

PERSONAL INFORMATION

Name and surname	Milica Nikolić
Date and place of birth	26.09.1985., Kragujevac
Scientific title	Research Associate
E-mail	obradovicm@kg.ac.rs
Educational-scientific / educational-artistic field	Department of Technical and Technological Sciences
University, Faculty, Organizational unit	Institute for Information Technologies, University of Kragujevac
Research field and areas	Bioengineering

EDUCATION

BACHELOR

Year	
Place	
Institution	

MASTER STUDIES

Year	2010
Place	Kragujevac
Institution	Faculty of Mechanical Engineering Kragujevac

DOCTORAL DISSERTATION

Year	2017
Place	Kragujevac
Institution	Faculty of Engineering University of Kragujevac
Title of doctoral dissertation	Electro-mechanical cochlea model and model response analysis
Scientific title	Doctor of science – mechanical engineering
Research area	Bioengineering

PROFESSIONAL BIOGRAPHY – ELECTION IN RESEARCH OR SCIENTIFIC TITLE

Date	Institution	Scientific title
2011	Faculty of Mechanical Engineering Kragujevac	Research Assistant
2014	Faculty of Engineering University of Kragujevac	Research Assistant
2018	Faculty of Engineering University of Kragujevac	Research Associate

PROFESSIONAL BIOGRAPHY - TRAINING

Year	Institution	Duration
2009	FERI, Maribor	2 months
2014	SCOPES Workshop, Fribourg, Switzerland	4 days
2021-2022	Eindhoven University of Technology, The Netherlands	2 years

ENGAGEMENT IN THE FORMATION OF SCIENTIFIC PERSONNEL

Supervision of bachelor and master students at Eindhoven University of Technology, The Netherlands

PARTICIPATION IN NATIONAL PROJECTS FINANCED BY MINISTRY OF EDUCATION/MINISTRY OF SCIENCE AND TECHNOLOGICAL DEVELOPMENT/SCIENCE FUND OF THE REPUBLIC OF SERBIA:

“Application of biomedical engineering in clinical and pre-clinical practice”, III41007, financed by Ministry of Education, Science and Technological Development of Republic of Serbia, 2011-2014 (2019). Coordinator of the project – Prof. Dr. Nenad Filipovic, Faculty of Engineering, University of Kragujevac

PARTICIPATION IN INTERNATIONAL PROJECTS

- ARTreat, Multi-level patient-specific artery and atherogenesis model for outcome prediction, decision support treatment, and virtual hand-on training, ICT-FP7 – Grant agreement ID: 224297, Coordinated by: Consiglio Nazionale Delle Ricerche, 01.09.2008. – 31.08.2013.
- MUST, Multi-Level Protection of Materials for Vehicles by “Smart” Nanocontainers, FP7 NMP – Grant agreement ID: 214261, Coordinated by: Airbus Defence and Space GMBH, 01.06.2008. – 30.09.2012.
- SIFEM, Semantic Infostructure interlinking an open source Finite Element tool and libraries with a model repository for the multi-scale Modelling and 3D visualization of the inner-ear, FP7-ICT – Grant agreement ID: 600933, Coordinated by: dr Ratnesh Sahay, National University of Ireland, Galway, NUIG, 01.02.2013 – 31.01.2016.
- EMBalance, A decision support system incorporating a validated patient-specific, multiscale balance hypermodel towards early diagnostic Evaluation and efficient Management plan formulation of Balance disorders, FP7-ICT – Grant agreement ID: 610454, Coordinated by: University College London, UCL, 01.12.2013 – 31.01.2017.
- SMARTool, Simulation Modeling of coronary ARtery disease: a tool for clinical decision support, H2020-EU.3.1.5. – Grant agreement ID: 689068, Coordinated by: Consiglio Nazionale Delle Ricerche, 01.01.2016 – 30.06.2019.
- PANBioRA, Personalized And/Or Generalized Integrated Biomaterial Risk Assessment, H2020-EU.2.1.3. – Grant agreement ID: 760921, Coordinated by: Steinbeis 2i GMBH, 01.01.2018 – 31.12.2021.
- MDR, The Gravitation Program “Materials Driven Regeneration”, funded by the Netherlands Organization for Scientific Research (024.003.013).

