Andrey Smirnov *Curriculum Vitae*

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Contact

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Education

2016 PhD in mathematics, Columbia University, New York (advisor A. Okounkov)

2013 PhD in theoretical physics, MIPT, Moscow (advisor M. Olshanetsky)

Professional Experience

2018-present	Assistant professor, UNC at Chapel Hill (tenure track)
2016–2018	Morrey visiting assistant professor at UC Berkeley
2011–2016	PhD candidate at mathematics department of Columbia University, New York, USA (advisor Prof. Andrei Okounkov)
2009 – 2011	Research assistant, laboratory for mathematical physics, Institute for Theoretical and Experimental Physics (ITEP), Moscow, Russia.
2007 – 2009	Moscow Institute of Physics and Technology (MIPT), Moscow, Russia *M.S. in Physics*, June 2009
2005 – 2007	Moscow Institute of Physics and Technology (MIPT), Moscow, Russia *B.S. in Physics*, June 2007

List of Publications (listed in reverse chronological orded by the date of first arXiv posting)

$*$-refereed publications

1) H. Dinkins, A.Smirnov *Quasimaps to zero-dimensional A_∞-quiver varieties*, arXiv:1912.04834;

2)* H. Dinkins, A.Smirnov *Characters of tangent spaces at torus fixed points and 3d-mirror symmetry*, arXiv:1908.01199, **accepted to Lett. Math. Phys**;

3)* R. Rimányi, A. Smirnov, A. Varchenko, Z. Zhou *Three-Dimensional Mirror Self-Symmetry of the Cotangent Bundle of the Full Flag Variety*, **SIGMA** 15 (2019), 093, 22 pages, arXiv:1906.00134;

4) R. Rimányi, A. Smirnov, A. Varchenko, Z. Zhou *3d Mirror Symmetry and Elliptic Stable Envelopes*, **submitted to IMRN**, arXiv:1902.03677;

5) P. Koroteev, P. Pushkar, A. Smirnov, A. Zeitlin *Quantum K-theory of Quiver Varieties and Many-Body Systems*, arXiv:1705.10419, **submitted to Selecta Mathematica**, pages 1-30, (2017);

6)* P. Pushkar, A. Smirnov, A. Zeitlin, *Baxter Q-operator from quantum K-theory*, **Advances in Mathematics**, Volume 360, in press, 2020 (doi: 10.1016/j.aim.2019.106919);

7)* A.Smirnov, *Elliptic stable envelope for Hilbert scheme of points in the plane*, **Selecta Mathematica**, 26: 3, in press, 2020 (doi: 10.1007/s00029-019-0527-2);

8) A. Smirnov *Rationality of capped descendent vertex in K-theory*, arXiv:1612.01048, **Preprint**, pages 1-31, (2016);

9) A. Okounkov, A. Smirnov *Quantum difference equation for Nakajima varieties*, **submitted to Inventiones Mathematicae** arXiv:1602.09007;

10) A. Smirnov, *Polynomials associated with fixed points on the instanton moduli space*, arXiv:1404.5304; **Preprint**, pages 1-22, (2014);

11)* G. Aminov, S. Arthamonov, A. Smirnov, A. Zotov, *Rational Top and its Classical R-matrix*, **Journal of Physics A: Mathematical and Theoretical**, Volume 47 (2014), pages 1-19, arXiv:1402.3189;

12)* A. Morozov, A. Smirnov, *Towards the proof of AGT relations with the help of the generalized Jack polynomials*, **Letters in Mathematical Physics**, Volume 104, pages 585-612, (2014), arXiv:1307.2576;

13)* A. Mironov, A. Morozov, A. Sleptsov, A. Smirnov, *On genus expansion of superpolynomials*, **Nuclear Physics B**, Volume 889, pages 757-777, (2014), arXiv:1310.7622;

14)* A. Smirnov, *On the Instanton R-matrix*, **Communications in Mathematical Physics**, Volume 345, pages 703-740, (2016) arXiv: 1302.0799;

15)* A. Zotov, A. Smirnov, *Modifications of bundles, elliptic integrable systems, and related topics*, **Theoretical and Mathematical Physics**, Volume 177, pages 1281 - 1338, (2013);

