Curriculum vitae

PERSONAL INFORMATION

Boban Stojanovic

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WORK EXPERIENCE

2008–Present — Associate professor

Department of mathematics and informatics, Faculty of science, University of Kragujevac, Kragujevac (Serbia)

2002–2008 — Research assistant

Supercomputing center, University of Kragujevac, Kragujevac (Serbia)

2005–2005 — Research assistant

Hong Kong Polytechnic university, Hong Kong (China)

2003–2003 — Research assistant

Hong Kong Polytechnic university, Hong Kong (China)

1996–2002 — Scientific software developer

Engineering software lab, Faculty of engineering, University of Kragujevac, Kragujevac (Serbia)

EDUCATION AND TRAINING

2002–2007 — Doctor of engineering sciences (Computational modeling) — EQF level 8

Center for interdisciplinary and multidisciplinary studies and research, University of Kragujevac, Kragujevac (Serbia)

1996–2002 — Master of mechanical engineering — EQF level 7

Faculty of engineering, University of Kragujevac, Kragujevac (Serbia)

PERSONAL SKILLS

Mother tongue(s): Serbian

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	B2	B2	C1
Russian	A2	A2	A1	A1	A1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Organisational / managerial skills

- Leadership (currently responsible for a team of more than 10 people)
- Good organisational skills gained as
  - head of Scientific Computing Group, Faculty of Science, University of Kragujevac

- coordinator of Computer science studies at Faculty of Science
- principal investigator on several scientific projects
- project manager or team leader on a number of software development projects

Job-related skills

Simulation methods

- Finite element method
- Finite difference method
- Discrete event system simulations

Optimization methods

- Evolutionary algorithms
- Multi-objective optimization
- Linear programming

Programming

- Languages: C++, C#, Fortran, Pascal
- Object-oriented programming
- Software engineering
- MPI, CUDA (indirectly as a software architect)
- Strong debugging and analysis skills
- SVN, Redmine

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Digital competences - Self-assessment grid

ADDITIONAL INFORMATION

Publications

Books

- M. Kojic, N. Filipovic, B. Stojanovic, N. Kojic. *Computer Modeling in Bioengineering.* John Wiley and Sons, 2008.
- B. Stojanovic, N. Milivojevic, M. Ivanovic, D. Divac, Chapter: *DotNet Platform for Distributed Evolutionary Algorithms with Application in Hydroinformatics*, book *High Performance and Cloud Computing in Scientific Research and Education*, group of authors: M. Despotovic-Zrakic, V. Milutinovic and A. Belic, editors, IGI Global, 2014.

Papers

- S. Mijailovich, O. Kayser-Herold, B. Stojanovic, Dj. Nedic, T. Irving, M. Geeves. Three-dimensional stochastic model of actin–myosin binding in the sarcomere lattice. *The Journal of General Physiology* 2016, 148(6): 459-488.
- B. Stojanovic, M. Milivojevic, N. Milivojevic, D. Antonijevic. A self-tuning system for dam behavior modeling based on evolving artificial neural networks. *Advances in Engineering Software* 2016, 97: 89-95.
- M. Ivanovic, B. Stojanovic, A. Kaplarevic-Malisic, R. Gilbert, S. Mijailovich. Distributed multi-scale

muscle simulation in a hybrid MPI–CUDA computational environment. *Simulation: Transactions of the Society for Modeling and Simulation International* 2016, 92(1): 19-31.