MEMBERSHIP IN SCIENTIFIC AND PROFESSIONAL ASSOCIATIONS

Serbian Society for Computational Mechanics, Kragujevac

ORGANIZATION OF NATIONAL/INTERNATIONAL SCIENTIFIC MEETINGS (CONFERENCES, CONGRESSES...)

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LIST OF SCIENTIFIC PAPERS:

Monographs, Monographic studies, Thematic anthologies	Sum 5
<p>1. Ignasi Jorba, Milica Nikolic, Carlijn VC Bouten, Chapter 8. Mechanical Considerations of Myocardial Tissue and Cardiac Regeneration, in book Cardiac and Vascular Biology Springer, accepted for publication.</p>	M13
<p>2. Milica Nikolic, Chapter 7: Lab-on-a-chip for lung tissue from in silico perspective, in book Cardiovascular and Respiratory Bioengineering, Elsevier, pISBN: 978012823956807, eISBN: 9780128242292, Published: May 12, 2022 https://www.elsevier.com/books/cardiovascular-and-respiratory-bioengineering/filipovic/978-0-12-823956-8</p>	M13
<p>3. Filipovic N., Nikolic M. and Sustersic T., 2020, Chapter 28, "Simulation of organ-on-a-chip systems", in book Biomaterials for Organ and Tissue Regeneration, New Technologies and Future Prospects, ISBN 978-0-08-102906-0, pp. 753-790, https://doi.org/10.1016/B978-0-08-102906-0.00028-3. https://www.sciencedirect.com/science/article/pii/B9780081029060000283?via%3Dihub</p>	M13
<p>4. Nikolic M. and Filipovic N., 2019 (2020), Chapter 4 - Lung on a chip and epithelial lung cells modelling in book Computational Modeling in Bioengineering and Bioinformatics, pp. 105-135, https://doi.org/10.1016/B978-0-12-819583-3.00004-7, ISBN 978-0-12-819583-3. https://www.sciencedirect.com/science/article/pii/B9780128195833000047</p>	M13
<p>5. Filipovic N., Petrovic D., Nikolic M., Jovanovic S., Jovanovic A. and Zdravkovic N., 2017,(2018), "Modeling of Self-Healing Materials with</p>	M13

Nanocontainers Using Discrete and Continuum Methods”, Chapter 8 in book Commercialization of Nanotechnologies-A Case Study Approach, D. Brabazon et al. (eds.), pp. 177-204, doi: 10.1007/978-3-319-56979-6_8, eISBN 978-3-319-56979-6, hardcover ISBN: 978-3-319-56978-9, Publisher: Springer International Publishing, first online 2017, copyright 2018. <https://www.springerprofessional.de/en/modeling-of-self-healing-materials-with-nanocontainers-using-dis/15032332>

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Papers published in scientific journals of international scientific importance

Sum

5

1. Tijana Šušteršič, Gorkem Muttalip Simsek, Guney Guven Yapici, Milica Nikolić, Radun Vulović, Nenad Filipovic and Nihal Engin Vrana, An In-Silico Corrosion Model for Biomedical Applications for Coupling With In-Vitro Biocompatibility Tests for Estimation of Long-Term Effects, *Front. Bioeng. Biotechnol.*, 07 September 2021, <https://doi.org/10.3389/fbioe.2021.718026>, IF 6.064

M21

2. Vulovic R., Nikolic M., Filipovic N., 2018, (2019), “Smart Platform for the Analysis of Cupula Deformation caused by Otoconia Presence within SCCs”, *Computer Methods in Biomechanics and Biomedical Engineering*, Vol. 22, No. 2, pp. 130-138, DOI 10.1080/10255842.2018.1539166, Published online: 24 Dec 2018, ISSN 1476-8259. <https://www.tandfonline.com/doi/abs/10.1080/10255842.2018.1539166?journalCode=gcmb20>

M22

3. Nikolic M., Sustersic T. and Filipovic N., (2018), “In vitro models and on-chip systems: Biomaterial interaction studies with tissues generated using lung epithelial and liver metabolic cell lines”, *Frontiers in Bioengineering and Biotechnology*, Vol. 6, Article 120, pp. 1-13, doi: 10.3389/fbioe.2018.00120, received: 31 May 2018; accepted: 13 August 2018; published: 3 September 2018, eISSN: 2296-4185, IF 5.122. <https://www.frontiersin.org/articles/10.3389/fbioe.2018.00120/full>

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4. Filipovic N., Zivic M., Obradovic M., Djukic T., Markovic Z., Rosic

M., 2013(2014), "Numerical and Experimental LDL Transport Through Arterial Wall", *Microfluidics and Nanofluidics*, Vol. 16, No. 3, pp. 455-464, Print ISSN 1613-4982, printed on March 2014, online ISSN 1613-4990, available online from 28 July 2013, DOI: <https://doi.org/10.1007/s10404-013-1238-1>.

