938-655-4-4

5. [M33] Dragan Adamović, Milentije Stefanović, Srbislav Aleksandrović, Miroslav Živković, Fatima Živić, **Marko Topalović**, Analysis of tribological process during ironing of sheet metal made of AlMg3, SERBIATRIB '13, 13th International Conference on Tribology, Kragujevac, (2013), 15–17 May, pp. 265-269, ISBN 978-86-86663-98-6
6. [M33] **Marko Topalović**, Miloš Ivanović, Miroslav Živković, Aleksandar Dišić, Comparison of FEM and SPH methods used for analysis of solid bodies, IConSSM 2013 - The 4rth International Congress of Serbian Society of Mechanics, Vrnjacka Banja, (2013), 4-7 June, pp. 401-406, ISBN 978-86-909973-5-0
7. [M33] Milan Micunović, Ljudmila Kudrjavceva, **Marko Topalović**, Thermomechanics of soft inelastics bodies - an application to asphalt behavior, IConSSM 2013 - The 4rth International Congress of Serbian Society of Mechanics, Vrnjacka Banja, (2013), 4-7 June, pp. 371-375, ISBN 978-86-909973-5-0
8. [M33] **Marko Topalović**, Vladimir Milovanović, Milan Blagojević, Aleksandar Dišić, Dragan Rakić, Miroslav Živković, Freight wagon mass reduction using parametric optimisation, VIII International Conference „Heavy Machinery-HM 2014", Zlatibor, (2014), 25-28 June, pp. E.53-60, ISBN 978-86-82631-74-3
9. [M33] Milan Blagojević, **Marko Topalović**, Miroslav Živković, Improvement of end-user experience by development of pre- and post-processing solution for FEM magnetostatic solver PAK-M, 8th International Quality Conference, Kragujevac, (2014), 23 May, pp. 409-416, ISBN 978-86-6335-004-5
10. [M33] Miroslav Živković, **Marko Topalović**, Milan Blagojević, Aleksandar Nikolić, Vladimir Milovanovć, Siniša Mesarović, Jagan Padbidri, Boundary identification and weak periodic condition application in DEM method, 2nd International Scientific Conference COMETa, East Sarajevo - Jahorina, Bosnia & Herzegovina, (2014), 2-5 December, pp. 365-370, ISBN 978-99976-623-1-6
11. [M33] Radovan Petrović, Jelena Živković, **Marko Topalović**, Miroslav Živković, Gordana Jovičić, Analytical stress calculation in spherical tank and experimental verification, XIIIth Youth Symposium on Experimental Solid Mechanics, Dečin, Czech Republic, (2014), 29 June - 2 July, pp. 92-95, ISBN 978-80-01-05556-4
12. [M33] **Marko Topalović**, Milan Blagojević, Aleksandar Nikolić, Miroslav Živković, Nenad Filipović, Application of Smoothed particle

hydrodynamics in biomechanics: advanced procedure for discretization of complex biological shapes into pseudo-particles, 15th International Conference on Bioinformatics & Bioengineering (BIBE 2015), Beograd, (2015), 2-4 November, pp. 142 (4pp), ISBN 978-1-4673-7982-3

