

CENTER FOR BIOENGINEERING  
 FACULTY OF ENGINEERING  
[www.fink.rs](http://www.fink.rs)  
 UNIVERSITY OF KRAGUJEVAC  
 BioIRC doo Kragujevac  
[www.bioirc.ac.rs](http://www.bioirc.ac.rs)  
 KRAGUJEVAC, SERBIA



**GENERAL INFORMATION**

First and last name	Nenad Filipovic
Year and place of birth	1970, Kragujevac
Position	Professor
e-mail/web site	fica@kg.ac.rs
Telephone	+381-34-334-379
Education-scientific / education –art field	Technical science
University, faculty, organizational unit	University of Kragujevac/ Faculty of Mechanical Engineering
Field and closer speciality	Biomedical Engineering

**EDUCATION – DIPLOMAS**

**BACHELOR STUDIES**

Year	1994
Place	Kragujevac
Institution	Faculty of Mechanical Engineering
Headline of BSC	Automatically mesh generation for finite element method
Field	Computer calculations

**PHD THESIS**

Year	1999
Place	Kragujevac
Institution	Faculty of Mechanical Engineering
Title of PHD thesis	Numerical solution of coupled problems: deformable solid and fluid flow
Field	Computer calculations

**TECHNICAL BIOGRAPHY – POSITIONS**

Year	Position
Research Assistant	1994
Assistant Professor	2000
Associate Professor	2005
Full Professor	2010

**PROFESSIONAL BIOGRAPHY - IMPROVEMENTS**

(training in the country and abroad, study courses, a visiting professor)

Year and duration	Scholarships - study abroad:
2001, 2 month	University of Vienna, Austria
2003-2010	Harvard University, USA

**AWARDS AND RECOGNITIONS**

Year	Name of award/recognition
2003	Young Scientist Award on the Second MIT Conference on Computational Fluid & Solid Mechanics, (Ed. K.J. Bathe), Boston, USA.

## RESULTS OF SCIENTIFIC AND RESEARCH WORK

### M11

1. Kojic M, Filipovic N, Stojanovic B, Kojic N, Computer Modeling in Bioengineering: Theoretical Background, Examples and Software., John Wiley and Sons, Br. strana: 446, ISBN 978-0-470-75175-6., Chichester, England., 2008;

### M14

2. Filipovic N., Kojic M., Tsuda A., Multiscale Modeling of Thrombosis by Finite Element (FE) and Dissipative Particle Dynamics (DPD) in the Large Arteries, Advanced Topics in Scattering and Biomedical Engineering, Editors: Charalambopoulos A., Fotiadis D. I., Polyzos D., World Scientific, pp 269-281, ISBN -13- 978-981-281-484-5, 2007;
3. Rakocevic G., Djukic T., **Filipovic N.**, Milutinovic V.,(Editors) Computational Medicine in Data Mining and Modeling, Springer, br. Str. 376, ISBN 978-1-4614-8784-5, 2013;
4. **N. Filipovic**, Modeling the behavior of smart composite materials, Smart Composite Coatings and Membranes, Editor Montemor M. F., Transport, Structural, Enviromental and Energy Applications, pp 61-81; ISBN 978-1-78242-283-9, 2016;

### M21

1. Kojic M., **Filipovic N.**, Vulovic S., Mijailovic S., A Finite Element Procedure for Porous Medium with Fluid Flow and Electromechanical coupling, Commun. Numer. Meth. Engng., Vol.14, No.4, pp. 381-392, ISSN 1099-0887, 1998
2. Kojic M., **Filipovic N.**, Mijailovic S., A Large Strain Finite Element Analysis of Cartilage Deformation with Electrokinetic Coupling, Comput. Methods Appl. Mech. Engng., Vol.190, No.18-19, pp. 2447-2464, ISSN 0045-7825, 2001
3. **Filipovic N.**, Mijailovic S., Tsuda A. and Kojic M., An Implicit Algorithm Within The Arbitrary Lagrangian-Eulerian Formulation for Solving Incompressible Fluid Flow With Large Boundary Motions, Comp. Meth. Appl. Mech. Eng., Vol.195, No.44-47, pp. 6347-6361, ISSN 0045-7825, 2006
4. Haber S., **Filipovic N.**, Kojic M. and Tsuda A., Dissipative Particle Dynamics Simulation of flow generated by two rotating concentric cylinders. Part I: Boundary conditions, Phys. Rev. E., Vol.74, No.-, pp. 1-8, ISSN -, 2006
5. **Filipovic, N.**, Haber, S., Kojic, M., Tsuda, A., Dissipative particle dynamics simulation of flow generated by two rotating concentric cylinders: II. Lateral dissipative and random forces, J. Phys. D: Appl. Phys., Vol.41, No.3, pp. 6, ISSN 0022-3727, Doi 10.1088/0022-3727/41/3/035504, 2008
6. **Filipovic, N.**, Kojic, M., Tsuda, A., Modeling thrombosis using dissipative particle dynamics method, Philosophical Transactions of the Royal Society. A, Vol.366, No.1879, pp. 3265-3279, ISSN 1364-503, 2008
7. **Filipovic, N.**, M. Ivanovic, M. Kojic, A comparative numerical study between dissipative particle dynamics (DPD) and smooth particle dynamics (SPH) when applied to simple unsteady flows, Microfluidics and Nanofluidics, Vol.7, No.2, pp. 227-235, ISSN 1613-4982, 2008
8. **Filipovic, N.**, Ravnic, D.J. Kojic, M., Mentzer, S.J., Haber, S. Tsuda, A., Interactions of Blood Cell Constituents: Experimental investigation and Computational Modeling by Discrete Particle Dynamics Algorithm, Microvascular Research, Vol.75, No.2, pp. 279-284, ISSN 0026-2862, 2008
9. **Filipovic, N.**, Ravnic, D.J. Kojic, M., Mentzer, S.J., Haber, S. Tsuda, A., Interactions of Blood Cell Constituents: Experimental investigation and Computational Modeling by Discrete Particle Dynamics Algorithm, Microvascular Research, Vol.75, No.-, pp. 279-284, ISSN -, 2008
10. Kojic, M., **Filipovic, N.**, Tsuda, A., A mesoscopic bridging scale method for fluids and coupling dissipative particle dynamics with continuum finite element method, Computer Methods in Applied

Mechanics and Engineering, Vol.197, No.6-8, pp. 821–833, ISSN 0045-7825, 2008

11. Kojic, M., **Filipovic, N.**, Tsuda, A., A mesoscopic bridging scale method for fluids and coupling dissipative particle dynamics with continuum finite element method, *Comput. Methods Appl. Mech. Engrg.*, Vol.197, No.-, pp. 821–833, ISSN -, 2008
12. Tsuda, A., **Filipovic, N.**, Haberthür, D., Dickie, R., Matsui, Y., Stampanoni, M. and Schittny, J.C., Finite element 3D reconstruction of the pulmonary acinus imaged by synchrotron X-ray tomography, *Journal of Applied Physiology*, Vol.105, No.1, pp. 964-976, ISSN 8750-7587, 2008
13. **Filipovic, N.**, A. Cvetkovic, V. Isailovic, Z. Matovic, M. Rosic and M. Kojic., Computer simulation of flow and mixing at the duodenal stump after gastric resection, *World Journal of Gastroenterology*, Vol.15, No.16, pp. 1990-1998, ISSN 1007-9327, 2009
14. **Filipovic, N.**, AkiraTsuda, Grace S. Lee, Lino F. Miele, Miao Lin, Moritz A., Konerding, and Steven J. Mentzer, *Computational Flow Dynamics in a Geometric Model of Intussusceptive Angiogenesis*, *Microvascular Research*, Vol.78, No.3, pp. 286-293, ISSN 0026-2862, 2009
15. **Filipovic, N.**, Vulovic, R., Peulic, A., Radakovic, R., Kosanic, Dj. and Ristic., B., Noninvasive determination of knee cartilage deformation during jumping, *Journal of Sports Science and Medicine*, Vol.8, No.1, pp. 584-590, ISSN 1303-2968, 2009

#### M24

16. Jovanovic, A. and **Filipovic, N.**, Innovative modelling methods in damage assessment: application of dissipative particle dynamics to simulation of damage and self-healing of polymer coated surfaces, *J. Theoretical and Applied Mechanics*, Vol.44, No.-, pp. 637-648, ISSN -, 2006