<https://link.springer.com/article/10.1007/s10404-013-1238-1>

M21

5. Filipovic F., Jovanovic A., Petrovic D., Obradovic M., Jovanovic S., Balos D., Kojic M., 2012, "Modelling of self-healing materials using discrete and continuum methods", *Surface Coatings International*, Vol. 95, No. 2, pp. 74-79, ISSN 1754-0925. https://www.researchgate.net/publication/274389121_Modelling_of_self-healing_materials_using_discrete_and_continuum_methods

M23

Proceedings of international scientific conferences	Sum
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Sum

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1. Milica Nikolic, Dylan Mostert, Carlijn C.V. Bouten, Sandra Loerakker, Interplay between microtissue structure and function in regeneration of cardiac fibrosis – an in silico approach, 9th World Congress on Biomechanics, 10-14th of July 2022, Taipei.

M34

2. Ignasi Jorba, Sil Gussenhoven, Atze van der Pol, Dylan Mostert, Milica Nikolic, Nicholas A. Kurniawan, Carlijn V.C. Bouten, Modulating local mechanics to control cell and ECM organization in a 3D in vitro cardiac model, 9th World Congress on Biomechanics, 10-14th of July 2022, Taipei.

M34

3. Sustersic, T., Nikolic, M., Tanase C. E., Ghaemmaghami, A., Vrana N.E., Filipovic, N., In-silico modelling of hepatocyte cell aggregation as a step towards improved biomaterial risk assessment, TERMIS 2021, TERMIS EU Virtual Conference, 15 - 19 November 2021, Maastricht, Netherlands, <https://insight.klinkhamergroup.com/termis2021/book/abstract/616>

M34

4. Nikolic, M., Sustersic, T., Filipovic, N., Numerical Simulation of Sedimentation Process using Mason-Weaver Equation, 21st IEEE International Conference on BioInformatics and BioEngineering

(BIBE), Kragujevac, Serbia (hybrid event), 25-27 October 2021, <https://www.computer.org/csdl/proceedings-article/bibe/2021/09635216/1zmvvASs1bi>.

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5. Sustersic T., Nikolic M., Barthes J., Vrana N. E. and Filipovic N., In silico modelling of epithelial barrier formation with A549 cancerous cell line, 11th World Biomaterials Congress, 11-15. December 2020., Glasgow, UK, <https://wbc2020.org/>

M34

6. Sustersic T., Nikolic M., Vulovic R., Vrana N. E. and Filipovic N., Use of Lung and Liver Computer Modeling in Preclinical Practice, Virtual Physiological Human (VPH), 26-28. August 2020., Paris, France, <https://vph2020.sciencesconf.org/>

M33

7. Šušteršič T., Nikolić M., Barthes J., Vrana N. E., Filipović N., 2019, "Coupling Experimental Data and Numerical Simulation in Modelling Epithelial Barrier Formation with A549 Cancerous Cell Line", 8th International Conference on Computational Bioengineering, ICCB2019, Belgrade, Serbia, 4-6 September, 2019, ICCB 2019 Proceedings, pp. 47-48, ISBN 978-86-81037-75-1 <http://www.iccb2019.kg.ac.rs/index.php/proceedings>

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8. Nikolic M., Sustersic T., Muller C. B., Zhang Y. S, Vrana N. E., Filipovic N., 2019, Monocyte Behaviour under Perfusion Conditions for Development of Granuloma on-a-chip, Tissue Engineering Therapies: From Concept to Clinical Translation & Commercialisation, TERMIS European Chapter Meeting 2019, Rhodes, Greece, 27-31 May, 2019, Termis EU 2019 Conference Book, pp. 1356. <https://termis.org/eu2019/>

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9. Sustersic T., Nikolic M., Vrana N. E., Filipovic N., 2019 (2020), "Discrete modelling of liver cell aggregation using partial differential equations", International Conference on Medical and Biological Engineering, CMBEBIH 2019, Banja Luka, Bosnia and Herzegovina, 16-18 May, 2019, IFMBE Proceedings, Springer, Cham, Vol. 73, pp. 379-384, https://doi.org/10.1007/978-3-030-17971-7_57, eISBN 978-3-030-17971-7, pISBN 978-3-030-17970-0, https://link.springer.com/chapter/10.1007/978-3-030-17971-7_57

