Antoine BOURGET

Personal Data

Place and Date of Birth:	Colombes, France | 3 January 1989
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Work Experience

Current Oct 2018	**Imperial College**, London, UK *Postdoctoral researcher in High Energy Physics* String theory, supersymmetric quantum field theory and mathematical physics.
Sep 2018 Sep 2016	**University of Oviedo**, Spain *Postdoctoral researcher in High Energy Physics* String theory, supersymmetric quantum field theory and mathematical physics.
Aug 2016 Sept 2013	**École Normale Supérieure**, Paris, France *PhD in High Energy Physics* Laboratoire de Physique Théorique de l'ENS (LPTENS).
Aug 2016 Sep 2011	**Ministry of Economic Affairs**, Paris, France *State Engineer of the Mines (Ingénieur du Corps des Mines).*
Aug 2012 Oct 2011	**Fastlite**, Orsay, France *Research Engineer* One full year internship in a technological start-up (non-linear optics, acousto-optics, laser physics).
Jul 2011 Mar 2011	**École Normale Supérieure**, Paris, France *Research internship* Master thesis under the supervision of Jean Iliopoulos. Title: The Higgs mechanism in Quantum Field Theory

Education

Jul 2016	PhD in theoretical physics, École Normale Supérieure, Paris, France *Mention très bien avec les félicitations du jury* Thesis: Modularity and Vacua in $\mathcal{N} = 1^*$ Supersymmetric Gauge Theories Advisor: Jan Troost Examiners: O. Aharony, C. Bachas, A. Hanany, M. Petrini, S.P. Kumar, H. Samtleben
Jun 2013	Master in theoretical physics, École Normale Supérieure, Paris, France *With High Honours*
Sept 2011	École Nationale Supérieure des Mines, Paris, France Admission to the *Corps des Mines* (rank 3).
2008-2011	École Polytechnique, Palaiseau, France Major in Mathematics and Theoretical Physics. GPA: 4.0 Minor in Biology and Mechanics. Admission from the MP* Classe Préparatoire (rank 2).

Teaching

2014-2016	TA in Quantum Mechanics Giving exercise classes for students majoring in Physics at ENS (L3 year). Lecture by Frédéric Chevy.
2015-2016	TA in General Relativity Giving exercise classes for students majoring in Physics at ENS (Master 1). Lecture by Gilles Esposito-Farèse.
2014-2016	Physics For Everyone This course is designed for non scientific students at ENS, and aims at introducing the fundamental concepts of modern physics.

Languages

French:	Mothertongue
English:	Fluent
Spanish:	Fluent
Chinese:	Intemediate

Interests and Activities

Piano (12 years under the supervision of Pr. Anne Goldenberg) · Scientific popularization · European and World History · Orienteering

TALENS : Teaching maths and physics classes to highschool students with high potential as a member of a volunteer organization at ENS.

PUBLICATIONS

1. AB and Jan Troost, *Duality and modularity in elliptic integrable systems and vacua of $\mathcal{N} = 1^*$ gauge theories*, JHEP **1504** (2015) 128.

2. AB and Jan Troost, *Counting the massive vacua of $\mathcal{N} = 1^*$ super Yang-Mills theory*, JHEP **1508** (2015) 106.

3. AB and Jan Troost, *On the $\mathcal{N} = 1^*$ Gauge Theory on a Circle and Elliptic Integrable Systems*, JHEP **01** (2016) 097.

4. AB and Jan Troost, *The Covariant Chiral Ring*, JHEP **03** (2016) 163.

5. AB, *Modularity and Vacua in $\mathcal{N} = 1^*$ Supersymmetric Gauge Theory*, July 2016, PhD thesis.

6. AB and Jan Troost, *The Arithmetic of Supersymmetric Vacua*, JHEP **07** (2016) 036.

7. AB and Jan Troost, *Permutations of Massive Vacua*, JHEP **1705** (2017) 042.

8. AB and Alessandro Pini, *Non-Connected Gauge Groups and the Plethystic Program*, JHEP **1710** (2017) 033.

9. AB, Alessandro Pini, Diego Rodríguez-Gómez, *Towards the deconstruction of the type D (2,0) theory*, JHEP **1712** (2017). arxiv:1710.10247.

10. AB and Jan Troost, *The Conformal Multiplets*, arXiv:1712.05415.

11. AB, Diego Rodríguez-Gómez, Jorge Russo, *A limit for large R-charge correlators in N=2 theories*, arXiv:1803.00580.

12. AB, Alessandro Pini, Diego Rodríguez-Gómez, *The Importance of Being Disconnected, A Principal Extension for Serious Groups*, arxiv:1804.01108.

13. AB, Diego Rodríguez-Gómez, Jorge Russo, *Universality of Toda equation in N=2 superconformal field theories*, arXiv:1810.00840.