13. [M33] **Marko Topalović**, Modelling granular materials with meshless DEM and SPH methods, Fifth Serbian (30th YU) Congress on Theoretical and Applied Mechanics, Arandjelovac, (2015), 15-17 June, pp. C-13 (6pp), ISBN 978-86-7892-715-7
14. [M33] Milan Micunović, Ljudminla Kudrjavceva, **Marko Topalović**, Inelasticity of metals - an application to thermal ratchetting, Fifth Serbian (30th YU) Congress on Theoretical and Applied Mechanics, Arandjelovac, (2015), 15-17 June, pp. C-19 (6pp), ISBN 978-86-7892-715-7
15. [M33] Nikola Jovanović, **Marko Topalović**, Vladimir Milovanović, Snežana Vulović, Miroslav Živković, Topology optimization used to reduce weight of four-axle bogie freight wagon, 7th International Scientific and Expert Conference of the International TEAM, Beograd, (2015), 15-16 Oktober, pp. 489-492, ISBN 978–86-7083–877–2
16. [M33] **Marko Topalović**, Vladimir Milovanović, Aleksandar Dišić, Ana Pavlović, Miroslav Živković, Numerical simulations for addressing flaws in the freight wagon design, achieving goal of increased exploitation functionality, International Congress Motor Vehicles & Motors 2016, Kragujevac, (2016), 6-8 Oktober, pp. 241-246, ISBN 978-86-6335-037-3
17. [M33] Dragan Adamović, Miroslav Živković, Tomislav Vujinović, Fatima Živić, **Marko Topalović**, Marko Pantić, Wear of the Tools for the Ironing Process and Methods for Increasing Their Lifetime, 15th International Conference on Tribology, Serbiatrib '17, Kragujevac, (2017), 17-19 May, pp. 408-416.
18. [M33] Aleksandar Nikolić, Nenad Filipović, **Marko Topalović**, Miroslav Živković, Finite Element Simulation of Turbulent Flow Using k omega Model and Rans Equations, 4th South-East European Conference on Computational Mechanics, Kragujevac, (2017), 3-5 July, pp. 1-10, ISBN 978-86-921243-0-3
19. [M33] Ljudmila Kudrjavceva, **Marko Topalovic**, Milan Micunovic, Rutting Problem for Rubber Wheel Motion over HMA Asphalt Concrete Pavement, 6th International Congress of Serbian Society of Mechanics, Tara, (2017), 19-21 June
20. [M33] **Marko Topalović**, Ljudmila Kudrjavceva, Milan Micunović, Temperature Dependent Elasto-Viscoplastic Material Model for Asphalt,

7th International Congress of Serbian Society of Mechanics, Sremski Karlovci, (2019), 24-26 June

21. [M33] **Marko Topalović**, Snežana Vulović, Miroslav Živković, Milan Bojović, Combination of Bash and Python in Development of Wrappers used for Automation of Finite Element Analysis, 10th International Conference on Information Society and Technology ICIST 2020, Kopaonik, (2020), 8-11 March

22. [M33] Snežana Vulović, Milan Bojović, **Marko Topalović**, Automation of FEM Analysis Report Generation using Visual Basic FEMAP API, 10th International Conference on Information Society and Technology ICIST 2020, Kopaonik, (2020), 8-11 March

23. [M33] Vladimir Milovanović, Milan Bojović, **Marko Topalović**, Miroslav Živković, Snežana Vulović, Developing Advanced Subsystem for Securing Steel Coil Cargo on Shimmns Wagon Cradles, XIX International Scientific-Expert Conference on Railways - RAILCON 2020, Niš, Serbia, (2020), 15-16 October, pp. 93-96, ISBN 978-86-6055-134-6

24. [M33] Vladimir Milovanović, Nikola Jovanović, Miroslav Živković, Aleksandar Dišić, **Marko Topalović**, Optimization of the Saddle Support Structure of the Freight Wagon Type Shimmns, XIX International Scientific-Expert Conference on Railways - RAILCON 2020, Niš, Serbia, (2020), 15-16 October, pp. 109-112, ISBN 978-86-6055-134-6

25. [M33] **Marko Topalović**, Vladimir Milovanović, Nikola Jović, Ljudmila Kudrjavceva, Milan Mićunović, FEM Modelling of Interaction Between Wheel and Asphalt, 5th International Scientific Conference COMETa 2020 "Conference on Mechanical Engineering Technologies and Applications", East Sarajevo, Bosnia and Herzegovina, (2020), 26-28 November, pp. 173-180, ISBN 978-99976-719-8-1

26. [M33] Snežana Vulović, Rodoljub Vujanac, Miroslav Živković, **Marko Topalović**, Aleksandar Dišić, FEM Modelling of Wind Load on Industrial Filter, 5th International Scientific Conference COMETa 2020 "Conference on Mechanical Engineering Technologies and Applications", East Sarajevo, Bosnia and Herzegovina, (2020), 26-28. November, pp. 138-145, ISBN 978-99976-719-8-1

27. [M33] Snežana Vulović, Danijela Pavlović, Miroslav Živković, Rodoljub Vujanac, **Marko Topalović**, Analysis of Freight Wagons for Transporting of Bulk Materials, The 8th International Congress of the Serbian Society of Mechanics, Kragujevac, Serbia, (2021), 28-30 June, pp. 1-10, ISBN 978-86-909973-8-1