#### M21a и M21

1. **Filipovic, N.**, M. Kojic, M. Ferrari, Dissipative Particle Dynamics Simulation of Circular and Elliptical Particles Motion in 2D Laminar Shear Flow, *Microfluidics and Nanofluidics*, Vol.10, No.5, pp. 1127-1134, ISSN 1613-4982, 2010
2. Kojic N., A. Huang, E. Chung, M.Ivanovic, **N.Filipovic**, M. Kojic, and D. Tschumperlin, A 3-D model of ligand transport in a deforming extracellular space, *Biophysical Journal*, Vol.99, No.11, pp. 3517-3525, ISSN 0006-3495, 2010
3. Lee G, **Filipovic, N.**, Blood flow shapes intravascular pillar geometry in the chick chorioallantoic membrane, *Journal of Angiogenesis Research*, Vol.11, No.2, pp. 1-9, ISSN 2040-2384, 2010
4. Dimitric-Markovic M, Markovic Z, Brdaric T, **Filipovic N**, Comparative spectroscopic and mechanistic study of chelation properties of fisetin with iron in aqueous buffered solutions. Implications on in vitro antioxidant activity, *DALTON TRANSACTIONS*, Vol.40, No.17, pp. 4560-4571, ISSN 1477-9226, 2011
5. Dimkic M, Pusic M, Vidovic D, Isailovic V, Majkic B **Filipovic N**, Numerical Model Assessment of Radial-Well Aging, *Journal of Computing in Civil Engineering*, Vol.25, No.1, pp. 43-49, ISSN 0887-3801, 2011
6. **Filipovic N**, Isailovic V, Djukic T, Ferrari M, Kojic M, Multi-scale modeling of circular and elliptical particles in laminar shear flow, *IEEE Trans Biomed Eng.*, Vol.0, No.0, pp. DOI 10.1109/TBME.2011.2166264, PMID: 21878403, ISSN 0018-9294, 2011
7. **Filipovic N**, Rosic M, Tanaskovic I, Milosevic Z, Nikolic D, Zdravkovic N, Peulic A. Fotiadis D, Parodi O, ARTreat project: Three-dimensional Numerical Simulation of Plaque Formation and Development in the Arteries, *IEEE Trans Inf Technol Biomed*, Vol.0, No.0, pp. PMID: 21937352, ISSN 1089-7771, 2011
8. **Filipovic N**. and H. Schima, Numerical simulation of the flow field within the aortic arch during cardiac assist, *Artificial Organs*, Vol.35, No.4, pp. 73-83, ISSN 1525-1594, 2011
9. **Filipovic N.**, M. Ivanovic, D. Krstajic and M.Kojic, Hemodynamic Flow Modeling through an Abdominal Aorta Aneurysm Using Data Mining Tools, *Transactions on Information Technology in Biomedicine*, Vol.15, No.2, pp. 189-194, ISSN 1089-7771, 2011
10. Lee G, **Filipovic N**, Lin M, Gibney B Simpson D, Konerding M, Tsuda A, Mentzer S, Intravascular Pillars and Pruning in the Extraembryonic Vessels of Chick Embryos, *DEVELOPMENTAL*

11. Markovic Zoran S, Dimitric-Markovic Jasmina M, Milenkovic Dejan, **Filipovic N**, Mechanistic study of the structure-activity relationship for the free radical scavenging activity of baicalein, *JOURNAL OF MOLECULAR MODELING*, Vol.17, No.10, pp. 2575-2584, ISSN 0948-5023, 2011
12. **Filipovic N.**, Isailovic V., Djukic T., Ferrari M., Kojic M., Multiscale Modeling of Circular and Elliptical Particles in Laminar Shear Flow, *IEEE transactions on biomedical engineering*, Vol.59, No.1, pp. 50-53, ISSN 0, Doi 10.1109/TBME.2011.2166264, 2012
13. **N. Filipovic**, M. Rosic, I. Tanaskovic, Z. Milosevic, D. Nikolic, N. Zdravkovic, A. Peulic, D. Fotiadis, O. Parodi, Three-dimensional Numerical Simulation of Plaque Formation and Development in the Arteries, *Information Technology in Biomedicine*, Vol.16, No.2, pp. 272-278, ISSN -, 2012
14. O. Parodi, T. Exarchos, P. Marraccini, F. Vozzi, Z. Milosevic, D. Nikolic, A. Sakellarios, P. Siogkas, D.Fotiadis, **N.Filipovic**, Patient-specific prediction of coronary plaque growth from CTA angiography: a multiscale model for plaque formation and progression, *Information Technology in Biomedicine*, Vol.16, No.5, pp. 952-956, ISSN -, 2012
15. Z. Bosnić, P. Vračar, M. Radović, G. Devedžić, **N. Filipović**, and Igor Kononenko, Mining Data from Hemodynamic Simulations for Generating Prediction and Explanation Models, *Transactions on Information Technology in Biomedicine*, Vol.16, No.2, pp. 248-254, ISSN 1089-7771, Doi 10.1109/TITB.2011.2164546, 2012
16. Dimkic M., Rankovic V., **Filipovic N.**, Stojanovic B., Isailovic V., Pusic M., Modeling of radial well lateral screens using 1D finite elements, *Journal of Hydroinformatics*, Vol.15, No.2, pp. 405-415, ISSN 1464-7141, Doi 10.2166/hydro.2012.008, 2013
17. **Filipovic N.**, Teng Z., Radovic M., Saveljic I., Fotiadis D., Parodi O., Computer simulation of three dimensional plaque formation and progression in the carotid artery, *Medical & Biological Engineering & Computing*, Vol.51, No.6, pp. 607-616, ISSN -, Doi 10.1007/s11517-012-1031-4, 2013
18. **Filipovic Nenad D**, Gibney Barry C, Kojic Milos R, Nikolic Dalibor, Isailovic Velibor, Ysasi Alexandra, Konerding Moritz A, Mentzer Steven J, Tsuda Akira, Mapping cyclic stretch in the postpneumectomy murine lung, *Journal of Applied Physiology*, Vol.115, No.9, pp. 1370-1378, ISSN -, Doi 10.1152/japplphysiol.00635.2013, 2013
19. **N Filipović**, M Stevanović, A Radulović, V Pavlović, D Uskoković, Facile synthesis of poly ( $\epsilon$ -caprolactone) micro and nanospheres using different types of polyelectrolytes as stabilizers under ambient and elevated temperature, *Composites Part B: Engineering*, Vol.45, No.1, pp. 1471-1479, ISSN 1359-8368, 2013
20. **Nenad Filipovic**, Dalibor Nikolic, Igor Saveljic, Zarko Milosevic, Themis Exarchos, Gualtiero Pelosi and Oberdan Parodi, Computer simulation of three dimensional plaque formation and progression in the coronary artery, *Computers and Fluids*, Vol.88, No.-, pp. 826-833, ISSN 0045-7930, Doi 10.1016/j.compfluid.2013.07.006, 2013
21. **Nenad Filipović**, Miroslav Živić, Milica Obradović, Tijana Đukić, Zoran Marković, Mirko Rosić, Numerical and experimental LDL transport through arterial wall, *Microfluidics and Nanofluids*, Vol.-, No.-, pp. -, ISSN 1613-4982, Doi 10.1007/s10404-013-1238-1, 2013
22. Sofla Aarash, Cirkovic Bojana, Hsieh Anne, Miklas Jason W, **Filipovic Nenad D**, Radisic Milica, Enrichment of live unlabelled cardiomyocytes from heterogeneous cell populations using manipulation of cell settling velocity by magnetic field, *Biomicrofluidics*, Vol.7, No.1, pp. -, ISSN 1932-1058, Doi 10.1063/1.4791649, 2013
23. AM Cvetkovic, DZ Milasinovic, AS Peulic, NV Mijailovic, **ND Filipovic**, Numerical and experimental analysis of factors leading to suture dehiscence after Billroth II gastric resection, *Computer methods and programs in biomedicine*, Vol.117, No.2, pp. 71-79, ISSN 0169-2607, Doi 10.1016/j.cmpb.2014.08.005, 2014
24. Arso M Vukicevic, Gordana R Jovicic, Miroslav M Stojadinovic, Rade I Prelevic, **Nenad D Filipovic**, Evolutionary assembled neural networks for making medical decisions with minimal regret: Application for predicting advanced bladder cancer outcome, *Expert Systems With Applications*, Vol.41, No.18, pp. 8092-8100, ISSN 0957-4174, Doi 10.1016/j.eswa.2014.07.006, 2014
25. D Nikolić, M Radović, S Aleksandrić, M Tomašević, **N Filipović**, Prediction of coronary plaque