M33

10. Krsmanovich D., Saveljic I., Nikolic D., Isailovic V., Nikolic M., Milosevic Z., Jovicic G., Milovanovic D., Sakellarios A., Exarchos T., Filipovic N., 2018, "Numerical model of stent deployment in the stenosed artery and modeling of atherosclerosis growing", 8th World Congress of Biomechanics, Dublin, Ireland, 8-12 July, 2018. <https://app.oxfordabstracts.com/stages/123/programme-builder/submission/22379?backHref=/events/123/programme-builder/view/sort/topic>

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11. Nikolic M., Sustersic T., Saveljic I., Vrana N. E. and Filipovic N., 2018, "Modelling of Monocytes Behaviour inside the Bioreactor", Belgrade BioInformatics Conference, BelBi 2018, Belgrade, Serbia, 18-22 June, 2018, Book of Abstracts, Biologia Serbica, Vol. 40, No. 1 (Special Edition), pp. 123, ISSN 2334-6590, UDK 57 (051). <http://belbi.bg.ac.rs/wp-content/uploads/2018/07/Book-of-abstracts-Belbi2018.pdf>

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12. Saveljic I., Nikolic D., Milosevic Z., Isailovic V., Nikolic M., Parodi O. and Filipovic N., 2018, "3D Modeling of Plaque Progression in the Human Coronary Artery", The 18th International Conference on Experimental Mechanics, ICEM 2018, Brussels, Belgium, 1-5 July, 2018, Published by MDPI AG, Basel, Switzerland, Vol. 2, No 8, 388, pp.1-6, doi:10.3390/ICEM18-05213, eISSN 2504-3900. <https://www.mdpi.com/2504-3900/2/8/388>

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13. Saveljic I., Isailovic V., Milosevic Z., Nikolic D., Nikolic M., Cirkovic-Andjelkovic B., Exarchos T., Fotiadis D., Pelosi G., Parodi O. and Filipovic N., 2018, "Numerical Simulation of Atherosclerotic Plaque Growth in Right Coronary Arteries", 9th GRACM International Congress on Computational Mechanics, Chania, Greece, 4-6 June, 2018, Proceedings: Book of Full-length Papers, pp. 346-351, ISBN 978-618-81537-5-2 (e-book). <https://dias.library.tuc.gr/view/78634>

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14. Filipovic N., Saveljic I., Nikolic D., Milosevic Z., Nikolic M., Sakellarios A., Exarchos T. and Parodi O., 2018, "Computational Modeling for Plaque Progression in the Coronary Artery", 2018 IEEE International Conference on Biomedical and Health Informatics, BHI

2018, Las Vegas, NV, USA, 4-7 March, 2018, ISBN 978-1-5386-2405-0.
<https://bhi-bsn.embs.org/2018/proceedings/>

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15. Saveljic I., Nikolic D., Milosevic Z., Nikolic M., Sakellarios A, Exarchos T. and Filipovic N., 2018, "Numerical simulation of blood flow and plaque progression in the right coronary artery", 2018 IEEE International Conference on Biomedical and Health Informatics, BHI 2018, Las Vegas, NV, USA, 4-7 March, 2018, ISBN 978-1-5386-2405-0. <https://bhi-bsn.embs.org/2018/proceedings/>

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16. Filipovic N., Isailovic V., Milosevic Z., Nikolic D., Saveljic I., Nikolic M., Gacic M., Cirkovic-Andjelkovic B., Exarchos T., Fotiadis D., Pelosi G., Parodi O., 2017, "Coupled computer modeling of atherosclerosis development in the coronary arteries", 2017 IEEE 17th International Conference on BioInformatics and BioEngineering, BIBE 2017, Washington D.C., USA, 23-25 October, 2017, IEEE Xplore, pp. 1-4, <https://doi.org/10.1109/BIBE.2017.00-19>, available online from 11 January 2018, , eISBN 978-1-5386-1324-5, eISSN: 2471-7819. <http://ieeexplore.ieee.org/document/8251325/>

