

Curriculum vitae

Lorenzo Bianchi
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Current position

“Rita Levi Montalcini” fellow since January 2021.
Tenure track position at Università degli Studi di Torino.
Via Pietro Giuria 1, 10125, Torino.

Experience

- 2020-2021 **Fellini COFUND fellow**
INFN, Sezione di Torino.
- 2018-2020 **Marie Skłodowska-Curie fellow**
Queen Mary, University of London
327 Mile End Road, London, E1 4NS, UK.
- 2015-2018 **Postdoctoral fellow**
II Institute for Theoretical Physics, DESY/Universität Hamburg

Education

- 2012-2015 **PhD in Theoretical Physics**
Junior Research Group *Gauge Fields from Strings*, Humboldt Universität zu Berlin.
Defense date: 01/10/2015
Final grade: *Summa cum laude*.
Thesis: *Perturbation theory for string sigma models*
Supervisor: Dr. Valentina Forini.
- 2010-2012 **Master of Science in Physics**
Torino University
Discussion date: 20/07/2012
Final grade: *110/110 with honorable mention*.
Thesis: *Amplitudes and Wilson loops in $\mathcal{N} = 4$ SYM theory*
Advisor: Prof. L. Magnea.
- 2007-2010 **Bachelor of Science in Physics**
Torino University
Discussion date: 22/07/2010
Final grade: *110/110 cum laude*
Thesis: *Geometry of free falling and light propagation*
Advisor: Prof. L. Fatibene

Awards and funding

- **Rita Levi Montalcini fellowship** for the project “Strongly interacting conformal defects” - started in January 2021.
- **Dorothy Hodgkin fellowship by The Royal Society**, 5-year fellowship offered and declined in 2020 for the project “Boundaries and defects in Quantum Field Theory ”

- **FELLINI cofund fellowship** won in 2019 for the project “STRINGCODE – STRongly INteractinG COformal DEfects”.
- **Marie Skłodowska-Curie Individual fellowship** won in 2017 for the project “AFFINITY – Amplitudes and Form Factors via INTegrabilitY”.
- **Carl-Ramsauer-Preis 2016** for his PhD thesis “Perturbation theory for string sigma models” awarded by the Berlin Physical Society.
- **Premio G. Preparata 2015** “for his contribution to the perturbative analysis of string theory in AdS backgrounds” awarded by the Italian Physical Society.
- **Premio Optime 2013** awarded by Unione Industriali di Torino.
- **Student scholarship from the School of Superior Studies of Torino** for the period 2010-2012.

Scientific publications

INSPIRE page: <http://inspirehep.net/author/profile/L.Bianchi.1>

Conference talks

1. Invited speaker for the conference “Great lessons from exact results and beyond”, “*Exact results with defects*” University of Padova, September 21, 2020
2. Invited speaker for the virtual conference “Cortona young 2020”, “*Exact results with defects*” May 28, 2020
3. Invited speaker for the conference “Boundaries and Defects in Quantum Field Theory”, “*Shape dependence of superconformal defects*” Perimeter Institute, Waterloo Ontario, August 8, 2019
4. Invited plenary speaker for the “Amplitudes 2019” conference, “*Loop recursion and dual conformal symmetry for form factors*” Trinity College, Dublin, July 4, 2019
5. Invited speaker for the South East Mathematical Physics Seminar, “*Loop recursion and dual conformal symmetry for form factors*” University of Hertfordshire, May 29, 2019.
6. Invited speaker for the “Mini-workshop on supersymmetric Wilson loops and related topic”, “*Wilson lines and superconformal defects*” Modena, May 15, 2019.
7. Conference talk at “New frontiers in theoretical physics”, “*Line defects and emitted radiation for $\mathcal{N} = 2$ theories*” Cortona, May 24, 2018
8. Invited conference lecture, “*String sigma models and integrability*” Avogadro Meeting, Padova, December 20, 2017.
9. Conference talk, “*Bremsstrahlung function for ABJM theory*” Young Researcher integrability School and Workshop, Dublin, March 3rd, 2017.
10. Conference talk, “*Green-Schwarz superstring on the lattice*” DESY theory workshop, Hamburg, September 29th, 2016
11. Conference talk, “*Rényi entropy and conformal defects*” New frontiers in theoretical physics, Florence, May, 2016
12. Conference talk, “*Rényi entropy and conformal defects*” Nordic string meeting, Bremen, March 14th, 2016

13. Invited speaker at Berlin Oxford Meeting 2015 *"Deep inelastic scattering in $\mathcal{N} = 4$ super Yang-Mills"*
HU Berlin, February 27, 2015
14. Invited speaker at Turin Lattice Meeting 2014, *"String sigma-model perturbation theory and beyond"*
Università di Torino, December 22, 2014
15. Conference talk at "New frontiers in theoretical physics", *"Unitarity methods for scattering in 2d"*
Cortona, May 28, 2014
16. Speaker at the workshop "Strongly coupled gauge theories", *"Infrared safe observables in $\mathcal{N} = 4$ SYM"*
King's College London, February 10-14, 2014

