

Curriculum Vitæ

<u>Name</u> :	Giulio Bonelli
<u>Nationality</u> :	Italian
<u>Date and place of birth</u> :	13 December 1968, Venezia (Italy)
<u>Current Position</u> :	Since December 2014 Associate Professor at SISSA/ISAS – Trieste (ITALY)
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Current Research keywords: Non perturbative aspects and geometry of String and Quantum Field Theories.

Previous Positions

- *December 2010 - November 2014*: Ricercatore at SISSA/ISAS – Trieste (ITALY)
- *December 2004 - November 2010*: Research Associate at SISSA/ISAS – Trieste (ITALY)
- *December 2002 - November 2004*: Marie Curie Postdoc at U.L.B. Service de Physique théorique et mathématique – University of Bruxelles
- *October 2001 - November 2002*: Post-Doc of the RTN network “The quantum structure of spacetime and the geometric nature of fundamental interactions” at U.L.B. and V.U.B. Brussels Universities (as sub-nodes of K.U.L. - Leuven University)
- *November 1999 - September 2001*: Post-Doc at Spinoza Institute – Utrecht University.

Collaborations with other institutes

- *2011 – 2013*: Director’s consultant at I.C.T.P. – Trieste (ITALY)
- *2013 – 2016*: ”Responsabile Locale di Iniziativa Specifica I.N.F.N.” for ST&FI (Gr. IV)
- *Since 2017*: ”Responsabile Nazionale di Iniziativa Specifica I.N.F.N.” for ST&FI (Gr. IV)

Qualifications

- *Since 2018*: Coordinator of the Theoretical Particle Physics Ph.D. curriculum at SISSA - Head of research group
- *Since 2018*: Member of the scientific board of the ICTP/SISSA joint Institute for Geometry and Physics

Grants Obtained

- *December 2002 - November 2004*: Marie Curie Postdoctoral grant.
- *May 2005 - April 2006*: Marie Curie European Reintegration Grant

Education

- *October 1996 - October 1999* Ph.D. in Elementary Particle Physics at SISSA (Trieste - Italy). Supervisor: Prof. L. Bonora (SISSA/ISAS)
Ph.D. thesis title: “*Issues in Matrix String Theory*”.
- *February 1993*: *Laurea (Degree)* in Theoretical Physics at the University of Padova (Italy). Supervisor : Prof. G.F. Sartori and Prof. M.Matone (Padova University)
Laurea thesis title: “*Quantum Groups In D=2 Integrable Field Theories*”

Events Organization

- May 12-14, 2004: First Solvay Workshop “Higher Spin Gauge Theories” – U.L.B. Bruxelles.
- Nov. 20-22 2006: “Miniworkshop on Topological Strings and Black Holes” – SISSA Trieste.
- *Sept. 8-12 2008*: MISGAM Workshop/School “From integrable structures to topological strings and back” – SISSA Trieste
- *Dec. 17-19 2008*: IVth Avogadro Meeting on Theoretical Physics – SISSA Trieste
- *Dec. 21-23 2009*: Vth Avogadro Meeting on Theoretical Physics – SISSA Trieste
- *Sept. 28-30 2011*: Geometric Correspondences of Gauge Theories I – SISSA Trieste
- *Jan. 9-11 2012*: INFN meeting on Theories of Fundamental Interactions – SISSA Trieste
- *Mar. 30 - Apr. 2 2012*: Problemi Attuali di Fisica Teorica XIIX – Vietri (Sa) Italy
- *Sept. 17-21 2012*: Geometric Correspondences of Gauge Theories II – SISSA Trieste
- *Sept. 9-13 2013*: ICTP/SISSA Workshop ”Geometric Correspondences of Gauge Theories” – ICTP Trieste
- *Sept. 15-19 2014*: Geometric Correspondences of Gauge Theories IV – SISSA Trieste
- *July 1-2 2015*: ASPECTS OF GAUGE AND STRING THEORIES: A conference in honour of the 70th birthday of Lorianò Bonora – SISSA Trieste
- *July 6-10 2015*: Geometric Correspondences of Gauge Theories V – SISSA Trieste
- *Mar. 18-20 2016*: Problemi Attuali di Fisica Teorica XXII – Vietri (Sa) Italy
- *Sept. 12-16 2016*: ICTP/SISSA Workshop ”Geometric Correspondences of Gauge Theories” – ICTP Trieste
- *July 6-10 2017*: Geometric Correspondences of Gauge Theories VII – SISSA Trieste
- *September 11-13 2017* Fifth Meeting of the INFN Networks GAST, GSS and ST&FI, ”Theories of the Fundamental Interactions” – Torino - Italy
- *June 11-15 2018*: Geometric Correspondences of Gauge Theories VIII – SISSA Trieste
- *Apr 02 - May 11 2018* : Supersymmetric Quantum Field Theories in the Non-perturbative Regime – Workshop at Galileo Galilei Institute (Firenze)
- *Aug 27 - Sept 7 2018*: Workshop on Geometric Correspondences of Gauge Theories at the Erwin Schrödinger Institute for Mathematics and Physics (Wien)
- *June 17-21 2019*: Geometric Correspondences of Gauge Theories IX – SISSA Trieste
- *October 22-23 2019* Sixth Meeting of the INFN Networks GAST, GSS and ST&FI, ”Theories of the Fundamental Interactions” – Torino - Italy
- *Sept. 2020*: Geometric Correspondences of Gauge Theories X – SISSA Trieste [Zoom Event]

