

**CV**  
**Božidar Jovanović**  
**Божидар Јовановић**

Date of birth: 18 May 1969;

Place of birth: Prizren, Serbia, Yugoslavia

Citizenship: Serbia

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**EDUCATION**

1989–1993 B. Sc. Mathematics, University of Belgrade

1992–1996 B. Sc. Astrophysics, University of Belgrade

1996 – Mr. Sc. Mathematics: Geometry of integrable systems with one-side constraints; Advisor: Vladimir Dragović

2000 – Ph. D in Mathematics: Integrable nonholonomic systems on Lie groups; Advisor: Vladimir Dragović

**EMPLOYMENT**

1994 – present Mathematical Institute SANU, Belgrade

Position: Full Research Professor (since 2011)

**LONGER VISITING**

1999–2000 – Faculty of Mathematics and Mechanics, Moscow State University

2000–2002 – Postdoc, Mathematical Institute, LMU, Muenchen

**AWARDS**

1995 – Rastko Stojanović: the best original paper of a researcher younger than 35 at 21<sup>st</sup> Yugoslav Congress in Theoretical and Applied mechanics (share the award with Borislav Gajic)

1996 – Zaharije Brkić: the best student of Astrophysics in generation

2008 – Award of the Union of the mathematical society of Serbia for the best achievement of a mathematician younger than 40 in the period 2005-2008

**PROFESSIONAL ACTIVITIES**

Deputy Editor of Theoretical and Applied Mechanics (since 2015)

Deputy Head of the Department of Mechanics, Mathematical Institute SANU (since 2012)

Referee for the journals: Journal of Nonlinear Science, Archive for Rational Mechanic and Analysis, Journal of Geometric Mechanics, Nonlinearity, Journal of Physics A, Regular and Chaotic Dynamics, Publications de l'Institut Mathématique

(Belgrade), SIGMA, Filomat, Differential Geometry and Applications, Theoretical and Applied Mechanics, Physica D

Reviewer for Zentralblatt MATH

A member of the Organisation Committee of 1<sup>st</sup> - 4<sup>th</sup> International Conference Geometry, Dynamics, Integrable Systems GDIS (Belgrade 2008, 2010, Lisbon 2011, Izhevsk 2013). A member of the Scientific Committee of 5<sup>th</sup> International Congress of Serbian Society of Mechanics, 2015, Arandjelovac

A member of the Executive committee of the Serbian Society of Mechanics

A member of the Academic Council of the Serbian Graduate School in Mathematics

Popularisation of mathematics and mechanics (Mathematical Institute SANU projects: Viva Mathematics, May – Mathematical Month)

More than 10 years of teaching in Mathematical Gymnasium, Belgrade

### **PARTICIPATION IN PROJECTS**

2002-05 – project No. 1643 “Geometry and topology of manifolds and integrable dynamical systems”- Ministry of Sciences, Technology and Development of Republic of Serbia

2006-2010 – project No. 144014 “Geometry and topology of manifolds and integrable dynamical systems”- Ministry of Sciences, Technology and Development of Republic of Serbia

2005-2010 – the international Italian-Serbian project (SISSA-MI SANU) “Geometry, topology and combinatorics of manifolds and dynamical systems”

2011-2016 – project No. 174020 “Geometry and topology of manifolds, classical mechanics and integrable dynamical systems”- Ministry of Education, Sciences, Technology and Development of Republic of Serbia

### **INVITED TALKS ON CONFERENCES AND WORKSHOPS**

- 1<sup>st</sup> – 6<sup>th</sup> International Conference Geometry, Dynamics, Integrable Systems GDIS (2008, 2010 Belgrade, Serbia, 2013, 2016 Izhevsk, Russia, 2011 Lisbon-Sintra, Portugal, 2014 Trieste, Italy)
- Workshop Geometry and PDEs (23-34 May 2013, 29-31 May 2015, 10-11 June 2016), West University of Timișoara, Romania
- XIX Geometrical Seminar, August 28 – September 4, 2016, Zlatibor, Serbia, <http://tesla.pmf.ni.ac.rs/people/geometrijskiseminarxix/index.php>
- Mechanics through Mathematical Modeling, Novi Sad, Serbia, 7-10 September 2015, <http://mtmm2015.rs/>
- Nonholonomic mechanics and optimal control, Institut Henri Poincaré, 25-28 November 2014, Paris, France, <http://nholmech-goc.lsis.org/>
- Geometry and Analysis of Metric Structures, 4-7 December 2013, Novosibirsk, Russia
- Alexandroff Readings, Moscow State University, 21–15 May 2012, Moscow, Russia

