Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG

Name: Gleb Arutyunov
Date of birth: 29.04.1968

Professional employment and academic education:

Since October 2014 Full Professor (W3), Department of Physics, Universität Hamburg
2013 -- 2014 Full Professor (H1), Utrecht University, The Netherlands
2013 -- 2013 Full Professor (H2), Utrecht University, The Netherlands
2012 -- 2013 Full Professor (Professional Chair), Utrecht University, The Netherlands
2006 -- 2012 Associate Professor, Utrecht University, The Netherlands
2005 -- 2006 Assistant Professor, Utrecht University, The Netherlands
2002 -- 2005 Senior Researcher at MPI for Gravitational Physics, Golm, Germany
2000 -- 2002 Postdoctoral fellow at MPI for Gravitational Physics, Golm, Germany
1999 -- 2000 Alexander von Humboldt Fellowship, Department of Physics, Ludwig Maximilian University, Munich, Germany
1998 -- 1999 Fellowship of the Cariplo Foundation for Scientific research, Department of Mathematics, University of Milan, Italy
1997 -- 1998 Scientific staff at Steklov Mathematical Institute, Moscow, Russia
1993 -- 1996 PhD in Theoretical Physics, Steklov Mathematical Institute, Moscow, Russia
1985 -- 1993 Diploma in Physics, Moscow State University, Russia

Honours, distinctions and awards, scholarships, medals:

2006 – 2018 DFG Project SFB 676
2010 -- 2016 The VICI grant of the Netherlands Organization for Scientific Research (NWO) VICI 680-47-602, 1.6M Euro
2009 The paper ''The off-shell symmetry algebra of the light-cone $AdS_5 \times S^5$ superstring'' won the 2009 Journal of Physics A Best Paper Prize
2009 -- 2014 The Utrecht University focus area grant "Foundations of Science"
1999 -- 2000 Alexander von Humboldt Fellowship
1998 – 1999 Fellowship of the Cariplo Foundation for Scientific Research, Italy

Supervisory work:

Since 2002 Supervision of 1 Bachelor student, 25 Master students, 8 PhD students, and 9 PostDocs

Selected academic activities:

2013 – 2014 Director of the Dutch Research School for Theoretical Physics (DRSTP)
2007 – 2013 Director of the Utrecht Summer School for Theoretical Physics

Selected research topics and accomplishments:

Research interests include integrable models, quantum field theory, string theory and gravitational physics. The main achievement of recent years is the construction of the Mirror Thermodynamic Bethe Ansatz which provides a solution of the spectral problem of the $AdS_5 \times S^5$ superstring and of the dual N=4 supersymmetric Yang-Mills theory. The current effort is aimed at developing and applying novel theoretical tools to understand the dynamics of strongly-coupled gauge theories.

Ten selected publications:

1. G. Arutyunov, R. Borsato and S. Frolov, "S-matrix for strings on eta-deformed $AdS_5 \times S^5$," JHEP **1404** (2014) 002, [arXiv:1312.3542 [hep-th]].

2. G. Arutyunov and S. Frolov, "Thermodynamic Bethe Ansatz for the $AdS_5 \times S^5$ Mirror Model," JHEP **0905** (2009) 068, [arXiv:0903.0141 [hep-th]].

3. G. Arutyunov and S. Frolov, "Foundations of the $AdS_5 \times S^5$ Superstring. Part I," J. Phys. A **42** (2009) 254003, [arXiv:0901.4937 [hep-th]].

4. G. Arutyunov and S. Frolov, "Superstrings on $AdS_4 \times CP^3$ as a Coset Sigma-model," JHEP **0809** (2008) 129, [arXiv:0806.4940 [hep-th]].

5. G. Arutyunov, S. Frolov and M. Zamaklar, "The Zamolodchikov-Faddeev algebra for $AdS_5 \times S^5$ superstring," JHEP **0704** (2007) 002, [hep-th/0612229].

6. G. Arutyunov, S. Frolov and M. Zamaklar, "Finite-size Effects from Giant Magnons," Nucl. Phys. B **778** (2007) 1, [hep-th/0606126].

7. G. Arutyunov, S. Frolov and M. Staudacher, "Bethe ansatz for quantum strings," JHEP **0410** (2004) 016, [hep-th/0406256].

8. G. Arutyunov, J. Russo and A. A. Tseytlin, "Spinning strings in $AdS_5 \times S^5$: New integrable system relations," Phys. Rev. D **69** (2004) 086009, [hep-th/0311004].

9. G. Arutyunov and M. Staudacher, "Matching higher conserved charges for strings and spins," JHEP **0403** (2004) 004, [hep-th/0310182].

10. G. Arutyunov, S. Frolov, J. Russo and A. A. Tseytlin, "Spinning strings in $AdS_5 \times S^5$ and integrable systems," Nucl. Phys. B **671** (2003) 3, [hep-th/0307191].