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17. Filipovic N., Isailovic V., Milosevic Z., Nikolic D., Saveljic I., Nikolic M., Cirkovic-Andjelkovic B., Exarchos T., Fotiadis D., Pelosi G., Parodi O., 2017, "Computer Modeling of Atherosclerosis in the Human Arteries", International Conference on Innovative Technologies, IN-TECH 2017, Ljubljana, Slovenia, 11-13 September, 2017, ISBN 978-953-6326-88-4, Proceedings of International Conference on Innovative Technologies, pp. 229-232, ISSN 0184-9069. <http://www.in-tech.info/2017/committees/index.html>
<https://www.bib.irb.hr/916917>

M33

18. Nikolic M. and Filipovic N., 2017, "Modeling Semicircular Canal Using DPD Method", 4th South-East European Conference on Computational Mechanics - SEECCM 2017, Kragujevac, Serbia, 3-4 July, 2017, Book of Abstract, pp. 18-19, Book of Proceedings, pp. 73-80, ISBN: 978-86-921243-0-3. https://www.researchgate.net/conference-event/SEECCM_South-East-European-Conference-on-Computational-Mechanics_2017/89817

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19. Vulovic R., Nikolic M., Filipovic N., 2017, "Software Solution of Cupula's Membrane Deformation Shew for Use in Clinical Praxis", 4th South-East European Conference on Computational Mechanics – SEECCM 2017, Serbian Society for Computational Mechanics, Kragujevac, Serbia, 3-4 July, 2017, Book of Abstract, pp. 28 - 29, Book of Proceedings pp. 173-180, ISBN: 978-86-921243-0-3. https://www.researchgate.net/conference-event/SEECCM_South-East-European-Conference-on-Computational-Mechanics_2017/89817
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20. Filipovic N., Isailovic V., Milosevic Z., Nikolic D., Saveljic I., Nikolic M., Cirkovic-Andjelkovic B., Radovic M., Exarchos T., Fotiadis D., Pelosi G., Parodi O., 2017, "Modeling of plaque development in the coronary arteries", CARS 2017 - Computer Assisted Radiology and Surgery, Proceedings of the 31st International Congress and Exhibition, Barcelona, Spain, 20-24 June, 2017, International Journal of Computer Assisted Radiology and Surgery, Vol. 12, No. 1, pp. 62-63, DOI 10.1007/s11548-017-1588-3. <https://www.ncbi.nlm.nih.gov/pubmed/28527024>
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21. Filipovic N., Isailovic V., Milosevic Z., Nikolic D., Saveljic I., Nikolic M., Cirkovic-Andjelkovic B., Jagic N, Exarchos T., Fotiadis D., Pelosi G., Parodi O., 2017, "Computational Modeling for Plaque Progression and Fractional Flow Reserve in the Coronary Arteries", 6th International Congress of Serbian Society of Mechanics, Tara, Serbia, 19-21 June, 2017, Proceedings, pp. 164, abstract, USB paper M3g, ISBN 978-86-909973-6-7. http://ssm.org.rs/archive/congress_2017/index.html
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22. Nikolic M. and Filipovic N., 2017, "Application of DPD Method on Modelling Semicircular Canals", 6th International Congress of Serbian Society of Mechanics, Tara, Serbia, 19-21 June, 2017, Proceedings, pp. 163, abstract, USB paper M3e, ISBN 978-86-909973-6-7. http://ssm.org.rs/archive/congress_2017/index.html
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23. Filipovic N., Isailovic V., Milosevic Z., Nikolic D., Saveljic I., Radovic M., Nikolic M., Cirkovic-Andjelkovic B., Exarchos T., Fotiadis D., Pelosi G., Parodi O., 2017, "Computational modeling of plaque development in the coronary arteries", IFMBE Proceedings of the

International Conference on Medical and Biological Engineering, CMBEBIH 2017, Sarajevo, Bosnia and Herzegovina, 16-18 March, 2017, Vol. 62, pp. 269-274, DOI:10.1007/978-981-10-4166-2_40, eISBN 978-981-10-4166-2, pISBN 978-981-10-4165-5. https://link.springer.com/chapter/10.1007/978-981-10-4166-2_40