- location on arteries having myocardial bridge, using finite element models, *Computer methods and programs in biomedicine*, Vol.117, No.2, pp. 137-144, ISSN 0169-2607, Doi 10.1016/j.cmpb.2014.07.012, 2014
26. **Filipovic Nenad D**, Zivic Miroslav, Obradovic Milica, Djukic Tijana, Markovic Zoran S, Rosic Marko, Numerical and experimental LDL transport through arterial wall, *Microfluidics and nanofluidics*, Vol.16, No.3, pp. 455-464, ISSN 1613-4982, 2014
  27. G Pelosi, D Panetta, F Voizzi, F Viglione, **N Filipovic**, I Saveljic, T Exharcos, P471Site-specific shear stress-plaque severity relations by high axial resolution coronary profiling in an animal model of atherogenesis, *Cardiovascular research*, Vol.103, No.1, pp. -, ISSN 0008-6363, 2014
  28. Janovic A. , Saveljic I., Vukicevic A., Nikolic D., Rakocevic Z., Jovicic G., **Filipovic N.**, Djuric M., Occlusal load distribution through the cortical and trabecular bone of the human mid-facial skeleton in natural dentition: A three-dimensional finite element study, *Annals of Anatomy*, Vol.-, No.-, pp. -, ISSN 0940-9602, Doi 10.1016/j.aanat.2014.09.002, 2014
  29. Janovic Aleksa, Milovanovic Petar, Saveljic Igor, Nikolic Dalibor, Hahn Michael, Rakocevic Zoran B, **Filipovic Nenad D**, Amling Michael, Busse Bjoern, Djuric Marija P, Microstructural properties of the mid-facial bones in relation to the distribution of occlusal loading, *Bone*, Vol.68, No.1, pp. 108-114, ISSN 8756-3282, Doi 10.1016/j.bone.2014.07.032, 2014
  30. K. Zelic, A. Vukicevic, G. Jovicic, S. Aleksandrovic, **N. Filipovic** , M. Djuric, Mechanical weakening of devitalized teeth: three-dimensional Finite Element Analysis and prediction of tooth fracture, *International Endodontic Journal*, Vol.-, No.-, pp. -, ISSN 0143-2885, Doi 10.1111/iej.12381, 2014
  31. **N. Filipovic**, T. Djukic, I. Saveljic, P. Milenkovic, G. Jovicic, Marija Djuric, Modeling of liver metastatic disease with applied drug therapy, *Computer Methods and Programs in Biomedicine*, Vol.-, No.-, pp. -, ISSN 0169-2607, Doi 10.1016/j.cmpb.2014.04.013, 2014
  32. Vukicevic Arso M, Stepanovic Nemanja M, Jovicic Gordana R, Apostolovic Svetlana R, **Filipovic Nenad D**, Computer methods for follow-up study of hemodynamic and disease progression in the stented coronary artery by fusing IVUS and X-ray angiography, *MEDICAL & BIOLOGICAL ENGINEERING & COMPUTING*, Vol.52, No.6, pp. 539-556, ISSN 0140-0118, Doi 10.1007/s11517-014-1155-9, 2014
  33. Antic Svetlana, Vukicevic Arso M, Milasinovic Marko, Saveljic Igor, Jovicic Gordana R, **Filipovic Nenad D**, Rakocevic Zoran B, Djuric Marija P, Impact of the lower third molar presence and position on the fragility of mandibular angle and condyle: A Three-dimensional finite element study, *Journal of Cranio-Maxillofacial Surgery*, Vol.43, No.6, pp. 870-878, ISSN 1010-5182, Doi 10.1016/j.jcms.2015.03.025, 2015
  34. Cihoric N, **Filipovic N**, Jeremic B, A call for careful interpretation of outcome of nonsurgical approach in clinical stage IIIa non-small cell lung cancer in the National Cancer Database, *The Annals of Thoracic Surgery*, Vol.99, No.3, pp. 1111-1112, ISSN 0003-4975, Doi 10.1016/j.athoracsur.2014.11.026, 2015
  35. Djukic Tijana R, Topalovic Marko D, **Filipovic Nenad D**, Numerical simulation of isolation of cancer cells in a microfluidic chip, *Journal of Micromechanics and Microengineering*, Vol.25, No.8, pp. -, ISSN 0960-1317, Doi 10.1088/0960-1317/25/8/084012, 2015
  36. Hetterich Holger, Jaber Ahmad, Gehring Moritz, Curta Adrian, Bamberg Fabian, **Filipovic Nenad D**, Rieber Johannes, Coronary Computed Tomography Angiography Based Assessment of Endothelial Shear Stress and Its Association with Atherosclerotic Plaque Distribution In-Vivo, *Plos One*, Vol.10, No.1, pp. -, ISSN 1932-6203, Doi 10.1371/journal.pone.0115408, 2015
  37. Jeremic B, **Filipovic N**, Milicic B, Milisavljevic S., Radiation therapy (RT) and chemotherapy (CHT) in stage II non-small cell lung cancer (NSCLC): Clinical entity neglected by radiation oncologists?, *Lung Cancer*, Vol.90, No.3, pp. 622-623, ISSN 0169-5002, Doi 10.1016/j.lungcan.2015.09.015, 2015
  38. Vukicevic Arso M, Velicki Lazar U, Jovicic Gordana R, Jovicic Nebojsa M, Stojadinovic Miroslav M, **Filipovic Nenad D**, Finite element analysis of uncommonly large renal arteriovenous malformation-Adjacent renal cyst complex, *Computers in Biology and Medicine*, Vol.59, No.-, pp. 35-41, ISSN 0010-4825, Doi 10.1016/j.combiomed.2015.01.016, 2015
  39. Vukicevic Arso M, Zelic Ksenija, Jovicic Gordana R, Djuric Marija P, **Filipovic Nenad D**, Influence of dental restorations and mastication loadings on dentine fatigue behaviour: Image-based modelling

approach, Journal of Dentistry, Vol.43, No.5, pp. 556-567, ISSN 0300-5712, Doi 10.1016/j.jdent.2015.02.011, 2015

40. Zelic Ksenija, Vukicevic Arso M, Jovicic Gordana R, Aleksandrovic Srbislav M, **Filipovic Nenad D**, Djuric Marija P, Mechanical weakening of devitalized teeth: three-dimensional Finite Element Analysis and prediction of tooth fracture, International Endodontic Journal, Vol.48, No.9, pp. 850-863, ISSN 1365-2591, Doi 10.1111/iej.12381, 2015
41. Brönnimann D, Djukic T, Triet R, Dellenbach C, Saveljic I, Rieger M, Rohr S, **Filipovic N**, Djonov V, Pharmacological Modulation of Hemodynamics in Adult Zebrafish In Vivo, PLoS ONE, Vol.11, No.3, pp. -, ISSN 1932-6203, Doi 10.1371/journal.pone.0150948, 2016
42. Cihoric Nikola Tsikkinis Alexandros **Filipovic Nenad** Jeremic Branislav, Treatment options for isolated locoregional recurrences of nonsmall cell lung cancer after surgery: yes, radiation therapy too!, European Respiratory Journal, Vol.48, No.1, pp. 276-278, ISSN 0903-1936, Doi 10.1183/13993003.00388-2016, 2016
43. Djukic TR, Karthik S, Saveljic I, Djonov V and **Filipovic N**, Modeling the Behavior of Red Blood Cells within the Caudal Vein Plexus of Zebrafish, Frontiers in Physiology, Vol.7, No.455, pp. -, ISSN 1664-042, Doi 10.3389/fphys.2016.00455, 2016
44. **Nenad Filipovic**, Kedar Ghimire, Igor Saveljic, Zarko Milosevic, Curzio Ruegg, Computational modeling of shear forces and experimental validation of endothelial cell responses in an orbital well shaker system, Computer Methods in Biomechanics and Biomedical Engineering, Vol.19, No.6, pp. 581-590, ISSN 1025-5842, Doi 10.1080/10255842.2015.1051973, 2016
45. Danijela M Cvetković, Marko N Živanović, Milena G Milutinović, Tijana R Djukić, Miloš D Radović, Aleksandar M Cvetković, **Nenad D Filipović**, Nebojša D Zdravković, Real-time monitoring of cytotoxic effects of electroporation on breast and colon cancer cell lines, Bioelectrochemistry, Vol.113, No.-, pp. 85-94, ISSN 1567-5394, Doi 10.1016/j.bioelechem.2016.10.005, 2017

## M22

46. Rosic, M., Pantovic, S. Rankovic, V. Obradovic, Z. **Filipovic, N.** Kojic, M., Evaluatiopn of dynamic response and biomechanical properties of isolated blood vessels, J. Biochem. Biophys. Methods, Vol.-, No.-, pp. -, ISSN -, 2008
47. **Filipovic N**, Milasinovic D, Zdravkovic N, Böckler D, von Tengg-Kobligh H, Impact of aortic repair based on flow field computer simulation within the thoracic aorta, Computer Methods and Programs in Biomedicine, Vol.101, No.3, pp. 243-252, ISSN 0169-2607, 2011
48. **Filipovic N.**, D. Milasinovic, N. Jagic, V. Miloradovic H. Hetterich, J.Rieber, Numerical simulation of the flow field and mass transport pattern within the coronary artery, Computer Methods in Biomechanics and Biomedical Engineering, Vol.14, No.4, pp. 379-388, ISSN 1025-5842, 2011
49. Markovic Z, Dimitric-Markovic J, Milenkovic D, **Filipovic N**, Structural and electronic features of baicalein and its radicals, MONATSHEFTE FUR CHEMIE, Vol.142, No.2, pp. 145-152, ISSN 0026-9247, 2011
50. A.Tsuda, F.S.Henry, S.Haber, D.Haberthür, **N.Filipovic**, D.Milasinovic, J.Schittny, The simultaneous role of an alveolus as flow mixer and flow feeder for the deposition of inhaled submicron particles, -, Vol.-, No.-, pp. -, ISSN -, Doi 10.1115/1.4007949, 2012
51. D. Krsmanovic, **N. Filipovic**, I.Koncar, L. Davidovic, D. Petrovic, D. Milasinovic, Computer Modeling of Maximal Displacement Forces in Endoluminal Thoracic Aortic Stent-Graft, Computer Methods in Biomechanics and Biomedical Engineering, Vol.-, No.-, pp. -, ISSN -, Doi 10.1080/10255842.2012.735661, 2012
52. **N. Filipovic**, B. Gibney, D. Nikolic, M. Konerding, S. Mentzer, A. Tsuda, Computational analysis of lung deformation after murine pneumectomy, Computer Methods in Biomechanics and Biomedical Engineering, Vol.-, No.-, pp. 1-7, ISSN -, Doi 10.1080/10255842.2012.719606, 2012
53. **Filipovic N**, Nikolic D, Saveljic I, Tanaskovic I, Zdravkovic N, Zivanovic A, Arsenijevec P, Jeremic B and Arsenijevec S, Computer simulation of cervix tissue response to a hydraulic dilator device, Theoretical Biology and Medical Modelling, Vol.10, No.64, pp. -, ISSN -, Doi 10.1186/1742-4682-10-64, 2013