- M. Ivanovic, V. Simic, B. Stojanovic, A. Kaplarevic-Malisic, B. Marovic. Elastic grid resource provisioning with WoBinGO: A parallel framework for genetic algorithm based optimization. *Future Generation Computer Systems* 2015, 42: 44–54.
- V. Rankovic, M. Drenovak, B. Stojanovic, Z. Kalinic, Z. Arsovski. The mean-Value at Risk static portfolio optimization using genetic algorithm. *Computer Science and Information Systems* 2014, 11(1): 89–109.
- B. Stojanovic, M. Milivojevic, M. Ivanovic, N. Milivojevic, D. Divac. Adaptive System for Dam Behavior Modeling Based on Linear Regression and Genetic Algorithms. *Advances in Engineering Software* 2013; 65: 182-190.
- M. Dimkic, V. Rankovic, N. Filipovic, B. Stojanovic, V. Isailovic, M. Pusic and M. Kojic. Modeling of radial well lateral screens using 1D finite elements. *Journal of Hydroinformatics* 2012; 15(2): 405-415.
- M. Kojic, J.P. Butler, I. Vlastelica, B. Stojanovic, V. Rankovic, A. Tsuda. Geometric hysteresis of alveolated ductal architecture. *Journal of biomechanical engineering* 2011; 133(11): 111005.
- S. Mijailovich, B. Stojanovic, M. Kojic, A. Liang, V. Wedeen, R. Gilbert. Derivation of a finite element model of lingual deformation during swallowing from the mechanics of mesoscale myofiber tracts obtained by MRI. *Journal of Applied Physiology* 2010; 109(5): 1500-1514.
- D. Stamenovic, M. Kojic, B. Stojanovic, D. Hunter. Pneumatic Osteoarthritis Knee Brace. *Journal of Biomechanical Engineering* 2009; 131 (4): (045001-1)-(045001-6).
- M. Kojić, N. Filipović, B. Stojanović, V. Ranković, M. Krstić, 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. *Water Science & Technology: Water Supply* 2007; 7(3): 41–50.
- B. Stojanovic, M. Kojic, M. Rosic, C.P. Tsui, C.Y. Tang. An Extension of Hill's Three-Component Model to Include Different Fiber Types in Finite Element Modeling of Muscle. *Int. J. Numer. Meth. Eng* 2007; 71: 801-817.
- C.Y. Tang, C.P. Tsui, B. Stojanovic, M. Kojic. Finite Element Modelling of Skeletal Muscles Coupled with Fatigue. *International Journal of Mechanical Sciences* 2007; 49: 1179-1191.
- M. Kojic, I. Vlastelica, B. Stojanovic, V. Rankovic, A. Tsuda. Stress integration procedures for a biaxial isotropic material model of biological membranes and for hysteretic models of muscle fibers and surfactant. *International Journal for Numerical Methods in Engineering* 2006; 68: 893-909.
- C.Y. Tang, B. Stojanovic, C.P. Tsui, M. Kojic. Modeling of muscle fatigue using Hill's model. *Biomedical Materials and Engineering* 2005; 15(5): 341-348.
- S. Marković, M.J. Lukić, S.D. Škapin, B. Stojanović, D. Uskoković. Designing, fabrication and characterization of nanostructured functionally graded HAp/BCP ceramics. *Ceramics International* 2015, 41: 2654-2667.
- M. Milivojevic, S. Stopic, B. Friedrich, B. Stojanovic, D. Drndarevic. Computer modeling of high-pressure leaching process of nickel laterite by design of experiments and neural networks. *Interantional Journal of Minerals, Metallurgy, and Materials* 2012; 19(7): 584-594.

Projects

- **NIH R01 DC 011528** - Multiscale mechanisms of lingual mechanical function. Subcontract of BioIRC to Northeastern University, Boston, US, 2011-2016. Role: Subcontract prime investigator.
- **R01 HL070542-03** - Particles in Developing Lung: Bioengineering Approach. Harvard University and University of Kragujevac, 2004-2008. NHLBI Prime Grant 5.
- **FP7-224297** - Large-scale Integrating Project(IP): ARTreat. Multi-level patient-specific artery and atherogenesis model for outcome prediction, decision support treatment, and virtual hand-on training, 2008-2011.
- **DAAD 2012-2013** - Artificial Neural Network Modelling of Silver Nanoparticle formation after Thermal Decomposition of an Aerosol Serbian–German programme for years, 2012-2013. Role: Prime investigator.
- **#5D214** - INTERREG IIIB CADSES Programme, CARDS project FLOODMED Monitoring, forecasting and best practices for flood mitigation and prevention in the CADSES region, 2006-2008.
- **PolyU 5271/03E** - Mechanistic Damage Modelling of Skeletal Muscles Using Hybrid Segment-

Superelement Technique. Hong Kong Polytechnic University, Hong Kong, 2003-2006.