- Integrability in Dynamical Systems and Control, Workshop at INSA de Rouen, 14 - 16, November, 2012, Rouen, France, <http://math.univ-lyon1.fr/~salnikov/disco/>
- XVII Geometrical Seminar 3–8 September 2012, Zlatibor, Serbia
- 4<sup>th</sup> Serbian-Greek Symposium, Recent Advances in Mechanics, 9-10 July, 2011, Vlasina Lake, Serbia
- 6<sup>th</sup> Mathematical Physics Meeting, 14-23 September 2010, Belgrade, Serbia
- 12<sup>th</sup> Serbian Mathematical Congress 2008, Novi Sad, Serbia (Award of the Union of the mathematical society of Serbia for the best achievement of a mathematician younger than 40 in the period 2005-2008)
- 3<sup>rd</sup> Serbian-Greek Symposium, Recent Advances in Mechanics 2008, Novi Sad, Serbia
- MM-VII Symmetries and Mechanics, Trimesters on Control, Geometry and Engineering 2005, Barcelona, Spain
- Summer School of Modern Mathematical Physics 2001, Sokobanja, Serbia

### **CONTRIBUTED TALKS (SINCE 2001)**

- 1<sup>st</sup> - 5<sup>th</sup> International Congress of Serbian Society of Mechanics (Kopaonik 2007, Palic 2009, Vlasina lake 2011, Vrnjacka Banja 2013, Arandjelovac 2015, Serbia)
- XXVIII Workshop on Geometric Methods in Physics, Białowieża, 28.06-04.07.2009, Poland
- Transformation Groups, December 7-22, 2007, Moscow, Russia
- Geometric Aspects of Integrable Systems, Coimbra , 2006-07-17 - 2006-07-19, Portugal
- Summer School and Conference in Poisson Geometry, ICTP, Trieste 2005, Italy (poster).
- 11<sup>th</sup> Mathematical Congress of Serbia and Montenegro, Petrovac 2004, Serbia and Montenegro
- Conference on Integrable Systems and Spectral Curves, Lille, 2003, France
- Singularities of integrable foliations of Hamiltonian systems Athens, November 10-13, 2003, Greece
- Workshop Contemporary Geometry and Related Topics, Belgrade 2002, Serbia
- Workshop on Geometry, Symmetry and Mechanics II, University of Warwick, 2002, UK
- Geometry, Symmetry and Mechanics 1, Lisbon 2001, Portugal

### **REFERENCES**

#### **scientific journals**

1. B. Jovanović: Noether theorem and integrability in time-dependent Hamiltonian dynamics, Theoretical and Applied Mechanics (2016)

2. B. Jovanović: Invariant measures of modified LR and L+R systems, Reg. Chaotic Dyn. **20** (2015) 542-552.
3. B. Jovanović, V. Jovanović: Contact flows and integrable systems, J. Geom. Phys, **87** (2015), Finite dimensional integrable systems: on the crossroad of algebra, geometry and physics, 217-232.
4. B. Gajić, V. Dragović, B. Jovanović: On the completeness of the Manakov integrals, Fundam. Prikl. Mat., **20**:2 (2015), 35-49.
5. V. Dragović, B. Gajić, B. Jovanović: Note on Free Symmetric Rigid Body Motion, Reg. Chaotic Dyn. **20** (2015) 293-308.
6. B. Jovanović, Vladimir Jovanović: Geodesic and Billiard Flows on Quadrics in Pseudo-Euclidean Spaces: L-A Pairs and Chasles Theorem, Int. Math. Res. Notices, (2015) 6618-6638.
7. B. Jovanovic: Heisenberg model in pseudo-Euclidean spaces, Reg. Chaotic Dyn. **19** (2014) 245-250.
8. B. Jovanovic: The Jacobi-Rosochatius Problem on an Ellipsoid: the Lax Representations and Billiards, Archive for Rational Mechanics and Analysis, **210** (2013) 101-131.
9. Y. N. Fedorov, B. Jovanovic: Three natural mechanical systems on Stiefel varieties. J. Phys. A **45** (2012) 165204.
10. B. Jovanovic: Noncommutative integrability and action-angle variables in contact geometry, Journal of Symplectic Geometry, **10** (2012) 535-562.
11. Y. N. Fedorov, B. Jovanovic: Geodesic Flows and Neumann Systems on Stiefel Varieties. Geometry and Integrability, Mathematische Zeitschrift **270** (2012) 659-698.
12. B. Jovanovic: On the principle of stationary isoenergetic action, Publications de l'Institut Math'ematique, **91(105)** (2012), 63-81.
13. B. Jovanovic: Geodesic flows on Riemannian g.o. spaces. Regul. Chaotic Dyn. **16** (2011), 504-513.
14. B. Jovanović: Integrability of Invariant Geodesic Flows on n-Symmetric Spaces, Annals of Global Analysis and Geometry, **38** (2010) 305-316.
15. B. Jovanović: Hamiltonization and Integrability of the Chaplygin Sphere in  $\mathbb{R}^n$ , J. Nonlinear. Sci. **20** (2010) 569-593.
16. V. Dragović, B. Gajić, B. Jovanović: Systems of Hess-Appel'rot Type and Zhukovskii Property, Int. Journal of Geometric Methods in Modern Physics, **6** (2009) 1253-1304.
17. Y. Fedorov, B. Jovanović: Hamiltonization of the Generalized Veselova LR System, Reg. Chaotic Dyn. **14** (2009) 495-505.
18. V. Dragović, B. Gajić, B. Jovanović: Singular Manakov Flows and Geodesic Flows on Homogeneous Spaces of  $SO(N)$ , Transformation Groups **14** (2009) 513-530.
19. B. Jovanović: LR and L+R systems, J. Phys. A **42** (2009), no. 22, 225202, 18 pp.
20. A. V. Bolsinov, B. Jovanović: Magnetic Flows on Homogeneous Spaces, Comm. Math. Helv. **83** (2008) 679-700.