54. **N. Filipovic**, D. Nikolic, I.Saveljic, T. Djukic, O. Adjic, P.Kovacevic, N. Cemerlic-Adjic, L. Velicki, Computer simulation of thromboexclusion of the complete aorta in the treatment of chronic type B aneurysm, *Computer Aided Surgery*, Vol.18, No.1-2, pp. 1-9, ISSN 1092-9088, Doi 10.3109/10929088.2012.741145, 2013
55. D Krsmanovic, **N Filipovic**, I Koncar, D Petrovic, D Milasinovic, L Davidovic, Computer modelling of maximal displacement forces in endoluminal thoracic aortic stent graft, *Computer methods in biomechanics and biomedical engineering*, Vol.17, No.9, pp. 1012-1020, ISSN 1025-5842, 2014
56. **N Filipovic**, BC Gibney, D Nikolic, MA Konerding, SJ Mentzer, A Tsuda, Computational analysis of lung deformation after murine pneumonectomy, *Computer methods in biomechanics and biomedical engineering*, Vol.17, No.8, pp. 838-844, ISSN 1025-5842, 2014
57. S. Antic, I. Saveljic, D. Nikolic, G. Jovicic, Z. Radakovic, **N. Filipovic**, M. Djuric, Does the presence of an unerupted lower third molar influence the risk of mandibular angle and condylar fractures?, *International Journal of Oral and Maxillofacial Surgery*, Vol.-, No.-, pp. -, ISSN 0901-5027, Doi 10.1016/j.ijom.2014.09.018, 2014
58. Janovic Aleksa, Saveljic Igor, Vukicevic Arso M, Nikolic Dalibor, Rakocevic Zoran B, Jovicic Gordana R, **Filipovic Nenad D**, Djuric Marija P, Occlusal load distribution through the cortical and trabecular bone of the human mid-facial skeleton in natural dentition: A three-dimensional finite element study, *Annals of Anatomy-Anatomischer Anzeiger*, Vol.197, pp. 16-23, ISSN 0940-9602, Doi 10.1016/j.aanat.2014.09.002, 2015
59. **Filipovic Nenad D** Zivanovic Marko N Savic Andrej M Bijelic Goran, Numerical simulation of iontophoresis in the drug delivery system, *Computer Methods in Biomechanics and Biomedical Engineering*, Vol.19, No.11, pp. 1154-1159, ISSN 1025-5842, Doi 10.1080/10255842.2015.1115021, 2016
60. Vukicevic Arso M Stojadinovic Miroslav M Radovic Milos D Djordjevic Milena Andjelkovic-Cirkovic Bojana Pejovic Tomislav Jovicic Gordana R, **Filipovic Nenad D**, Automated development of artificial neural networks for clinical purposes: Application for predicting the outcome of choledocholithiasis surgery, *Computers in Biology and Medicine*, Vol.75, No.-, pp. 80-89, ISSN 0010-4825, Doi 10.1016/j.combiomed.2016.05.016, 2016

## M23

61. **Filipovic N.**, Kojic M. and Dimitrijevic V., Three-Dimensional Numerical Analysis of the Lumbar Motion Segments, *Acta of Bioengineering and Biomechanics*, Vol.4, No.1, pp. 76, ISSN 1509409, 2002
62. D. Milašinović, M. Ivanovic, H. Tengg-Kobligk, D. Böckler, **N. Filipović**, Software Tools for Generating CFD Simulation Models of Blood Flow from CT Images, and for Postprocessing, *Journal of the Serbian Society for Computational Mechanics*, Vol.2, No.2, pp. 51-58, ISSN 1820-6530, 2008
63. Rosic, M., Pantovic, S. Rankovic, V. Obradovic, Z. **Filipovic**, N. Kojic, M., Evaluation of dynamic response and biomechanical properties of isolated blood vessels, *Journal of Biochemical and Biophysical Methods*, Vol.70, No.6, pp. 966-972, ISSN 0165-022, 2008
64. **Filipovic, N.**, Vulovic, R., Peulic, A., Radakovic, R., Kosanic, Dj. and Ristic., B., Noninvasive determination of knee cartilage deformation during jumping, *Journal of Sports Science and Medicine*, Vol.8, No.1, pp. 584-590, ISSN 1303-2968, 2009
65. **Filipovic N**, Peulic A, Zdrakovic N, Grbovic-Markovic V and Jurisic-Skevin A, Transient Finite Element Modeling of Functional Electrical Stimulation, *General Physiology and Biophysics*, Vol.30, No.1, pp. 59-65, ISSN 0231-5882, 2011
66. D. Veljkovic, **N. Filipovic**, M. Kojic, The effect of asymmetry and axial prestraining on the amplitude of mechanical stresses in abdominal aortic aneurism, *Journal of Mechanics in Medicine and Biology*, Vol.12, No.5, pp. -, ISSN -, Doi 10.1142/S0219519412500893, 2012
67. **N. Filipovic**, A. Jovanovic, D. Petrovic, M. Obradovic, S. Jovanovic, D. Balos, M. Kojic, Modelling of self-healing materials using discrete and continuum methods, *Surface Coatings International*, Vol.95, No.2, pp. 74-79, ISSN -, 2012
68. Djukic Tijana R, Mandic Vesna M, **Filipovic Nenad D**, Virtual reality aided visualization of fluid flow simulations with application in medical education and diagnostics, *Computers in Biology and Medicine*,

69. **Filipovic Nenad D**, Isailovic Velibor M, Nikolic Dalibor, Peulic Aleksandar S, Mijailovic Nikola V, Petrovic Suzana, Cukovic Sasa, Vulovic Radun, Matic Aleksandar, Zdravkovic Nebojsa D, Devedzic Goran B, Ristic Branko M, Biomechanical Modeling of Knee for Specific Patients with Chronic Anterior Cruciate Ligament Injury, *Computer Science and Information Systems*, Vol.10, No.1, pp. 525-545, ISSN 1820-0214, Doi 10.2298/CSIS120531014F, 2013
70. Peulic Aleksandar S, Milojevic Natasa, Jovanov Emil S, Radovic Milos D, Saveljic Igor, Zdravkovic Nebojsa D, **Filipovic Nenad D**, Modeling of Arterial Stiffness using Variations of Pulse Transit Time, *Computer Science and Information Systems*, Vol.10, No.1, pp. 547-565, ISSN 1820-0214, Doi 10.2298/CSIS120531015P, 2013
71. Belle Janeil, Ysasi Alexandra, Bennett Robert D, **Filipovic Nenad D**, Nejad Mohammad Imani, Trumper David L, Ackermann Maximilian, Wagner Willi, Tsuda Akira, Konerding Moritz A, Mentzer Steven J, Stretch-induced intussusceptive and sprouting angiogenesis in the chick chorioallantoic membrane, *Microvascular Research*, Vol.95, No.1, pp. 60-67, ISSN 0026-2862, Doi 10.1016/j.mvr.2014.06.009, 2014
72. **Filipovic Nenad D**, Djukic Tijana R, Radovic Milos D, Cvetkovic Danijela M, Curcic Milena G, Markovic Snezana D, Peulic Aleksandar S, Jeremic Branislav, Electromagnetic field investigation on different cancer cell lines, *Cancer Cell International*, Vol.14, No.-, pp. 1-4, ISSN 1475-2867, Doi 10.1109/BIBE.2013.6701574, 2014
73. G Jovicic, A Vukicevic, **N Filipovic**, Computational Assessment of Stent Durability Using Fatigue to Fracture Approach, *Journal of Medical Devices*, Vol.-, No.-, pp. -, ISSN 1932-6181, Doi 10.1115/1.4027687, 2014
74. Jeremic Svetlana R, **Filipovic Nenad D**, Peulic Aleksandar S, Markovic Zoran S, Thermodynamical aspect of radical scavenging activity of alizarin and alizarin red S. Theoretical comparative study, *Computational and Theoretical Chemistry*, Vol.1047, No.-, pp. 15-21, ISSN -, Doi 10.1016/j.comptc.2014.08.007, 2014
75. Mrdaković, V., Ilić, D., Vulović, R., Matić, M., Janković, N., **Filipović, N**, Leg stiffness adjustment during hopping at different intensities and frequencies, *Acta of bioengineering and biomechanics*, Vol.16, No.3, pp. -, ISSN 1509-409, Doi 10.5277/abb140308, 2014
76. Arsenijevic Petar S, Milosevic Marko D, Zivanovic Aleksandar S, Milicic Biljana R, Jeremic Branislav M, **Filipovic Nenad D**, Protrka Zoran M, Todorovic Petar M, Arsenijevic Slobodan N, Analysis of cervical resistance during continuous controllable balloon dilatation: controlled clinical and experimental study, *Trials*, Vol.16, No.1, pp. -, ISSN 1745-6215, Doi 10.1186/s13063-015-1003-8, 2015
77. Mijailovic Nikola V, Vulovic Radun, Milankovic Ivan L, Radakovic Radivoje, **Filipovic Nenad D**, Peulic Aleksandar S, Assessment of Knee Cartilage Stress Distribution and Deformation Using Motion Capture System and Wearable Sensors for Force Ratio Detection, *Computational and Mathematical Methods in Medicine*, Vol.-, No.-, pp. -, ISSN -, Doi 10.1155/2015/963746, 2015
78. Panetta Daniele, Pelosi Gualtiero, Viglione Federica, Kusmic Claudia, Terreni Marianna, Belcari Nicola, Del Guerra Alberto, Athanasiou Lambros, Exarchos Themistoklis, Fotiadis Dimitrios I, **Filipovic Nenad D**, Trivella Maria Giovanna, Salvadori Piero A, Parodi Oberdan, Quantitative micro-CT based coronary artery profiling using interactive local thresholding and cylindrical coordinates, *Technology and Health Care*, Vol.23, No.5, pp. 557-570, ISSN 0928-7329, Doi 10.3233/THC-151010, 2015
79. Radovic Milos D, Milosevic Marina, Ninkovic Srdjan M, **Filipovic Nenad D**, Peulic Aleksandar S, Parameter optimization of a computer-aided diagnosis system for detection of masses on digitized mammograms, *Technology and Health Care*, Vol.23, No.6, pp. 757-774, ISSN 0928-7329, Doi 10.3233/THC-151034, 2015
80. Jeremic Branislav, Cihoric Nikola, Dubinsky Pavol, **Filipovic Nenad D**, Adjuvant immunotherapy in resected early non-small cell lung cancer-battle lost, hopefully not the war!, *Journal of Thoracic Disease*, Vol.8, No.8, pp. 1886-1890, ISSN 2072-1439, Doi 10.21037/jtd.2016.07.11, 2016

