Curriculum Vitae **September 2011**

Tudor Dan Dimofte
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Personal

Date of Birth: 28 September, 1982
Place of Birth: Bucharest, Romania
Nationality: United States & Romania

Research Interests

String theory, quantum field theory, dualities, and relations to mathematics.

Education

Ph.D. Physics, Caltech, 2010
Thesis: *Refined BPS Invariants, Chern-Simons Theory, and the Quantum Dilogarithm*

MASt Theoretical Physics, Cambridge, 2005
Essay: *Inflation and String Theory*

A.B. Mathematics, Princeton, 2004
Thesis: *Bilinear Estimates and the Maxwell-Klein-Gordon Equations*

Honors and Awards

2010 Caltech Clauser Prize for doctoral thesis
2009- Fellow, Trinity College Cambridge
2006-09 U.S. National Defense Science and Engineering Graduate Fellowship
2004-05 Studentship in Mathematics, Trinity College Cambridge
2004 P.A. Greenberg '77 Prize for outstanding accomplishments in mathematics, Princeton
2003 George Wood Legacy Junior Prize (top academic honor), Princeton
2000 U.S. Presidential Scholar

Invited Talks

7/2011 *Tetrahedra, 3-Manifolds, and 3d Gauge Theory*,
KITP Program: Nonperturbative Effects and Dualities in QFT and Integrable Systems

6/2011 *Chern-Simons Theory with Complex Gauge Group* Arbeitstagung, MPIM, Bonn

4/2011 *Liouville Theory and D-Modules*, Rutgers

4/2011 *S-duality and Mirror Symmetry in Chern-Simons Theory*,
Derived Categories Workshop, Cambridge

3/2011 *Gluing Tetrahedra in TQFT, Quantum A-Polynomials, and Chern-Simons Theory*,
Spring School in Geometry and Quantum Topology, Les Diablerets

3/2011 *Modularity in Chern-Simons Theory*,
Conference on Modular Forms and Mock Modular Forms, ICTP, Trieste

2/2011 *A New Perspective on Gluing in TQFT*, Caltech

1/2011 *Quantum Curves in Chern-Simons Theory*, Georgia Tech

11/2010 *Quantum Riemann Surfaces*, King's College, London

10/2010 *Quantum Riemann Surfaces*, CERN

7/2010 *From 2d to 3d and Wall Crossing to Chern-Simons*, Aspen Center for T.P.

3/2010 *Motivic Wall Crossing in Seiberg-Witten Theory*, AMS meeting, Lexington

3/2010 *TQFT and the Volume Conjecture*, Univ. Tokyo

12/2009 *Motivic Wall Crossing in Seiberg-Witten Theory*, UC Berkeley

8/2009 *Refined and Motivic BPS Invariants*, Simons Workshop, SUNY, Stony Brook

5/2009 *Refined and Motivic Wall Crossing*, Focus Week on Wall Crossing, IPMU, Tokyo

4/2009 *Multicenter black holes and refined microstate counting*, Stanford

5/2008 *A hyperbolic state sum model for $SL(2,\mathbb{C})$ Chern-Simons theory*, UC Santa Barbara

Teaching and Related

2009-2010 TA, advanced particle theory, Caltech

2008-2009 Weekly graduate seminar organizer, Caltech

2006 TA, Freshman Summer Institute, Caltech

2005-06 TA (lecturing), classical mechanics and electromagnetism, Caltech

Other Skills and Interests

Programming: Mathematica, C, C++

Languages: English, Romanian, French; some German and Spanish; minimal Japanese

Publications

Gauge Theories Labelled by Three-Manifolds, with D. Gaiotto and S. Gukov, arXiv:1108.4389.

Chern-Simons Theory and S-Duality, with S. Gukov, arXiv:1106.4550.

Quantum Riemann Surfaces in Chern-Simons Theory, arXiv:1102.4847.

Vortex Counting and Lagrangian 3-manifolds, with S. Gukov and L. Hollands, arXiv:1006.0977.

Quantum Field Theory and the Volume Conjecture, with S. Gukov, Contemp. Math. 541 (2011), arXiv:1003.4808.

Quantum Wall Crossing in $\mathcal{N} = 2$ Gauge Theories, with S. Gukov, Y. Soibelman, Lett. Math. Phys., Vol. 95, No. 1 (2011) arXiv:0912.1346.

Refined, Motivic, and Quantum, with S. Gukov, Lett. Math. Phys., Vol. 91, No. 1 (2010), arXiv:0904.1420.

Exact Results for Perturbative Chern-Simons Theory with Complex Gauge Group, with S. Gukov, J. Lenells, and D. Zagier, Comm. Num. Thy. and Phys., Vol. 3, No. 2 (2009), arXiv:0903.2472.

Noncompact quantum knot invariants, in Proceedings of the Cargèse Summer School 2008, Nucl. Phys. B (Proc. Supp.) 136-137 (2009).

Type IIB Flux Vacua at Large Complex Structure, JHEP Vol. 9, 064 (2008), arXiv:0806.0001.