21. B. Jovanović: Symmetries and Integrability, Publications de l'Institut Mathématique, **84(98)** (2008), 1-36.
22. B. Jovanović: Partial Reduction of Hamiltonian Flows and Hess-Appelrot Systems on  $SO(n)$ , Nonlinearity **20** (2007) 221-240.
23. B. Jovanović: On the Cartan Model of the Canonical Vector Bundles over Grassmannians, Sib. Math. Zh. **48** (2007) 772-777.
24. Y. N. Fedorov, B. Jovanović: Quasi-Chaplygin Systems and Nonholonomic Rigid Body Dynamics, Letters in Mathematical Physics **76** (2006) 215-230.
25. A. V. Bolsinov, B. Jovanović: Magnetic Geodesic Flows on Coadjoint Orbits, J. Phys. A: Math. Gen. **39** (2006) L247-L252.
26. A. V. Bolsinov, B. Jovanović: Complete involutive algebras of functions on cotangent bundles of homogeneous spaces, Mathematische Zeitschrift **246** (2004) 213-236.
27. Y. N. Fedorov, B. Jovanović: Nonholonomic LR systems as Generalized Chaplygin systems with an Invariant Measure and Geodesic Flows on Homogeneous Spaces; J. Nonlinear. Sci. **14** (2004) 341-381.
28. V. Dragovic, B. Jovanović, M. Radnovic: On elliptical billiards in the Lobachevsky space and associated geodesic hierarchies, J. Geom. Phys. **47** (2003) 221-234.
29. A. V. Bolsinov, B. Jovanović: Non-commutative integrability, moment map and geodesic flows, Annals of Global Analysis and Geometry, **23** (2003) 305-322.
30. B. Jovanović: Some multidimensional integrable cases of nonholonomic rigid body dynamics, Reg. Chaotic Dyn, **8** (2003) 125-132.
31. B. Jovanović: On the integrability of geodesic flows of submersion metrics, Lett. Math. Phys. **61** (2002) 29-39.
32. A. V. Bolsinov, B. Jovanović: Integrable geodesic flows on homogeneous spaces. Sb. Mat. **192** (2001) No. 7-8, 951-969.
33. B. Jovanović: Geometry and integrability of Euler-Poincare-Suslov equations. Nonlinearity, **14** (2001) 1555-1657.
34. B. Jovanović: Nonholonomic left and right flows on Lie groups, J. Phys A-Math. Gen. **32** (1999) 8293-8302.
35. V. Dragović, B. Gajić, B. Jovanović: Generalizations of classical integrable nonholonomic rigid body systems, J. Phys A: Math. Gen, **31** (1998) 9861-9869.
36. B. Jovanović: Nonholonomic geodesic flows on Lie groups and integrable Suslov problem on  $SO(4)$ , J. Phys A-Math. Gen. **31** (1998) 1415-1422.
37. V. Dragović, B. Jovanović: On integrable potential perturbations of billiard system within ellipsoid, J. Math. Phys. **38** (1997) 3063-3068.
38. B. Jovanović: Integrable perturbations of billiards on constant curvature surfaces, Phys. Lett. A. **231** (1997) 353-358.

#### **research monographs, chapters, conference proceedings**

1. V. Dragović, B. Gajić, B. Jovanović: Rigid body systems of Hess-Appel'rot type and partial reductions, Proceeding of XXVIII Workshop on Geometric Methods

in Physics (P. Kielanowski, S.T. Ali, A. Odziejewicz, M. Schlichenmaier, Th. Voronov eds), AIP Conf. Proc. November 30, **1191** (2009) 72-79.

2. Yu. N. Fedorov, B. Jovanović: Integrable nonholonomic geodesic flows on compact Lie groups, In: Topological methods in the theory of integrable systems (Bolsinov A.V., Fomenko A.T., Oshemkov A.A. eds) Cambridge Scientific Publ., 2006, pp. 115-152.
3. A. V. Bolsinov, B. Jovanović, Integrable geodesic flows on Riemannian manifolds: Construction and Obstructions; In: Contemporary Geometry and Related Topics (Eds. Bokan N., Djoric M., Rakic Z., Fomenko A. T., Wess J.), World Scientific, 2004, pp. 57–103.

#### **popularisation of science**

1. B. Jovanović: What are integrable Hamiltonian systems? Teaching of mathematics, **13** (2011) 1-14.
2. Б. Јовановић: Линеаризација интеграбилних Хамилтонових система, Настава математике, **LV** (2010) No. 3-4, 22-30. (in Serbian)
3. Б. Јовановић: Шта су то потпуно интеграбилни Хамилтонови системи, Настава математике **LV** (2010) No. 1-2, 46-54. (in Serbian)

#### **CITATION**

The papers are cited about 200 times in papers, books, and PhD theses (without self-citations).