Invitations as seminar speaker

1. *"Exact results with defects"*, Uppsala University, December 2, 2020
2. *"Symmetries and surfaces"*, University of Southampton, December 4, 2019
3. *"Symmetries and surfaces"*, EPFL, Lausanne, November 25, 2019
4. *"Symmetries and surfaces"*, LMU, Munich, November 21, 2019
5. *"Symmetries and surfaces"*, Imperial College, London, November 19, 2019
6. *"Symmetries and surfaces"*, Università di Milano Bicocca, October 14, 2019
7. *"Symmetries and surfaces"*, CERN, October 1, 2019
8. *"Shape deformations of superconformal defects"*, ETH Zürich, April 3, 2019
9. *"Line defects and emitted radiation"*, Università di Parma, November 14, 2018
10. *"Line defects and emitted radiation"*, City, University of London, October 2, 2018
11. *"Line defects and emitted radiation"*, DESY Hamburg, August 29, 2018
12. *"Line defects and emitted radiation"*, Università di Torino, June 12, 2018
13. *"Wilson loops as superconformal defects in ABJM theory"*, Durham University, November 24, 2017
14. *"Conformal defects: from entanglement to emitted radiation"*, University of Uppsala, March 21, 2017.
15. *"Perturbative and numerical aspects of AdS string sigma models"*, Queen Mary, University of London, January, 2016
16. *"Sigma-model perturbation theory and unitarity methods"*, IPhT, Saclay, November 14, 2014
17. *"Sigma-model perturbation theory and unitarity methods"*, École Normale Supérieure, Paris, November 12, 2014
18. *"Sigma-model perturbation theory and unitarity methods"*, Università di Torino, October 21, 2014

Teaching experience

- Teaching assistance for the course "Advanced Quantum Mechanics"
Hamburg University, winter semester 2016/2017.
- Teaching assistance for the course "Introduction to String Theory"
Humboldt University Berlin, summer semester 2014/2015.
- Teaching assistance for the course "Theoretical Introduction to the Standard Model"
Humboldt University Berlin, winter semester 2014/2015
- Teaching assistance for the course "Introduction to String Theory"
Humboldt University Berlin, winter semester 2013/2014.

- Tutoring for the course “Mathematical Methods for physics”
Torino University, Department of Physics, 2012.
- Tutoring for the course “Physics I”
Torino University, Department of Mathematics, 2012.
- Tutoring for the course “General physics”
Torino University, Department of Biology, 2011.

Organization of Conferences

- Organiser of the **kick-off meeting for the Innovative Training Network SAGEX**.
- Organiser of the **International Conference of Physics Students 2017** as Head of the Scientific Committee.

Reviewer experience

- Referee for the **Journal of High Energy Physics**.
- Referee for the **Journal of Physics A**.
- Referee for the **Nuclear Physics B**.
- Reviewer for the **American Mathematical Society**.

Outreach experience

1. Outreach public talk on a social event “Aperitivo Scientifico” organized by the Italian Association of Physics Students, March 2018.
2. Author of the outreach article “Stephen Hawking had pinned the hopes on M-theory to fully explain the universe - here’s what it is” on the web journal “The conversation”.
3. Author of the leaflet “The idea of vibrating strings” by the European Network GATIS
4. Collaboration to the movie “What is gauge theory” by the European Network GATIS
5. Conference talk at ICPS 2015, “*Holographic strings*”.
Zagreb University, August 14, 2015
6. Conference talk at ICPS 2014, “*Why strings?*”, price as third best speaker.
Heidelberg University, August 11, 2014
7. Conference talk at ICPS 2013, “*Living in a conformal world*”
Heriott-Watt University Edinburgh, August 20, 2013
8. Conference talk at ICPS 2012, “*Geometry of gauge invariance*”, price as second best speaker.
University of Utrecht, August 9, 2012
9. Conference talk at ICPS 2011, “*Conformal invariance and Weyl geometry*”
University of Budapest, August, 2011

Administration experience

- Organizer of the theory colloquia for the Academic Year 2020/21 at Università di Torino.
- Organizer of the local string seminar series for the Academic Year 2019/20 at Università di Torino.
- Organizer of the local seminar series for the Academic Years 2018/19 and 2019/20 at Queen Mary University of London.

- Senator of Students in the period 2009-2011, University of Torino.
- Students' Union Representative in the period 2009-2011, Faculty of Science, University of Torino.
- Students' Union Representative in the period 2009-2011, Course of study in Physics, University of Torino.

Languages

Italian (native), English (fluent), German (basic), French (basic).