**M24**

81. Nikola Mijailović, Aleksandar Peulić, **Nenad Filipović**, Emil Jovanov, Implementation of Wireless



Sensor System in Rehabilitation After Back Spine Surgery, SERBIAN JOURNAL OF ELECTRICAL ENGINEERING, Vol.9, No.1, pp. 63-70, ISSN 1451-4869, Doi 10.2298/SJEE1201063M, 2012;

82. Milanković Ivan, Mijailović Nikola, Končar Igor, Nikolić Dalibor, **Filipović Nenad**, Peulić Aleksandar, Development of the system for abdominal aortic aneurysm mechanical properties research using “Bubble Inflated” method, Serbian Journal of Electrical Engineering, Vol.10, No.3, pp. 415-423, ISSN 2217-7183, Doi 10.2298/SJEE131007013M, 2013;
83. Ivan L. Milanković Nikola V. Mijailović Aleksandar S. Peulić Dalibor Nikolić Igor Končar Themis Exarchos Oberdan Parodi, **Nenad D. Filipović**, Software and Hardware Systems for Abdominal Aortic Aneurysm Mechanical Properties Investigation, FME Transactions, Vol.43, No.2, pp. 161-167, ISSN 1451-2092, Doi 10.5937/fmet1502161M, 2015;

### M31

1. S. Jovanovic, **N. Filipovic**, The Roadmapping of the EU Materials Research (EuMaT) and an Alternative Modeling Concepts and Dissipative Particle Dynamics Method for Simulation of Particle Adsorption onto a Polymer-coated Surface, SEECCM06, Kragujevac, 2006, pp. 57-63

### M32

2. **Filipovic N.** and Schima H., Numerical Simulation of Effects in the Aorta with Pulsatile Flow of the Artificial Heart Device, ACTA of BIOENGINEERING and BIOMECHANICS, Wroclaw, Poland, 2002, pp. 645 – 646
3. **Filipovic N.**, Kojic M. and Dimitrijevic V., A Three-Dimensional Parameterized Finite Element Model of the Lumbar Spine Included Electrokinetic Coupling, ACTA of BIOENGINEERING and BIOMECHANICS, Wroclaw, Poland, 2002, pp. 141 – 142
4. **Filipovic N.** and Schima H., Numerical simulation of the residence times within the aortic arch during cardiac assist, The International Journal of Artificial Organs, -, 2003, pp. 603
5. Kojic M., **Filipovic N.**, Vlastelica I. and Zivkovic M., Modeling of blood flow in the human aorta with use of an orthotropic nonlinear material model for the walls, Second MIT Conference on Computational Fluid & Solid Mechanics, Boston, USA, 2003, 17-20 June, pp. 1751 – 1754
6. L. Otasevic, **N. Filipovic**, M. Ivanovic, Sparse Matrices Using Balanced Binary Trees and Parallel Computing, SEECCM06, Kragujevac, 2006, pp. 120-125
7. M. Kojic, **N. Filipovic**, A. Tsuda, A Multiscale Method for Bridging Dissipative Particle Dynamics and Navier-Stokes Finite Element Equations for Incompressible Fluid, SEECCM06, Kragujevac, 2006, pp. 345-350
8. M. Krstić, M. Kojić, **N. Filipović**, B. Stojanović, V. Ranković, L. Otašević, M. Ivanović, M. Nedeljković, M. Dimkić, M. Tričković, M. Pušić, Đ. Boreli-Zdravković, D. Đurić, Finite Element Modeling of Underground Water Flow With Ranney Wells, SEECCM06, Kragujevac, 2006, pp. 510-516
9. M. Nedeljkovic, **N. Filipovic**, Biomagnetic Flow in a Straight Tube Under the Influence of an Applied Magnetic Field, SEECCM06, Kragujevac, 2006, pp. 365-369
10. M. Rosic, S. Pantovic, Z. Obradovic, **N. Filipovic**, M. Kojic, Experimental and Computational Methods in Cardiovascular Fluid Mechanics, SEECCM06, Kragujevac, 2006, pp. 429-435
11. Peulić, A. Dostanić, **N. Filipović**, Experimental IEEE 802. 15. 4 Wireless Patient Parameters Monitoring System Coupled With a Simple Muscle Modeling, SEECCM06, Kragujevac, 2006, pp. 529-536
12. S. M. Mijailovich, **N. Filipovic**, O. Kayser-Herold, and J. C. del Álamo, Molecular Origins of Airway Narrowing: Model Predictions of Hyperresponsiveness in Asthmatics, SEECCM06, Kragujevac, 2006, pp. 45-52
13. V. Rankovic, N. Jagic , B. Stojanovic, P. Uskokovic, **N. Filipovic**, M. Kojic, Shape Memory Alloys in Medical Devices. Nitinol Stent Design and Blood Vessel Stresses, SEECCM06, Kragujevac, 2006, pp.

14. **Filipović Nenad**, Miloš Kojić, Akira Tsuda, MODELING OF THROMBOSIS BY DISSIPATIVE PARTICLE DYNAMICS, First Serbian (26th YU) Congress on Theoretical and Applied Mechanics, Kopaonik, Serbia, 2007, April 10-13
15. **Filipović Nenad**, Radivoje Radaković, Đorđe Kosanić, MODELING OF CARTILAGE DEFORMATION DURING A SPORTSMAN TRAINING, First Serbian (26th YU) Congress on Theoretical and Applied Mechanics, Kopaonik, Serbia, 2007, April 10-13
16. Isailović Velibor, **Nenad Filipović**, Miloš Kojić, FINITE ELEMENT ANALYSIS OF THE LUMBAR INTERVERTEBRAL DISC: PATIENT-SPECIFIC SPINE MODEL, First Serbian (26th YU) Congress on Theoretical and Applied Mechanics, Kopaonik, Serbia, 2007, April 10-13
17. Ivanović Miloš, **Nenad Filipović**, Miloš Kojić, Akira Tsuda, NUMERICAL MODELING OF PARTICLE DEPOSITION IN HUMAN LUNG, First Serbian (26th YU) Congress on Theoretical and Applied Mechanics, Kopaonik, Serbia, 2007, April 10-13
18. Krstić Mirosljub, Miloš Ivanović, Lazar Otašević, **Nenad Filipović**, APPLICATION OF GRID INFRASTRUCTURE IN BIOMEDICINE SIMULATIONS, First Serbian (26th YU) Congress on Theoretical and Applied Mechanics, Kopaonik, Serbia, 2007, April 10-13
19. Miljković Olga, Mileta Nedeljković, **Nenad Filipović**, APPLICATION OF NEURAL NETWORK FOR DETERMINATION OF HEMODYNAMICS FACTORS IN THE ARTERIAL BLOOD FLOW, First Serbian (26th YU) Congress on Theoretical and Applied Mechanics, Kopaonik, Serbia, 2007, April 10-13
20. Nedeljković Mileta, **Nenad Filipović**, Juergen Koelndorfer, Martin Steiner, Aleksandar Vujanić, ELECTRICAL STIMULATION ON LOWER ARM FEM MODELING, First Serbian (26th YU) Congress on Theoretical and Applied Mechanics, Kopaonik, Serbia, 2007, April 10-13
21. Peulić Aleksandar, Mileta Nedeljković, **Nenad Filipović**, MODELING OF ELECTROMAGNETIC FIELDS (EMF) IN WIRELESS SENSOR NETWORKS AND EFFECTS ON HUMAN HEALTH, First Serbian (26th YU) Congress on Theoretical and Applied Mechanics, Kopaonik, Serbia, 2007, April 10-13
22. Rosić Mirko, Suzana Pantović, Zdravko Obradović, Vladimir Ranković, **Nenad Filipović**, Miloš Kojić, TRANSPORT OF L-ARGININE AND ITS EFFECTS ON DYNAMIC RESPONSE AND BIOMECHANICAL PROPERTIES OF ISOLATED BLOOD VESSELS, First Serbian (26th YU) Congress on Theoretical and Applied Mechanics, Kopaonik, Serbia, 2007, April 10-13