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24. Isailovic V., Nikolic M., Bibas T., Sakellarios A., Tachos N., Milosevic M., Filipovic N., 2016, (2018), Numerical simulation of human hearing system, 2nd EAI International Conference on Future Access Enablers of Ubiquitous and Intelligent Infrastructures (FABULOUS 2016), Belgrade, Serbia, 24-25 October, 2016, Published in EAI Endorsed Transactions on Pervasive Health and Technology, Vol. 4, No. 13, e3, pp. 1-4, doi: 10.4108/eai.28-2-2018.154144, received on 06 June 2017, accepted on 14 November 2017, published on 28 February 2018, ISSN: 2411-7145. <http://eudl.eu/doi/10.4108/eai.28-2-2018.154144>

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25. Isailovic V., Bibas T., Sakellarios A., Tachos N., Nikolic M., Nikolic D., Saveljic I., Filipovic N., 2016, "The realistic three-dimensional model of the middle and inner ear", European Congress on Computational Methods in Applied Sciences and Engineering, ECCOMAS 2016, Crete, Greece, 5-10 June, 2016, ISBN: 978-618-82844-0-1. <https://www.eccomas2016.org/proceedings/pdf/8959.pdf>

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26. Nikolic M., Isailovic M., Filipovic N., 2016, "Electro-mechanical cochlea model", European Congress on Computational Methods in Applied Sciences and Engineering, ECCOMAS 2016, Crete, Greece, 5-10 June, 2016, ISBN: 978-618-82844-0-1. <https://www.eccomas2016.org/proceedings/pdf/9007.pdf>

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27. Isailovic V., Nikolic M., Nikolic D., Saveljic I., Filipovic N., 2016, "Using of Finite Element Method for Modeling of Mechanical Response of Cochlea and Organ of Corti", ICIST 2016 6th International Conference on Information Society and Technology, Kopaonik, Serbia, from 28 February to 2 March, 2016, Proceedings, Vol. 1, pp. 102-105, ISBN 978-86-85525-18-6. <https://www.eventiotic.com/eventiotic/library/paper/26>

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28. **M33Isailovic V.**, Nikolic M., Filipovic N., 2015, "Tapered Box Model

of the Cochlea: Air and Bone Conduction”, Fifth Serbian (30th YU) Congress on Theoretical and Applied Mechanics, Arandjelovac, Serbia, 15-17 June, 2015, Proceedings, USB paper B2b, pp. 1-6, ISBN 978-86-7892-715-7. <http://ssm.org.rs/kongresi/>

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29. Isailovic V., Nikolic M., Milosevic Z., Saveljic I., Nikolic D., Radovic M., Filipovic N., 2015, “Finite Element Model of Cochlea – Air Conduction and Bone Conduction”, ICIST 2015 5th International Conference on Information Society and Technology, Kopaonik, Serbia, 8-11 March, 2015, Proceedings, Vol. 1, pp. 19-21, ISBN 978-86-85525-16-2. <https://www.eventiotic.com/eventiotic/library/paper/84>

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30. Nikolic M., Isailovic V., Teal P., Radovic M., Filipovic N., 2015, “Electro-mechanical cochlea model”, 2015 IEEE 15th International Conference on Bioinformatics and Bioengineering (BIBE 2015), Belgrade, Serbia, 2-4 November, 2015, IEEE Xplore pp. 293-295 (3 pages), <https://doi.org/10.1109/BIBE.2015.7367684>, available online from 04.01.2016., eISBN 978-1-4673-7983-0. <http://ieeexplore.ieee.org/document/7367684/>

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31. Isailovic V., Nikolic M., Nikolic D., Saveljic I., Filipovic N., 2015, “Using of finite element method for modeling of active cochlea”, 2015 IEEE 15th International Conference on Bioinformatics and Bioengineering (BIBE 2015), Belgrade, Serbia, 2-4 November, 2015, IEEE Xplore, pp. 216-219 (4 pages), <https://doi.org/10.1109/BIBE.2015.7367667>, available online from 04.01.2016., eISBN 978-1-4673-7983-0. <http://ieeexplore.ieee.org/document/7367667/>

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32. Isailovic V., Nikolic M., Milosevic Z., Nikolic D., Saveljic I., Radovic M., Filipovic N., 2015, “Modeling of coiled cochlea and organ of Corti – using for the cochlear implants”, XLII Annual ESAO Congress, ESAO 2015, Leuven, Belgium, 2-5 September, 2015, Published in The International Journal of Artificial Organs, Vol. 38, No. 7, pp. 405, DOI: 10.5301/ijao.5000418, First Published July 31, 2015, eISSN 1724-6040, ISSN 0391-3988. <https://www.ncbi.nlm.nih.gov/pubmed/26246433>

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33. Nikolic M., Teal P., Isailovic V., Filipovic N., “Finite Element Cochlea

Box Model – Mechanical and Electrical Analysis of the Cochlea”, 12th International Workshop on the Mechanics of Hearing, Cape Sounio, Greece, 23-29 June, 2014. AIP Conference Proceedings, Vol. 1703, No. 070012-1 – 070012-5, ISBN 978-0-7354-1350-4, ISSN 0094-243x, <https://doi.org/10.1063/1.4939386>.