28. [M33] **Marko Topalović**, Aleksandar Nikolić, Snežana Vulović, Vladimir Milovanović, FSI Analysis of Hydrofoils Using FEM and SPH Methods, The 8th International Congress of the Serbian Society of Mechanics, Kragujevac, Serbia, (2021), 28-30 June, pp. 109-114, ISBN 978-86-909973-8-1
29. [M33] Miroslav Živković, Vladimir Milovanović, Aleksandar Dišić, Gordana Jovičić, **Marko Topalović**, A Comparative Analysis of Fatigue Behavior Between S355j2+N and STRENX 700 Steel Grade, The 8th International Congress of the Serbian Society of Mechanics, Kragujevac, Serbia, (2021), 28-30 June, pp. 188-193, ISBN 978-86-909973-8-1
30. [M33] Aleksandar Nikolić, **Marko Topalović**, Vladimir Simić, Milan Blagojević, Blood Flow in Arterial Bifurcation Calculated by Turbulent Finite Element Model, The 8th International Congress of the Serbian Society of Mechanics, Kragujevac, Serbia, (2021), 28-30 June, pp. 265-272, ISBN 978-86-909973-8-1
31. [M33] Vladimir Milovanović, Miroslav Živković, Snežana Vulović, Aleksandar Dišić, **Marko Topalović**, Experimental and numerical strength analysis of freight wagon type SHIMMNS intended for the transportation of the sheet coils, The Tennth International Triennial Conference Heavy Machinery HM 2021, Vrnjačka Banja, Serbia, (2021), 23–25 June, pp. E.45-E.52, ISBN 978-86-81412-09-1
32. [M33] Aleksandar Nikolić, **Marko Topalović**, Milan Blagojević, Vladimir Simić, Blood Flow in Coronary Artery Bifurcation Calculated by Turbulent Finite Element Model, 1st International Conference on Chemo and Bioinformatics, Kragujevac, Serbia, (2021), 26-27 October, pp. 235-238, DOI:10.46793/ICCBI21.235N
33. [M33] **Marko Topalović**, Aleksandar Nikolić, Miroslav Zivković, Blood Flow Simulation Using SPH Method in Ls-Dyna, Analysis of Advantages and Disadvantages, 1st International Conference on Chemo and Bioinformatics, Kragujevac, Serbia, (2021), 26-27 October, pp. 255-258, DOI:10.46793/ICCBI21.255T
34. [M33] Aleksandar Nikolić, **Marko Topalović**, Vladimir Simić, Nenad Filipović, Calculation of blood flow in carotid artery bifurcation by turbulent finite element method, The 21st IEEE International Conference on BioInformatics and BioEngineering, Kragujevac, Serbia, (2021), 26-27 October, paper_80 1:4, DOI:10.46793/ICCBI21.235N
35. [M33] Snežana Vulović, Miroslav Živković, Rodoljub Vujanac, Ana Pavlović, **Marko Topalović**, Determining the Numerical Values of the

Potential at the Measuring Points, 6th International Scientific Conference COMETa 2022 "Conference on Mechanical Engineering Technologies and Applications", East Sarajevo, Bosnia and Herzegovina, (2022), 17-19. November, pp. 465-470, ISBN 978-99976-947-6-8

36. [M34] Snežana Vulović, Miroslav Živković, Rodoljub Vujanac, Ana Pavlović, **Marko Topalović**, FEM Analysis of Continuous Tracks, 1st International Conference on Mathematical Modelling in Mechanics and Engineering, Belgrade, Serbia, (2022) 8-10 September, pp. 114, ISBN 978-86-6060-127-0

Списак резултата М40 Монографије националног значаја- обавезно навести категорију	

Списак резултата М50 Рад у часописима националног значаја- обавезно навести категорију	**Број** [M51]=1 [M52]=2 [53]=4 Σ[M50]=7

1. [M51] Dragan Adamović, Vesna Mandić, Miroslav Živković, Zvonko Gulisija, Milentije Stefanović, **Marko Topalović**, Srbislav Aleksandrović, Numerical modeling of ironing process, Journal for Technology of Plasticity, (2013),Vol.38, No.2, pp. 109-124, ISSN 0354-3870

2. [M52] Milan Blagojević, Miroslav Živković, **Marko Topalović**, Registration and Surface Inspection of Automotive Pressed Parts Based on Point Cloud Generated by Optical Measuring Techniques, Mobility and Vehicle Mechanics, (2017), Vol. 43, No. 4, pp. 1-11. ISSN 1450 – 5304

3. [M52] **Marko Topalović**, Vladimir Milovanović, Nikola Jović, Ljudmila Kudrjavceva, Milan Mićunović, FEM Modelling of Interaction Between Wheel and Asphalt, Machine Design, (2020), Vol. 12, No. 4, pp. 89-94, ISSN 1821-1259