### M33

23. **Filipovic N.** and Schima H., Numerical Simulation of the Flow Field within the Aortic Arch During Cardiac Assist, The International Journal of Artificial Organs, -, 2002, pp. 75
24. **Filipovic N.**, Kojic M. and Rankovic V., Computer simulation of flow pattern in stented arteries, The International Journal of Artificial Organs, -, 2003, pp. 602
25. Miloradovic, VM Kojic, MK **Filipovic**, NF Jovic, MJ Iric-Cupic, VIC Detection of coronary artery disease in essential hypertensive patients by dobutamine - atropine stress echocardiography, HYPERTENSION, -, 2003, pp. 640-640
26. **Filipovic N.**, Kojic M. and Krstic M., Fluid structure interaction of blood flow through stented arteries, The International Journal of Artificial Organs, -, 2004, pp. 539
27. **Filipovic, N** Kojic, M Miloradovic, M Rankovic, V Miloradovic V, Computer simulation of flow pattern in stented arteries, EUROPEAN HEART JOURNAL, -, 2004, pp. 543-543
28. Mijailovich S. M., **Filipovic N.** and Kojic M., Molecular Origins of Abrupt Airway Closure: Model Predictions of Hyperresponsiveness in Asthmatics, ESB, Philadelphia, USA, 2004
29. **Filipovic N.**, Kojic M., and Tsuda A., Computer simulation of platelet deposition in experimental blood flow between parallel plates, Intl. J. Artif. Organs, -, 2005, pp. 897
30. **Filipovic N.**, Kojic M. and Tsuda A., Modeling of thrombosis by dissipative particle dynamics (DPD), Intl. J. Artif. Organs, -, 2006, pp. 514

31. **Filipovic N.**, Kojic M., and Tsuda A., A Dissipative Particle Dynamics Analysis to Study the Kinetics of Platelets in Microscale, FASEB J., -, 2006, pp. 701
32. **Filipovic N.**, Kojic M., Tsuda A., Modeling of Microcirculation and Thrombosis by Dissipative Particle Dynamics (DPD), Journal of Biomechanics, -, 2006, pp. 624
33. Kojic M., **Filipovic N.**, Tsuda A., Multiscale modeling of blood flow: Coupling of Dissipative Particle Dynamics (DPD) method and Finite Element (FE) method, Journal of Biomechanics, -, 2006, pp. 296

### M31

1. **Nenad Filipovic**, Exarchos Themis, Nicolas Meunier, Dimitris Fotiadis and Oberdan Parodi, Computer simulation of three-dimensional plaque formation and progression in arteries, MICCAI Workshop on Computing and Visualization for Intravascular Imaging (CVII), Toronto, 2011, Sept 18-22
2. **Nenad Filipovic**, Mirko Rosic, Irena Tanaskovic, Nicolas Meunier, Oberdan Parodi and Dimitris Fotiadis, Computer Simulation and Experimental Analysis of LDL in the Arteries, EMBC11, Boston, 2011, 30 aug - 3 sept
3. **Nenad Filipovic**, Nicolas Meunier, Dimitris Fotiadis, Oberdan Parodi, Computer modeling of plaque formation and development in the arteries, ISABEL2011, Barcelona, 2011, Oct 26-29

### M32

4. A. Peulic, E. Jovanov, M. Radovic, I. Saveljic, N. Zdravkovic, **N.Filipovic**, Stiffness modeling using variations of Pulse Transit Time, 10th IEEE International Workshop on Biomedical Engineering, Kos-Greece, 2011, Oct 05-07
5. D. Milasinovic, A. Cvetkovic, **N. Filipovic** and M. Kojic, Simulation of the conditions leading to duodenal stump disruption after billroth ii gastric resection, Congress on Theoretical and Applied Mechanics, Vlasina Lake, 2011, 5-8 July
6. Danko Z. Milasinovic, Aleksandar M. Cvetkovic, Srđan M. Ninković, **Nenad D. Filipovic**, Milos R. Kojic, Afferent loop syndrome CFD simulation after Billroth II gastric resection, 10th IEEE International Workshop on Biomedical Engineering, Kos-Greece, 2011, Oct 05-07
7. Dejan Krsmanovic, Igor Koncar, Dejan Petrovic, Danko Milasinovic, Lazar Davidovic, **Nenad Filipovic**, Computer Modeling of Drag Forces in Endoluminal Stent-Graft, 10th IEEE International Workshop on Biomedical Engineering, Kos-Greece, 2011, Oct 05-07
8. M. Radovic, D. Petrovic, and **N. Filipovic**, Data mininig application in the wall shear stress distribution prediction for aneurysm and carotid bifurcation models, Congress on Theoretical and Applied Mechanics, Vlasina Lake, 2011, 5-8 July
9. Milica Obradovic, **Nenad Filipovic**, Modeling Ablation on the Endocardium and Temperature Distribution during RF Ablation, 10th IEEE International Workshop on Biomedical Engineering, Kos-Greece, 2011, Oct 05-07
10. V. Isailovic, T. Djukic, M. Ferrari, **N. Filipovic** and M. Kojic, Motion of circular and elliptical particles in laminar flows, Congress on Theoretical and Applied Mechanics, Vlasina Lake, 2011, 5-8 July
11. Z. Milosevic, B. Stojanovic, V. Isailovic, D. Nikolic, D. Milasinovic, M. Radovic, T. Exarchos, K. Stefanou, P. Siogkas, A. Sakelarios, D. Fotiadis, O. Parodi, N. Zdravkovic, M. Kojic and **N. Filipovic**, Artool: a platform for the development of multi-level patient-specific artery and atherogenesis models, Congress on Theoretical and Applied Mechanics, Vlasina Lake, 2011, 5-8 July
12. **Filipovic N**, Teng Z, Milosevic Z, Nikolic D, Radovic M, Saveljic I, Exarchos T, Fotiadis DI, Gillard J, Parodi O, Computer simulation of three-dimensional plaque formation and progression in the carotid artery, The 80th European Atherosclerosis Society Congress, Milan, Italy, 2012
13. Bojana Cirkovic, Velibor Isailovic, Zarko Milosevic, Aarash Sofla, Milica Radisic, **Nenad Filipovic**, Computer Simulation of Motion of Magnetic Particles in External Magnetic Field, 4th International Congress of Serbian Society of Mechanics, Vrnjacka Banja, Serbia, 2013, 4-7th June
14. D. Nikolic, S. Aleksandric, M. Tomasevic, M. Radovic, V. Rankovic, **N. Filipovic**, Prediction of coronary plaque position on arteries with myocardial bridge, 4th International Congress of Serbian

Society of Mechanics, Vrnjacka Banja, Serbia, 2013, 4-7th June

15. I. Saveljic, A. Janovic, D. Nikolic, Z. Rakocevic, M. Đuric, **N. Filipovic**, Finite element analysis of the facial skeleton on simulated occlusal loading, 4th International Congress of Serbian Society of Mechanics, Vrnjacka Banja, Serbia, 2013, 4-7th June
16. L. Velicki, N. Cemerlic-Adic, R. Jung, N. Tomic, O. Adic, D. Nikolic, I. Saveljic, D. Milašinovic, **N. Filipovic**, Evaluation of borderline coronary lesions using noninvasive computed fractional flow reserve, 4th International Congress of Serbian Society of Mechanics, Vrnjacka Banja, Serbia, 2013, 4-7th June
17. M. Radovic, M. Djokovic, A. Peulic, **N. Filipovic**, Application of Data Mining Techniques for Mammogram Classification, 4th International Congress of Serbian Society of Mechanics, Vrnjacka Banja, Serbia, 2013, 4-7th June
18. M. Radovic, Z. Milosevic, D. Nikolic, I. Saveljic, M. Obradovic, D. Petrovic, N. Zdravkovic, Z. Teng, J. Bird, **N. Filipovic**, Modeling and Correlation of Plaque Size with Histological and Blood Analysis Data for Animal Rabbit Experiments, The 3rd South-East European Conference on Computational Mechanics, Kos Island, Greece, 2013, 12–14 June
19. Milica Obradovic, **Nenad Filipovic**, Modeling of axonal elongation by stem cells using finite element method, 4th International Congress of Serbian Society of Mechanics, Vrnjacka Banja, Serbia, 2013, 4-7th June
20. N. Mijailovic, S. Petrovic, D. Nikolic, A. Peulic, N. Zdrakovic, B. Ristic, **N. Filipovic**, Non-invasively assessment of knee cartilage stress distribution using motion capture system and finite element method, 4th International Congress of Serbian Society of Mechanics, Vrnjacka Banja, Serbia, 2013, 4-7th June
21. Tijana Djukic, Slobodan Savic, **Nenad Filipovic**, Computer imulation of otion of solid particles in laminar flow using strong solid-fluid coupling computational scheme, 4th International Congress of Serbian Society of Mechanics, Vrnjacka Banja, Serbia, 2013, 4-7th June
22. V. Isailovic, M. Milosevic , I. Vlastelica, N. Kojic, **N. Filipovic**, M. Kojic , M. Ferrari, Computational Modeling of Transport of Cells and Particles in Small Blood Vessels, SEECCM III, 3rd South-East European Conference on Computational Mechanics- an ECCOMAS and IACM Special Interest Conference, Kos Island, Greece, 2013, 12–14 June
23. Z. Milošević, D. Nikolic, I. Saveljic, M. Radovic, T. Exarchos, O. Parodi, **N. Filipovic**, Three-dimensional computer modeling of plaque formation and ldl transport within artery and throught the vessel wall, 4th International Congress of Serbian Society of Mechanics, Vrnjacka Banja, Serbia, 2013, 4-7th June
24. Z. Milosevic, M. Radovic, D. Nikolic, I. Saveljic., V. Isailovic, M. Obradovic, D. Petrovic, E. Themis, D. Fotiadis, W. Pelosi, O. Parodi, M. Kojic and **N. Filipovic**, Plaque Formation Modeling – from Animal to Human Studies, SEECCM III, 3rd South-East European Conference on Computational Mechanics- an ECCOMAS and IACM Special Interest Conference, Kos Island, Greece, 2013, 12–14 June
25. **N. Filipović**, D. Nikolić, I. Saveljić, T. Exarchos, O. Parodi, Experimental testing and numerical modeling of stents in the coronary arteries, IX International scientific conference contemporary materials, Banja Luka, 2016, sept. 4-5;
26. Arso M. Vukicevic, Gordana Jovicic, Nebojsa Jovicic, Zarko Milosevic, **Nenad Filipovic**, [Assessment of bone stress intensity factor using artificial neural networks](#), IEEE 15th International Conference on Bioinformatics and Bioengineering (BIBE), [doi:10.1109/BIBE.2015.7367680](https://doi.org/10.1109/BIBE.2015.7367680), pp. 1-4, Belgrade, 2.-4. November; 2015;
27. Ž. Milošević, D. Nikolić, I. Saveljić, V. Isailović, T. Bibas, **N. Filipović**, Three-dimensional biomechanical and visualisation model of vertigo disease in the semi-circular canal, IX International scientific conference contemporary materials, Banja Luka, 2016, sept. 4-5;

