

Curriculum Vitae - Antonio Amariti - 11/09/2020

Personal Information

Place of Birth: Milano (MI), Italy
Date of Birth: May 13, 1982
Nationality: Italian
Sex: Male
Spoken Languages: Italian, English
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Private Address: via Moncenisio 8, 20092 Cinisello Balsamo (MI), Italy
Actual position: *INFN 3rd level Researcher* at:
Universita' degli studi di Milano,
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Education

Oct. 2001 – Jul. 2006 Undergraduate studies in Physics, Milano-Bicocca University.
Specialization in Theoretical Physics.

Jul. 2006 Degree in Physics. Thesis title:
Metastable vacua in $SU(N)$ SQCD with adjoint matter.
Advisors: Prof. Luciano Girardello and Prof. Alberto Zaffaroni.
Final degree mark: 110/110 *cum laude*.

Nov. 2006 – Oct. 2009 PhD student at Milano-Bicocca University.
PhD advisor: Prof. Luciano Girardello.

Oct. 2009 PhD degree in Physics. Thesis title: Recent aspects of Seiberg duality:
metastable vacua, stringy instantons and M2 branes
Committee: Prof. Alberto Lerda, Prof. Carlos Nunez and
Prof. Riccardo Argurio

Jobs

Nov. 2009 – Oct. 2012 PostDoc at University of California San Diego
Nov. 2012 – Oct. 2014 PostDoc at ENS, Philippe Meyer Fellowship, Paris
Nov. 2014 – Sep. 2015 PostDoc at ENS, CNRS, Paris
Sep. 2015 – Sep. 2016 PostDoc at CCNY, CUNY, New York
Oct. 2016 – Aug. 2017 PostDoc at AEI, Bern University
Sep. 2017 – Current INFN researcher at University of Milano

Talks and Seminars

- "(2+1)d dualities with $N = 2$ supersymmetry", Review talk for the PRIN2017 program, Pisa, November 2019
- "Recent aspects of 3d $N=2$ dualities", Cern, February 2019
- "Aspects of 4d/2d reductions" Joint ICTP/SISSA string seminar, Trieste, February 2018
- "Aspects of 4d/2d reductions", University of Torino, April 2018
- "Modern aspects of 3d $N=2$ QFTs", Milano, November 2017
- "Introduction to the 3d-3d correspondence", AEI and ITP Bern, February 2017
- "Exact R-symmetry from attractors in Gauged supergravity", ITP Utrecht, November 2016
- "Exact R-symmetry from attractors in Gauged supergravity", ITP Bern, November 2016
- "Global properties of 4d $N=2$ theories and S-duality", UCSD, May 2016
- "Global properties of 4d $N=2$ theories and S-duality", University of Cincinnati, April 2016
- "4d \rightarrow 3d dualities with branes", Bern University, July 13, 2015
- "4d \rightarrow 3d dualities with branes", University of Milano-Bicocca, June 30, 2015
- "4d \rightarrow 3d dualities with branes", UC San Diego, May 13, 2015
- "4d \rightarrow 3d dualities with branes", CCNY, New York, 4 May, 2015
- "Progress on 3d $\mathcal{N} = 2$ dualities", Università di Tor-Vergata, Rome, March 3, 2015
- "Duality in 3D $\mathcal{N} = 2$ ", SUSY 2014, Manchester, July 21, 2014
- "Aspects of 3d $N=2$ dualities: RG flows, localization and contact terms", Crete centre for theoretical physics, April 17, 2014
- "Aspects of $N=2$ duality in three dimensional SUSY gauge theories", Annual symposium, ENS, Paris, October 1, 2013
- "A Zig-Zag Index", Joint Seminars ENS-Jussieu, Paris, May 25, 2013
- "A Zig-Zag Index", Joint Seminars VUB-ULB-Leuven, Lauven, Belgium, March 27, 2013
- "The partition function on the three sphere", ENS, Paris, February, 2013
- "Cluster Algebra and Integrable Dimer Models", Math. department, UCSD, San Diego, May 2012
- "Holographic Optics", Avogadro meeting, GGI, Firenze, Italy, December 20-22, 2010