4. [M53] Đukić Tijana, **Topalović Marko**, Filipović Nenad, Parallelization of specialized fluid flow simulator based on lattice boltzmann method on a multi GPU system, IPSI BgD Transactions on Advanced Research (TAR), (2014), Vol.10, No.1, pp. 8-12, ISSN 1820-4511, (M53)

5. [M53] **Marko Topalović**, Đorđe Damnjanović, Aleksandar Peulić,

Milan Blagojević, Nenad Filipović, Syllable-based speech recognition using electromyography and decision set classifier, Biomedical Engineering: Applications, Basis and Communications, (2014) Vol. 27, No. 2, pp. 1550020 (9pp), DOI: 10.4015/S101623721550020

6. [M53] Dragan Adamović, Tomislav Vujinović, Fatima Živić, Jelena Živković, **Marko Topalović**, Application of Aluminum and ITS Alloys in the Automtiove Industry with Special Emphasis PN Wheel Rims, Traffic and Transport Theory and Practce, Journal for Traffic and Transport Research and Application, (2021), Vol. 6, No. 7, pp. 87-95, DOI: 10.7251/JTTTP2102087A

7. [M53] Snežana Vulović, Rodoljub Vujanac, Miroslav Živković, **Marko Topalović**, Aleksandar Dišić, FEM Modelling Of Wind Load On Industrial Filter, IETI Transactions on Engineering Research and Practice, (2021), Vol. 5, No. 1, pp. 24-33, DOI:10.6723/TERP.202102_5(1).0004

Списак резултата М60 Предавања по позиву на скуповима националног значаја- обавезно навести категорију	**Број** [M63]=1

1. [M63] **Marko Topalović**, Milan Blagojević, Miroslav Živković, Povezivanje programa za SPH proračune sa programom za postprocesiranje ParaView, XVIII konferencija YU INFO 2012, Kopaonik, (2012), 29 Februar- 3 March, pp. 260-263, ISBN 978-86-85525-09-4

Списак резултата М80 Техничка решења- обавезно навести категорију	**Број** [M85]=2

1. [M85] Miroslav Živković, Radovan Slavković, Milan Blagojević, **Marko Topalović**, Nenad Busarac, Jelena Borota, Softver za numeričko rešavanje elektrostatičkih problema PAK-E, TR-69/2012, Univerzitet u Kragujevcu, Fakultet inženjerskih nauka, Kragujevac, 2012

2. [M85] Miroslav Živković, Radovan Slavković, Miloš Kojić, Nenad Grujović, Snežana Vulović, Nenad Busarac, **Marko Topalović**, Softver za proračun temperaturnog polja konstrukcija PAK-T, TR-68/2012, Univerzitet u Kragujevcu, Fakultet inženjerskih nauka, Kragujevac, 2012

Списак резултата М90 Патенти- обавезно навести категорију	**Број**

***Разврставање резултата према ПРАВИЛНИКУ о стицању истраживачких и научних звања "Службени гласник РС", број 159 од 30. децембра 2020, Прилог 3 - Врста и квантификација индивидуалних научноистраживачких резултата.**

ЦИТИРАНОСТ НАУЧНИХ РАДОВА

Укупно 36 цитата без аутоцитата (по scopus-у) од тога 8 у 2022 години.

КРАТАК ОПИС ИСТРЖИВАЊА У ПРЕТХОДНОМ ПЕРИОДУ

Модификација МКЕ (Метода Коначних Елемената) програма PAK-S коришћењем динамичког алоцирања меморије.
Уградња методе за паковање матрице крутости у меморију помоћу red-black дрвета.
Развој и унапређење паралелизације PAK-S програма коришћењем MUMPS солвера за решавање sparse матрица коришћењем MPICH имплементације MPI стандарда.
Адаптација и развој SPH (Smoothed Particle Hydrodynamics) програма. Решавање проблема генерисања и брисања SPH честица применом тзв "алгоритма животног циклуса". Коришћењем овог алгоритма моделирано је струјање крви кроз артерије.

КРАТАК ОПИС ПЛАНИРАНИХ ИСТРЖИВАЊА У НАРЕДНОМ ПЕРИОДУ

Примена SPH методе у биоинжењерингу. Моделирање струјања крви у срцу помоћу SPH програма.

Адаптација LINUX пројекта за компајлирање МКЕ солвера PAK-S .