### M33

28. Radulović, J., Mijailović, N., Trajanović, M., **Filipović, N.**, Radulović, N, Estimation of exposure dose of human head during CT scanning procedure using Monte Carlo simulation, 11th International Scientific Conference MMA 2012 - Advanced Production Technologies, Novi Sad, 2012, 20-21.

September, pp. 513-516

29. Koncar Igor, Dalibor Nikolic, Suzana Pantovic, Mirko Rosic, Nikola Mijailovic, Nikola Ilic, Marko Dragas, Zivan Maksimovic, Lazar Davidovic, and **Nenad D. Filipovic**, Modeling of abdominal aortic aneurism rupture by using experimental bubble inflation test, In Bioinformatics and Bioengineering (BIBE), 2013 IEEE 13th International Conference, Chania, Greece, 2013, November 10-13, pp. 1-4, ISBN 9781479931644
30. Ivan Milankovic, Nikola Mijailovic, Jasna Radulovic, Aleksandar Peulic, **Nenad Filipovic**, Development of a System for Analysing the Electromagnetic Radiation Caused By the CT Scanner, 8th International Quality Conference, Kragujevac, 2014, May 23th 2014, pp. 893-898, ISBN 978-86-6335-004-5
31. Jasna Radulovic, Nikola Mijailovic, Vesna Rankovic, Miroslav Trajanovic, **Nenad Filipovic**, Modeling of radiation dose of human head during CT scanning using neural networks, 2015 IEEE 15th International Conference on Bioinformatics and Bioengineering (BIBE), Belgrade, 2015, 2-4. November., pp. 1-4, ISBN 978-1-4673-7982-3
32. Nikola Mijailović, Jasna Radulović, Miroslav Trajanović, **Nenad Filipović**, Aleksandar Peulić, Multimodal Imaging for PET Attenuation Correction, 5th International Conference on Information Society and Technology (ICIST 2015), Kopaonik, 2015, pp. 464-467, ISBN 978-86-85525-16-2
33. Nikola Mijailovic; Radivoje Radakovic; Aleksandar Peulic; Ivan Milankovic; **Nenad Filipovic**, Using force plate, computer simulation and image alignment in jumping analysis, 2015 IEEE 15th International Conference on Bioinformatics and Bioengineering (BIBE), Belgrade, 2015, 2-4. November., pp. 1-4, ISBN 978-1-4673-7982-3
34. R. Radakovic; M. Dopsaj; R. Vulovic; B. Leontijevic; N. Mijailovic; **N. Filipovic**, The reliability of motion analysis of elite soccer players during match measured by the Tracking Motion software system, 2015 IEEE 15th International Conference on Bioinformatics and Bioengineering (BIBE), Belgrade, 2015, 2-4. November., pp. 1-6, ISBN 978-1-4673-7982-3
35. Tijana Šušteršič Nikola Mijailović Ivan Milanković **Nenad Filipović** Aleksandar Peulić, Segmentation and Three-Dimensional Visualization of Brain Tumor and Possibility of Mapping Such Algorithms on High Performance Reconfigurable Computers, 5th International Conference on Information Society and Technology (ICIST 2015), Kopaonik, 2015, pp. 455-459, ISBN 978-86-85525-16-2

## M51

1. Kojic M., Filipovic N., Mijailovic S., A General Formulation for Finite Analysis of Flow Through a Porous Deformable Medium, Theoretical and Applied Mechanics (Yugoslavian), Vol.23, No.-, pp. 67-81, ISSN -, 1997
2. M. Kojić, H. Filipović, H. Zdravković, B-3. Ђулија и Д. Дивац, Моделирање филтрације подземних вода методом коначних елемената, Монографија, Управљање водним ресурсима Србије, Институт за водопривреду "Јарослав Черни", Vol.-, No.-, pp. 189-207, ISSN -, 1997
3. Divac D., Vuckovic D., Filipovic N., Zdravkovic N. and Kojic M., Mathematical Modelling of Spatial Seepage Problems Using Finite Element Method Applied in Case Study of "Prvonek" Dam", Water Resources Management (Yugoslavian), Vol.177-182, No.-, pp. 9-21, ISSN -, 1999
4. M. Kojić, H. Filipović и M. Живковић, Савремени поступци нумеричке симулације струјања крви и деформисања крвних судова, 3 поглавље монографије Васкуларна доплер ултрасонографија, Др Божидар Новаковић и др., Издавач Центар за научна истраживања САНУ и Универзитета у Крагујевцу, Призма- Крагујевац, Vol.-, No.-, pp. 23-28, ISSN -, 1999
5. H. Filipović, M. Kojić, Могућности нумеричког решавања проблема везаних за артеросклерозу, 4 поглавље монографије Васкуларна доплер ултрасонографија, Др Божидар Новаковић и др., Издавач Центар за научна истраживања САНУ и Универзитета у Крагујевцу, Призма- Крагујевац, Vol.-, No.-, pp. 29-34, ISSN -, 1999
6. Filipovic N., Kojic M., Computer simulations of blood flow with mass transport through the carotid artery bifurcation, Theoret. Appl. Mech. (Serbian), Vol.31, No.1, pp. 1-33, ISSN -, 2004

7. Dimkic, M. Krstic, M., Filipovic, N., Comparison of different configurations of Ranney wells using finite element modeling, *Journal of the Serbian Society for Computational Mechanics*, Vol.1, No.1, pp. 144-153, ISSN -, 2007
8. Filipovic, N., Nedeljkovic, Peulic, A., Finite element modeling of a transient functional electrical stimulation, *Journal of the Serbian Society for Computational Mechanics*, Vol.1, No.1, pp. 154-163, ISSN -, 2007
9. Kojic, M., Isailovic, V., Stojanovic, B., Filipovic, N., Modeling of cell mechanical response by biphasic models with activation, *Journal of the Serbian Society for Computational Mechanics*, Vol.1, No.1, pp. 135-143, ISSN -, 2007
10. Dimkic, M. Krstic, M., Filipovic, N, Comparison of different configurations of Ranney wells using finite element modeling, *Journal of the Serbian Society for Computational Mechanics*, Vol.1, No.1, pp. 144-153, ISSN 1820-6530, 2007
11. Filipovic, N., Nedeljkovic, Peulic, A., Finite element modeling of a transient functional electrical stimulation, *Journal of the Serbian Society for Computational Mechanics*, Vol.1, No.1, pp. 154-163, ISSN 1820-6530, 2007
12. Kojic, M., Isailovic, V., Stojanovic, B., Filipovic, N, Modeling of cell mechanical response by biphasic models with activation, *Journal of the Serbian Society for Computational Mechanics*, Vol.1, No.1, pp. 135-143, ISSN 1820-6530, 2007
13. D. Milašinović, M. Ivanovic, H. Tengg-Kobligk, D. Böckler, N. Filipović, Software Tools for Generating CFD Simulation Models of Blood Flow from CT Images, and for Postprocessing, *Journal of the Serbian Society for Computational Mechanics*, Vol.1, No.1, pp. 51-58, ISSN 1820-6530, 2008
14. O. Miljkovic, M. Ivanovic, N. Filipovic, M. Kojic, AI Models of the Hemodynamic Simulation, *Journal of the Serbian Society for Computational Mechanics*, Vol.2, No.2, pp. 59-72, ISSN 1820-6530, 2008
15. R.Radakovic, N. Filipovic, Dj. Kosanic, Computer simulation and modeling of cartilage deformation during a sportsman training, *Serbian Journal of Sports Sciences*, Vol.2, No.1, pp. 29-39, ISSN 1820-6301, 2008