- “Negative refraction and additional light waves from AdS/CFT”, UCSD, San Diego, CA, USA, November 22 , 2010
- “A new class of supersymmetry breaking vacua from superconformal field theories”, Problemi attuali di fisica teorica, XVI edizione, Vietri Sul Mare, Salerno, Italy, March 26-31 2010
- “Supersymmetry breaking”, Avogadro meeting, SISSA, Trieste, Italy, December 21-23, 2009
- “Seiberg duality for M2 branes and supersymmetry breaking”, UCSD, San Diego, CA, USA, November 17, 2009
- “Spontaneous R symmetry breaking in models of chiral fields” , Journal Club at VUB-ULB, Bruxelles, Belgium, March 10 2009
- “Aspects of Metastable vacua and R -symmetry breaking” , University of Milano-Bicocca, Milan, Italy, February 6 2009
- “Aspects of Metastable vacua and R -symmetry breaking” , Institute for theoretical physics, Utrecht, Holland, December 12 2008
- “Aspects of Metastable vacua and R -symmetry breaking” , UAM and IFT, Madrid, Spain, November 25 2008
- “Aspects of Metastable vacua and R -symmetry breaking” , Swansea University, Wales, UK, November 21 2008
- “Stringy instantons and strong dynamics”, ENS, Paris, France, September 26 2008
- “Stringy instantons and strong dynamics”, Constituents, Fundamental Forces and Symmetries of the Universe, RTN 4th Workshop and Midterm Meeting, September 11-17 2008, Varna, Bulgaria
- “On metastability in $N=1$ gauge theories”, Luciano Girardello Fest, November 23-24 2007, Milano, Italy

Conferences and Schools in Theoretical Physics

- ” Parma School of Theoretical Physics, SNFT06”, September 5-15 2006, Parma, Italy
- ”RTN Winter School on Strings, Supergravity and Gauge Theories”, January 15-19 2007, CERN, Geneva, Switzerland.
- ”Spring school on superstring theory and related topics”, March 22 - March 30 2007, Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy.
- ”String and M theory approaches to particle physics and cosmology”, March 19 - June 22 2007, Galileo Galilei Institute for Theoretical Physics (GGI), Arcetri, Florence, Italy
- ”Constituents, Fundamental Forces and Symmetries of the Universe”, RTN 3rd Workshop and Midterm Meeting, October 1-5 2007, Valencia, Spain

- "RTN Winter School on Strings, Supergravity and Gauge Theories", January 15-19 2008, CERN, Geneva, Switzerland.
- "Spring school on superstring theory and related topics", March 27 - April 4 2008, Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy.
- "Constituents, Fundamental Forces and Symmetries of the Universe", RTN 4th Workshop and Midterm Meeting, September 11-17 2008, Varna, Bulgaria
- "RTN Winter School on Strings, Supergravity and Gauge Theories", February 9-13 2009, CERN, Geneva, Switzerland.
- "Constituents, Fundamental Forces and Symmetries of the Universe", RTN 5rd Workshop and Midterm Meeting, September 2009, Zurich, Switzerland
- "Constituents, Fundamental Forces and Symmetries of the Universe" RTN 5rd Workshop and Midterm Meeting, September 2009, Zurich, Switzerland
- "Cordes, particules et l'univers", XLIIIème Institut d'été, 19-30 August 2013, ENS, Paris
- "Gauge theories: quivers, tilings and Calabi-Yaus" 12-16 May 2014, ICMS, Edinburgh
- "SUSY" 2014, 21-26 July 2014, Manchester
- "Strings, Matrices, Integrability" 18-20 August 2014, ENS, Paris
- "Cordes, particules et l'univers", XLIVème Institut d'été, 21-29 August 2014, ENS, Paris
- "Cordes, particules et l'univers", XLVème Institut d'été, 19-28 August 2015, ENS, Paris
- "The String Theory Universe", 21st European string workshop and 3rd COST MP1210 meeting, 7-11 September 2015, Leuven
- "2016 Simons Summer Workshop in Mathematics and Physics", Simons Center for Geometry and Physics,
- "The String Theory Universe", 22nd European string workshop and FINAL COST MP1210 conference, 20-24 February 2017, Milano-Bicocca