<https://aip.scitation.org/doi/pdf/10.1063/1.4939386?class=pdf>

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34. Isailovic V., Nikolic M., Milosevic Z., Saveljic I., Nikolic D., Radovic M., Filipovic N., “Finite Element Coiled Cochlea Model”, 2014, 12th International Workshop on the Mechanics of Hearing, Cape Sounio, Greece, 23-29 June, 2014. AIP Conference Proceedings, Vol. 1703, No. 070015-1 – 070015-4, ISBN 978-0-7354-1350-4, ISSN 0094-243x, <https://doi.org/10.1063/1.4939389>.

<https://aip.scitation.org/doi/pdf/10.1063/1.4939389?class=pdf>

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35. Isailovic V., Nikolic M., Saveljic I., Nikolic D., Filipovic N., “Modeling of the 3D Coiled Cochlea”, IEEE – EMBS International Conferences on Biomedical and Health Informatics, Valencia, Spain, 1-4 June, 2014. Abstract is available online https://embs.papercept.net/conferences/scripts/rtf/BHI14_ContentListWeb_1.html.

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36. Obradovic M. and Filipovic N., 2013, “Modeling of Axonal Elongation by Stem Cells Using Finite Element Method”, 19th Congress of the European Society of Biomechanics, ESB 2013, Patras, Greece, 25-28 August, 2013. http://esbiomech.org/papers/ESB_congress_2013/

http://esbiomech.org/papers/ESB_congress_2013/oral/S22.2-327.pdf

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37. Filipovic N., Obradovic M., Zdravkovic N. and Rosic M., “Experimental and Numerical LDL Transport in the Artery”, 19th Congress of the European Society of Biomechanics, ESB 2013, Patras, Greece, 25-28 August, 2013. http://esbiomech.org/papers/ESB_congress_2013/

http://esbiomech.org/papers/ESB_congress_2013/oral/S18.4-266.pdf

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38. Isailovic V., Obradovic M., Nikolic D., Saveljic I., Filipovic N., 2013 (2014), “SIFEM project: Finite element modelling of the cochlea”, 13th

IEEE International Conference on Bioinformatics and Bioengineering (BIBE), Chania, Greece, 10-13 November, 2013, IEEE Xplore available online since 09.01.2014., pp. 1-4, eISBN 978-1-4799-3163-7, doi: 10.1109/BIBE.2013.6701611.

<http://ieeexplore.ieee.org/abstract/document/6701611/>

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39. Milosevic Z., Radovic M., Nikolic D., Saveljic I., Isailovic V., Obradovic M., Petrovic D., Exarchos T., Fotiadis D., Pelosi G., Parodi O., Kojic M., Filipovic N., 2013, "Plaque Formation Modeling - from Animal to Human Studies", 3rd South-East European Conference on Computational Mechanics – an ECCOMAS and IACM Special Interest Conference, SEECCM III, Kos Island, Greece, 12-14 June, 2013, M. Papadrakakis, M. Kojic, I. Tuncer (eds.), ISBN 978-960-99994-4-1.

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Technical solutions	Sum 0
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CITATION OF SCIENTIFIC PAPERS

11 (Scopus)

BRIEF DESCRIPTION OF RESEARCH IN THE PREVIOUS PERIOD

Computational modelling in the bioengineering area, with focus in the field of regenerative medicine. Development of cardiac fibrosis microtissue model. Simulation of responses under different boundary and loading conditions, including connection to the macro scale model. Development of kidney model and analysis of epithelial renal cell polarisation.

BRIEF DESCRIPTION OF PLANNED RESEARCH IN THE NEXT PERIOD

Continue research in the cardiovascular area by adding more detailed electrical conductivity pathways to the current cardiac microtissue model with the goal to uncover the impact of microtissue structure on functionality. Step towards preclinical and clinical trials of novel regenerative strategies.