- **G-T645** - Failure Prediction of Particulate-Reinforced Dental Composites Using a Combined Damage and Fracture Mechanics Approach. Hong Kong Polytechnic University, Hong Kong, 2003-2006.
- **OI 174028** - Methods for multiscale modeling with application in biomedicine. Ministry of Science, Serbia, 2011-2015.
- **III 41007** - Application of biomedical engineering in preclinical and clinical practice. Ministry of Science, Serbia, 2011-2015.
- **CD-JEP-40104** - Tempus Joint European Project (JEP) Curriculum development : Engineering Business Management and Service Science Master Module, 2006-2009.
- **OI 144028** - Methods for modeling biomechanical systems for medical application. Ministry of Science, Serbia, 2006-2010.
- **TR-6209A** - Development of computational methods and software for modeling in general and biomedical engineering. Ministry of Science, Serbia, 2005-2007.
- **CD-JEP-18114** - Tempus Joint European Project (JEP) Curriculum development: Restructuring of Mechanical Engineering Studies, 2004-2007.
- **TR0233** - Development of methods, software and devices for biomechanics and bioengineering. Ministry of Science, Serbia, 2002-2004.
- **3433** - Development of methods and software for numerical and experimental research in biomedical sciences. Ministry of Science, Serbia, 1997-2000.
- **2121** - Development of methods and software for fluid flow through porous media with free surface analysis. Institute for Water Resources, "Jaroslav Cerni", Belgrade, Serbia, 1996-2000.
- **11M06** - Development of new engineering methods in mechanical engineering and shipbuilding. Ministry of Science, Serbia, 1996-2000.

Software

- Finite element solver for structural analysis - PAK
- Finite element modeling desktop application - WinPAKG
- Muscle modeling software based on finite element method - MUSCULO (funded by Hong Kong Polytechnic University)
- Software for modeling ground water flow using finite element method - LIZZA
- A number of finite element software for modeling various problems
  - Particle deposition in alveolar duct (funded by US NIH and Harvard University)
  - Pneumatic osteoarthritis knee brace
  - Blood flow analysis. Stent design
- Finite difference solver for hydraulic and hydropower production calculations (Danube - "Iron gate" hydropower plant)
- Software for hydrological simulations - RunoffCore
- Hydro-information system for acquisition, archiving and analysis of data in water resources management
- Multi-model system for monitoring and optimization of dam leakage remediation
- A parallel framework for genetic algorithm based optimization - WoBinGO
- Software solution for distributed multi-scale muscle simulations in a hybrid MPI–CUDA environment - Mexie
- Software for education in bio-engineering simulations
- A number of desktop and web applications for usage in various fields

Honours and awards

- 2000 - Norway government honor
- 1997-2002 - Scholarship for Talented Students for graduate studies from Ministry of Science and Technology of Serbia
- 1997-2002 - First place in programming on State Competition of Mechanical Engineering Students

- 1996 - First place on State High-school Competition in Programming
- 1995 - First place on State High-school Competition in Programming
- 1992 - Second place on State Elementary-school Competition in Physics

Courses

Developed curricula

- Curricula for bachelor, master and doctoral degree of computer science study programs at Faculty of Science, University of Kragujevac.

Developed courses

- Programming basics (BSc degree)
- Data structures and algorithms (BSc degree)
- Algorithm strategies (BSc degree)
- Software engineering (BSc degree)
- Computer graphics (MSc degree)
- Computer modeling and simulations (PhD degree)

Memberships

- Serbian Society for Computational Mechanics, cofounder

Other

- Married, father of two
- Hobbies: playing guitar, tennis, skiing