#### **M52**

1. Vukicevic, N. Stepanovic, D. Nikolic, Z. Milosevic, G. Jovicic, S. Savic, S Apostolovic, S Salinger-Martinovic, N.Filipovic, Software tools for Image-based modeling of fluid-solid interaction in coronary arteries fusing IVUS and angiography modalities, *Journal of the Serbian Society for Computational Mechanics*, Vol.-, No.-, pp. 108-121, ISSN -, 2012
2. Cirkovic, V. Isailovic, Z. Milosevic, J. Radulovic, A. Sofla, M. Radisic, M. Kojic and N. Filipovic, Analytical and numerical analysis of magnetic separation of cardiomyocytes, *Journal of the Serbian Society for Computational Mechanics*, Vol.6, No.2, pp. 145-159, ISSN 1820-6530, 2012
3. Matic A., Ristic B., Devedzic G., Filipovic N., Petrovic S., Mijailovic N., Cukovic S, Gait analysis in the patients with chronic anterior cruciate ligament injury, *Serbian Journal of Experimental and Clinical Research*, Vol.13, No.2, pp. 49-54, ISSN -, 2012
4. N. Filipovic, M. Radovic, V. Isailovic, Z. Milosevic, D. Nikolic, I. Saveljic, M. Milosevic, D. Petrovic, M. Obradovic, D. Krsmanovic, E. Themis, A. Sakellarios, P. Siogkas, P. Marraccini, F. Vozzi, N. Meunier, Z. Teng, D. Fotiadis, O. Parodi, M. Kojic, Plaque formation and stent deployment with heating thermal effects in arteries, *Journal of the Serbian Society for Computational Mechanics*, Vol.6, No.1, pp. 11-28, ISSN 1820-6530, 2012
5. Z. Milosevic, M. Radovic, Z. Teng, J. Bird, M. Obradovic, I. Saveljic, S. Savic, N. Filipovic, Plaque Progression Modeling by Using Hemodynamic Simulation and Histological Data, *Journal of the Serbian Society for Computational Mechanics*, Vol.6, No.2, pp. 122-132, ISSN 1820-6530, 2012

#### **M51**

6. Nenad Filipovic, Mirko Rosic, Velibor Isailovic, Zarko Milosevic, Dalibor Nikolic, Danko Milasinovic, Milos Radovic, Boban Stojanovic, Milos Ivanovic, Irena Tanaskovic, Igor Saveljic, Miljan Milosevic, Dejan Petrovic, Milica Obradovic, Exarchos Themis, Antonis Sakellarios, Panagiotis Siogkas, Paolo Marraccini, Federico Vozzi, Nicolas Meunier, Zhongzhao Teng, Dimitris Fotiadis, Oberdan Parodi, Milos Kojic, ARTREAT project: Computer, Experimental and Clinical analysis of Three-Dimensional

1. N.Mijailović, A.Peulić, N. Filipović, E. Jovanov, IMPLEMENTACIJA BEŽIČNOG SENZORSKOG SISTEMA U PROCESU REHABILITACIJE NAKON OPERACIJE DISKUSA, 55st ETRAN Conference, Banja Vrućica, Teslić, 2011, June 6-9, ISBN 978-86-80509-66-2
2. N.Mijailović, A.Peulić, N. Filipović, IMPLEMENTACIJA WAVELET TRANSFORMACIJE NA FPGA PLATFORMI ZA DETEKCIJU ZAMRZAVANJA KOD PACIJENATA SA PARKINSONOVOM BOLEŠĆU, Proc. 56st ETRAN Conference, Zlatibor, 2012, 11-14. Juna, ISBN 978-86-80509-67-9
3. Ivan Milanković, Nikola Mijailović, Igor Končar, Dalibor Nikolić, Nenad Filipović, Aleksandar Peulić, Razvoj sistema za ispitivanje mehaničkih karakteristika tkiva abdominalne aorte zahvaćenog aneurizmom pomoću „Bubble Inflated“ metode, 57th ETRAN Conference, Zlatibor, 2013, 3 – 6. juna 2013., pp. ME1.3.1-4, ISBN 978-86-80509-68-6
4. Ivan Milanković, Nikola Mijailović, Miodrag Peulić, Vojin Kovačević, Nenad Filipović, Aleksandar Peulić, Dijagnostika lumbalne diskus hernije primenom uređaja za određivanje površinske raspodele pritiska stopala na podlogu, 57th ETRAN Conference, Zlatibor, 2013, 3 – 6. juna, pp. ME1.4.1-5, ISBN 978-86-80509-68-6
5. Nikola Mijailović, Suzana Petrović, Dalibor Nikolić, Aleksandar Peulić, Nebojša Zdravković, Branko Ristić, Nenad Filipović, NON-INVASIVELY ASSESSMENT OF KNEE CARTILAGE STRESS DISTRIBUTION USING MOTION CAPTURE SYSTEM AND FINITE ELEMENT METHOD, Fourth Serbian (29th Yu) Congress on Theoretical and Applied Mechanics, Vrnjačka Banja, Serbia, 2013, 4-7 June, pp. 809-814, ISBN 978-86-909973-5-0

#### M85

1. Kojic, M., Filipovic, N., Živkovic, M., Slavkovic, R. & Grujovic, N., PAK-F Finite Element Program for Laminar Flow of Incompressible Fluid and Heat Transfer, Kragujevac, Serbia, 1998
2. Filipovic, N., Kojic, Milivojevic, N., Stojanovic, B., Zivkovic, M., Slavkovic, R. & Grujovic, N., CFDAL CFD software for alveolated flow, Kragujevac, Serbia, 2000
3. Kojic, M., Filipovic, N., Živkovic, M., Slavkovic, R. & Grujovic, N., PAK-FS Finite Element Program for Fluid-Structure Interaction, Kragujevac, Serbia, 2001
4. Filipovic, N., Kojic, M., Ivanovic, M., Stojanovic, B., Otasevic, L. & Rankovic, V., MedCFD, Specialized CFD software for simulation of blood flow through arteries, Kragujevac, Serbia., 2006
5. Filipovic, N., Kojic, M., Stojanovic, B. & Rankovic, V., VEINS, Specialized CFD software for simulation of blood flow through the veins, Kragujevac, Serbia., 2006

**Complete List of Published Work:** <https://scholar.google.com/citations?user=aRNUD08AAAAJ&hl=en>

#### **Ongoing Research Support**

H2020-PHC-2015-single-stage PI: Parodi In EU, 01/01/16-30/06/19  
SMARTool: Simulation Modeling of coronary ARtery disease: a tool for clinical decision support  
Role: Co-investigator

H2020-SC1-2016-2017 PI: Tzioufas In EU, 01/01/17-30/06/20  
HarmonicSS: HARMONIZATION and integrative analysis of regional, national and international Cohorts on primary Sjögren's Syndrome (pSS) towards improved stratification, treatment and health policy making  
Role: Co-investigator, leader WP7

SCOPES Joint Research Project PI: Filipovic In EU, 01/09/14-01/09/18  
Role of blood flow and sdf-1/cxcr4-induced recruitment of mononuclear cells in intussusceptive angiogenesis

Role: Coordinator of the Serbian side of the project

III41007 Serbian national project  
Applied of biomedical engineering in the pre-clinical and clinical practice  
Role: PI

PI: Filipovic

In Serbia, 01/01/11-12/31/19

H2020- SC1-PM-16-2017  
InSilc: In-silico trials for developing and assessing biomedical products  
Role: Co-investigator, Leader WP2

PI: Fotiadis

In EU, 01/11/2017-31/10/2020

H2020-SC1-2016-2017  
HOLOBALANCE: HOLOgrams for personalised virtual coaching and motivation in an ageing population with BALANCE disorders

PI: Fotiadis

In EU, 01/12/2017-31/11/2020

H2020-NMBP-2016-2017  
PANBioRA: Personalised And/or Generalised Integrated Biomaterial Risk Assessment  
Role: Co-investigator

PI: Vrana

In EU, 01/01/2018-30/06/2022

H2020- C1-PM-02-2017  
TAXINOMISIS: A multidisciplinary approach for the stratification of patients with carotid artery disease  
Role: Co-investigator

PI: Fotiadis

In EU, 01/12/2017-31/11/2020

Erasmus+KA2/2016  
Improving Academic and Professional Education Capacity in Serbia in the area of Safety & Security  
(by means of strategic partnership with the EU) / ImprESS  
Role: Co-investigator, Leader WP5

PI: Ivanovic

In EU, 01/10/2017-30/09/2020

### **Completed Research Support**

FP7-ICT-2013-10  
EMBalance: A Decision Support System incorporating a validated patient-specific, multi-scale Balance Hypermodel towards early diagnostic Evaluation and efficient Management plan formulation of Balance Disorders  
Role: Co-investigator, leader WP6

PI: Luxon

In EU, 01/12/13-30/11/16

FP7 ICT-2011.5.2  
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  
Role: Co-investigator

PI: Sahay

In EU, 01/02/13-31/01/16

SCOPES Institutional partnership  
Computational modeling of blood flow in the tumor vasculature  
Role: Coordinator of the Serbian side of the project

PI: Filipovic

In EU, 01/06/12-31/05/15

FP7- ICT IP-224297  
ARTreat: Multi-level patient-specific artery and atherogenesis model for outcome prediction, decision support treatment, and virtual hand-on training.  
Role: Co-Investigator, Scientific coordinator, Leader WP3

PI: Parodi

In EU, 09/01/08-08/31/13

Serbian National Project  
Development of a software-hardware system for biomechanical analysis of athletes  
Role: PI

PI: Filipovic

In Serbia, 2012-2013

FP7 Project-NMP-2007-LARGE-1  
Multifunctional materials for future vehicles, MUST  
Role: Co-Investigator, coordinator for modeling

PI: Hack

In EU, 09/01/08-08/31/13



FP7-NMP-2011-CSA-5

PI: Basista

In EU, 01/02/12-31/01/15

INN-VIN: Innovative materials solutions for Transport, Energy and Biomedical sectors by strengthening integration and enhancing research dynamics of KMM-VIN

Role: Co-investigator