Curriculum vitae

Personal data

Surname: Šnobl   **First name:** Libor
Year of Birth: 1976   **Gender:** Male
Nationality: Czech   **Citizenship:** Czech Republic
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Webpage: `http://www.fjfi.cvut.cz/files/k402/Pers_Hpgs/snobl/index.html`

Education

- 1999 – 2002 **Ph.D. study** at Faculty of Nuclear Sciences and Physical Engineering (FNSPE), Czech Technical University in Prague (CTU), branch of study: Mathematical Engineering, subbranch : Mathematical Physics
  Doctoral Thesis: On Integrability and T–duality of Principal Models
  Defended: November 7, 2002, **Supervisor:** Prof. Ladislav Hlavatý

- 1994 – 1999 **Graduate study with Honours** at FNSPE CTU, branch of study: Mathematical Engineering, subbranch : Mathematical Physics
  Diploma (M.Sc.) Thesis: Quantum Doubles and Universal R–matrices,
  Supervisor: Prof. Ladislav Hlavatý

Work experience

- since July 2012 **associate professor of physics** at the Department of Physics, FNSPE CTU (promotion on the basis of the habilitation thesis "Lie algebras: their structure and application", successfully defended during the meeting of the Scientific Council of FNSPE CTU on April 26, 2012)

- October 2002 – June 2012 **assistant professor** at the Department of Physics, FNSPE CTU

- March 2002 – September 2002 **part–time assistant lecturer** at the Department of Physics, FNSPE CTU

International experience

- 2/2004–1/2006 postdoctoral fellowship at Centre de recherches mathématiques de l'Université de Montréal

- one–month stays at Centre de recherches mathématiques, Université de Montréal, repeatedly 2006, 2008, 2009, 2010, 2011, 2012

- short–term research or teaching stays (approx. 2 weeks)

  - Universidad Complutense de Madrid 12/2007, 11/2011,
    ERASMUS teaching staff mobility 1/2012
  - Yukawa Institute for Theoretical Physics, Kyoto University 9/2007

- C. N. Yang Institute for Theoretical Physics, State University of New York, Stony Brook 10/2005

- more than 50 international conferences and summer schools attended, mostly with a talk or a poster presented

- reviewer for AMS Mathematical Reviews

Research interests

- current

  - Classification and identification of Lie algebras
  - Symmetry analysis of differential equations
  - Dualities in string theory, especially T–dualities of σ–models

- in the past

  - Classical integrability of field theories
  - Quantum groups and Yang–Baxter–like equations
  - Differential geometry of surfaces and its relation to integrable models

Publications

- author of 22 papers published in peer-reviewed international journals listed in Web of Science database and contributions in several conference proceedings,

- these papers were up to now cited 52 times (excluding direct and indirect self–citations), as registered by Web of Science and SCOPUS databases.

Teaching

- current: lectures on Lie groups and Lie algebras, geometrical methods of physics, symmetries of differential equations and advanced quantum mechanics

- in the past: lectures on elementary quantum mechanics, seminars on theoretical physics and linear algebra

Awards and scholarships

- Award of the Rector of the Czech Technical University in Prague for outstanding scientific results 2011

- Award of the Rector of the Czech Technical University in Prague for prestigious publication 2006 (together with Prof. L. Hlavatý)

- Distinguished doctoral thesis in Václav Votruba Prize competition 2004

- McKinsey Scholarship 2001

- Prize of Josef Hlávka for the Best Students and Graduates 1999

List of publications

a) in peer–reviewed international journals included in Web of Science database

1. L. Šnobl and P. Winternitz, Solvable Lie algebras with Borel nilradicals, J. Phys. A: Math. Theor. 45 (2012) 095202 [arXiv:1110.5492].

2. A.M. Grundland, A.J. Hariton and L. Šnobl, Invariant solutions of supersymmetric nonlinear wave equations, J. Phys. A: Math. Theor. 44 (2011) 085204 [arXiv:0911.1324].

3. L. Šnobl, On the structure of maximal solvable extensions and of Levi extensions of nilpotent Lie algebras, J. Phys. A: Math. Theor. 43 (2010) 505202 [arXiv:1003.4223].

4. L. Šnobl and D. Karásek, Classification of solvable Lie algebras with a given nilradical by means of solvable extensions of its subalgebras, Linear Algebra and its Applications 432 (2010) 1836-1850 [arXiv:0908.0271].

5. A. M. Grundland, A. J. Hariton and L. Šnobl, Invariant solutions of the supersymmetric sine-Gordon equation, J. Phys. A: Math. Theor. 42 (2009) 335203 [arXiv:0812.3862].