Phd Courses attended

- Models of EWSB - Roberto Contino, University of Milano-Bicocca - February 2007
- CMB Physics - Massimo Giovannini, University of Milano-Bicocca - March 2007
- 2-D Conformal Field Theory - Stephan Detournay, University of Milano - April 2007
- Perturbative QCD - Carlo Oleari, University of Milano-Bicocca - April/June 2007
- Introduction to String Theory - Pedro Silva, University of Milano - May 2007

- Complex Geometry - Stephan Detournay and Dietmar Klemm, University of Milano - April/May 2008
- Generalized Complex Geometry - Michela Petrini, University of Milano - May 2008

Teaching Experiences

- September 2005 - June 2009, Mechanics, Electromagnetism and Thermodynamics. High school “I.I.S. Peano”, Cinisello Balsamo, Milano, Italy.
- June 2012 , Holography and Superconductivity, PhD Course, UCSD , San diego, USA
- September 2013 , $\mathcal{N} = 2$ dualities in three dimensions, Modave Summer School, Belgium
- November 2014 - September 2015, Co-Supervisor of the master thesis of Dr. Luca Cassia and Dr. Carlo Sana, University of Milano-Bicocca (Supervisor Prof. Silvia Penati).
- May 2015, Introduction to D-branes, PhD Course, UCSD, San Diego, USA
- Gravità and Superstringhe II. Master Course, A.A. 2018, University of Milano
- Gravità and Superstringhe II. Master Course, A.A. 2019, University of Milano
- Gravità and Superstringhe II. Master Course, A.A. 2020, University of Milano

Organization of conferences

- “Lucianofest”, conference for the 70-th birthday of Luciano Girardello, University of Milano-Bicocca, October 2007
- “Supersymmetric gauge theories, dualities and deformation”, 1st edition, AEC Bern, July 2017
- “Supersymmetric gauge theories, dualities and deformation”, 2nd edition, AEC Bern, July 2018
- “Theory inTtrona”, Phd School at the “Rifugio Trona Soliva”, September 2019

Grants

- Grant of 20.000 Euro from INFN to the winners of the 2017 INFN concourse.
- Prin2017: grant from the Italian minister of university for the project “supersymmetry breaking with strings and branes” (project coordinated by SNS PISA, with PI Augusto Sagnotti. The other nodes are Padova, Milano-Bicocca and INFN Milano. I am the local PI of this last node.

Mentoring Students

I have co-advised the thesis of the following students

- **Master degree:** Luca Cassia (2015 Milano-Bicocca), Dario Sana (2015 Milano-Bicocca) Andrej Bindi (2019 Milano), Beniamino Spinelli (2019 Milano) , Gianmarco Formigoni (2019 Milano), Andrea Marcassoli (2019 Milano) Dario Sauro (2020 Milano) , Alessia Segati (2020 Milano)
- **Bachelor degree:** Dario Sauro (2017 Milano), Tommaso Armadillo (2019 Milano), Enrico Fornasa (2019 Milano), Francesco Marcolli (2019 Milano), Andrea Zanetti (2019 Milano), Michelangelo Tartaglia (2020 Milano), Andrea Di Pinto (2020 Milano), Omar Samuele Contin (2020 Milano), Giulia Dellea (2020 Milano), Andrea Conti (2020 Milano), Giovanni De Crescenzo (2020 Milano), Andrea Mattiello (2020 Milano), Giacomo Papagni (2020 Milano)
- **PhD degree:** I helped in mentoring the PhD work of Prarit Agarwal (UCSD), David Stone (UCSD), Claudius Klare (Bicocca), Luca Cassia (Bicocca), Ivan Garozzo (Bicocca)