16)* P. Dunin-Barkowski, A. Mironov, A. Morozov, A. Sleptsov, A. Smirnov, *Superpolynomials for toric knots from evolution induced by cut-and-join operators*, **JHEP** 03, 021, pages 1-85, (2013) arXiv:1106.4305;

17)* A. Levin, M. Olshanetsky, A. Smirnov, A. Zotov, *Characteristic Classes of SL(N)-Bundles and Quantum Dynamical Elliptic R-Matrices*, **Journal of Physics A: Mathematical and Theoretical**, 46 pages 1-25, (2013) arXiv:1208.5750;

18)* A. Levin, M. Olshanetsky, A. Smirnov, A. Zotov, *Hecke Transformations of Conformal Blocks in WZW Theory. I. KZB Equations for Non-Trivial Bundles*, **SIGMA**, 8 095, pages 1-37, (2012), arXiv:1207.4386;

19)* D.Galakhov, A.Mironov, A.Morozov, A.Smirnov, *On 3d extensions of AGT relation*, **Theoretical and mathematical Physics**, Volume 172, pages 939-962, (2012) arXiv:1104.2589;

20)* A. Mironov, A. Morozov, Sh. Shakirov, A. Smirnov, *Proving AGT conjecture as HS duality: extension to five dimensions*, **Nuclear Physics B**, Volume 855, pages 128-151, (2011), arXiv:1105.0948;

21)* P. Dunin-Barkowski, A. Sleptsov, A. Smirnov, *Explicit computation of Drinfeld associator in the case of the fundamental representation of gl(N)*, **Journal of Physics A: Mathematical and Theoretical**, 45, pages 1-15, (2012), arXiv:1201.0025;

22)* P. Dunin-Barkowski, A. Sleptsov, A. Smirnov, *Kontsevich integral for knots and Vassiliev invariants*, **International Journal of Modern Physics A**, 28, pages 1-38, (2013), arXiv:1112.5406;

23)* A. Levin, M. Olshanetsky, A. Smirnov, A. Zotov, *Characteristic Classes and Integrable Systems for Simple Lie Groups*, **Journal of Geometry and Physics**, Volume 62, pages 1810–1850, (2010), arXiv:1007.4127;

24)* A. Levin, M. Olshanetsky, A. Smirnov, A. Zotov, *Characteristic Classes and Integrable Systems. General Construction* , **Communications in Mathematical Physics**, Volume 316, pages 1–44, (2012), arXiv:1006.0702;

25)* A. Morozov, A. Smirnov, *Chern-Simons Theory in the Temporal Gauge and Knot Invariants through the Universal Quantum R-Matrix* , **Nuclear Physics B**, Volume 835, pages 284-313, (2010), arXiv:1001.2003;

26)* A. Smirnov, *Notes on Chern-Simons Theory in the Temporal Gauge* , **Proceedings of 47th International School of Subnuclear Physics**, Erice, Italy, pages 489-499, (2009), arXiv:0910.5011;

27)* A. Smirnov, *Degenerate Sklyanin Algebras*, **Central European Journal of Physics**, Volume 8, pages 542-554, (2009), arXiv:0903.1466;

28)* A. Smirnov, *Correspondence between Calogero-Moser systems and integrable SL(N,$\mathbb{C}$) Euler-Arnold tops*, **Theoretical and mathematical Physics**, Volume 158, pages 300-312, (2008), arXiv:0809.2187;

29)* A. Smirnov, *Two body systems from sl(2,C)-tops*, **Theoretical and mathematical Physics**, Volume 157, pages 8-21, (2007), arXiv:0711.2432;

Professional Service

2019-present, Co-organizer of "Physically inspired mathematics seminar" at University of North Carolina.
Summer 2017, I was organizing the Berkeley-Tokyo Summer School on Geometry, Representation Theory and Mathematical Physics (UC Berkeley).
Fall 2016 - present, I am coorganizer of Berkeley String-Math seminar,
In Fall 2013 I was the organizer of graduate students representation theory seminar at Columbia University,

Referee for journals:
Letter in Math. Phys., PRISM, Annales de l'Institut Fourier, Selecta Math., Comm. Math. Phys.