6. L. Šnobl and P. Winternitz, All solvable extensions of a class of nilpotent Lie algebras of dimension n and degree of nilpotency n-1, J. Phys. A: Math. Theor. 42 (2009) 105201 [arXiv:0809.3259].

7. L. Hlavatý and L. Šnobl, Description of D-branes invariant under the Poisson-Lie T-plurality, J. High Energy Phys. 07 (2008) 122 [arXiv:0806.0963].

8. C. Albertsson, L. Hlavatý, and L. Šnobl, On the Poisson–Lie T–plurality of boundary conditions, J. Math. Phys. 49 (2008) 032301 [arXiv:0706.0820].

9. L. Hlavatý and L. Šnobl, Poisson–Lie T–plurality as canonical transformation, Nucl. Phys. B 768 (2007) 209–218 [hep–th/0608133].

10. A.M. Grundland and L. Šnobl, Surfaces associated with sigma models, Studies in Applied Mathematics 117 (2006) 335–351.

11. A. M. Grundland and L. Šnobl, Description of surfaces associated with Grassmannian sigma models on Minkowski space, J. Math. Phys. 46, (2005) 083508 [math.DG/0501200].

12. L. Šnobl and P. Winternitz, A class of solvable Lie algebras and their Casimir Invariants, J. Phys. A: Math. Gen. 38 (2005) 2687–2700 [math–ph/0411023].

13. L. Hlavatý and L. Šnobl, Poisson–Lie T–plurality of three–dimensional conformally invariant sigma models II: Nondiagonal metrics and dilaton puzzle, J. High Energy Phys. 10 (2004) 045 [hep–th/0408126].

14. A. M. Grundland and L. Šnobl, Description of surfaces associated with CP^{N-1} sigma models on Minkowski space, Journal of Geometry and Physics, 56 (2006) 512–531 [math.DG/0405513].

15. L. Hlavatý and L. Šnobl, Poisson–Lie T–plurality of three–dimensional conformally invariant sigma models, J. High Energy Phys. 05 (2004) 010 [hep–th/0403164].

16. L. Šnobl, On modular spaces of semisimple Drinfeld doubles, J. High Energy Phys. 09 (2002) 018 [hep–th/0204244].

17. L. Šnobl, L. Hlavatý, Classification of 6–dimensional real Drinfeld doubles, Int. J. Mod. Phys. A17 (2002) 4043–4068 [math.QA/0202210].

18. L. Hlavatý L. Šnobl, Classification of Poisson–Lie T–dual models with two–dimensional targets, Mod. Phys. Lett. A17 (2002) 429–434 [hep–th/0110139].

19. L Hlavatý and L Šnobl, Principal chiral models on non–semisimple groups, J. Phys A 34 (2001) 7795–7809.

20. L. Hlavatý, L. Šnobl, Solution of the Yang–Baxter System for Quantum Doubles, Int. J. Mod. Phys. A 14 (1999) 3029–3058.

b) in other peer–reviewed journals and in peer-reviewed conference proceedings (some of them published in special issues of journals included in Web of Science database)

1. L. Šnobl, Maximal solvable extensions of filiform algebras, Archivum mathematicum 47 (2011) 405-414.

2. L. Hlavatý and L. Šnobl, Transformations of conformally invariant sigma models, Proceedings of the 25th Winter School Geometry and Physics, Srni, January 2005, Rend. Cic. Mat. Palermo, Serie II, Suppl. 79 (2006) 111–116.

3. A.M. Grundland and L. Šnobl, Surfaces in su(N) algebra via CP^{N-1} sigma models on Minkowski space, Proceedings of International Conference Symmetry Methods in Physics [CD–ROM]. Dubna: JINR, 2004.

4. L. Šnobl, Modular spaces of low–dimensional Drinfeld doubles, Proceedings of the 23rd Winter School Geometry and Physics, Srni, January 2003, Rend. Cic. Mat. Palermo, Serie II, Suppl. 72 (2004) 193–202.

5. L. Šnobl, L. Hlavatý, Principal chiral models with non–constant metric, Proceedings of 10th International Colloquium on Quantum Groups, Prague, Czech. J. of Phys. 51 (2001) 1441–1446.

6. L. Šnobl, Construction of quantum doubles from solutions of Yang–Baxter system,, Proceedings of 8th International Colloquium on Quantum Groups, Prague, Czech. J. of Phys. 50 (2000) 187–192.