Teaching Experience

- *Since 2021* “Quantum Field Theory III” at HE-curriculum SISSA/ISAS
- *2016-2020* “String Theory I” at HE-curriculum SISSA/ISAS - Trieste
Content of the course: “STRING THEORY” Vol. 1 by J. Polchinski

- *2011-2015* “String Theory” at HE-curriculum SISSA/ISAS - Trieste
in cooperation with L. Bonora. Content of the course: Basics in light-cone quantization, BRST quantization, basic amplitudes computations, superstring spectra, compactifications of Field and String Theories, Calabi-Yau manifolds, D-branes, Dualities in field and string theories, gauge/string correspondence.
- *2011-2012* “Introduction to Lie groups and Lie algebras” at ICTP Diploma course in HE - Trieste
Content of the course: Basics in the Theory of Lie groups and Lie algebras, their representation theory and applications to quantum mechanics.
- *2009-2011*: “Non-perturbative effects in QFT” at HE Ph.D.-curriculum SISSA/ISAS - Trieste
Content of the course: Introduction on solitons and instantons, the 4D YM instantons: ADHM parameterization, introduction to multi-instanton calculus, application to the Affleck-Dine-Seiberg potential
- *2005-2010*: “String theory II” at HE Ph.D.-curriculum SISSA/ISAS - Trieste
Content of the course: Compactifications of Field and String Theories, Calabi-Yau manifolds, D-branes, Dualities in field and string theories, gauge/string correspondence, AdS/CFT correspondence, sigma-models and mirror symmetry.
- *February 2006* “Mini-course on Topological Strings” at ULB - Bruxelles
- *August 2006* “Introduction to String Theory” - School on Particle Physics, Gravity and Cosmology (Dubrovnik).

Seminars and Study groups organisation

- 2002-2004: Coorganizer (with G.Barnich at PMIF - Bruxelles) at ULB of the study group “On String Field Theories”.
- From 2005 to 2009: organizer of the weekly HE group seminar.
- 2006-2007: Coorganizer (with A.Tanzini at SISSA Math. Phys.) at SISSA of the study group “On Topological String Theories”.
- Since 2018: Coorganizer (with A.Tanzini at SISSA Math. Phys.) at SISSA/IGAP of the ”Geometry and Physics Seminars”

Students tutoring

- Ph.D. tutor at SISSA of Cristoforo Iossa (MP) expected to graduate in 2023
- Ph.D. tutor at SISSA of Daniel Panea Lichtig (TPP) expected to graduate in 2023
- Ph.D. tutor at SISSA of Fran Globlek (MP) expected to graduate in 2022
- Ph.D. tutor at SISSA of Nadir Fasola (MP) expected to graduate in 2020
- Ph.D. tutor at SISSA of Fabrizio Del Monte (TPP) graduated in 2020 [Postdoc from 2020 at Concordia Univ. Montreal]
- Ph.D. tutor at SISSA of Mengqi Zhu (TPP) graduated in 2018.
- Ph.D. tutor at SISSA of Matteo Poggi (TPP) graduated in 2018 [Then KIAS - Seoul]
- Ph.D. tutor at SISSA of Massimiliano Ronzani (MP) graduated in 2016 [Then Univ. of Geneva]
- Ph.D. tutor at SISSA of Adytia Bawane (MP) graduated in 2017.[Then KIAS - Seoul]
- Ph.D. tutor at SISSA of Antonio Sciarappa (TPP) graduated in 2015.[Then KIAS - Seoul]

- Ph.D. tutor at SISSA of Petr Vasko (TPP) graduated in 2015. [Then Nat. Univ. of Singapore]
- Ph.D. tutor at SISSA of Zhao Jian (HE) graduated in 2012.[Then Bank of Scotland.]
- Ph.D. tutor at SISSA of Andrea Prudenziati (HE) graduated in 2010. [Then Yukawa Institute Kyoto]
- Ph.D. tutor at SISSA of Houman Safaai (HE) graduated in 2009. [Then moved to Neuroscience - now Harvard Univ.]
- Laurea tutor of Enrico Goi (University of Trieste) graduated with full marks cum laude (2007). [Then Ph.D. Student in Saclay-CEA]

Referee

He serves as referee for JHEP, NPB and other journals. Project evaluator for APS and for Polish and Romanian governmental agencies.

List of Publications

References

- [1] G. Bonelli, N. Fasola, A. Tanzini and Y. Zenkevich, [arXiv:2011.02366 [hep-th]].
- [2] G. Bonelli, F. Fucito, J. F. Morales, M. Ronzani, E. Sysoeva and A. Tanzini, [arXiv:2007.15468 [hep-th]].
- [3] G. Bonelli, F. Del Monte and A. Tanzini, [arXiv:2007.11596 [hep-th]].
- [4] G. Bonelli, N. Fasola and A. Tanzini, [arXiv:1911.12787 [math.AG]].
- [5] G. Bonelli, F. Del Monte, P. Gavrylenko and A. Tanzini, [arXiv:1909.07990 [hep-th]].
- [6] G. Bonelli, N. Fasola and A. Tanzini, [arXiv:1907.02771 [hep-th]].
- [7] G. Bonelli, F. Del Monte, P. Gavrylenko and A. Tanzini, Commun. Math. Phys. **377** (2020) no.2, 1381-1419 doi:10.1007/s00220-020-03743-y [arXiv:1901.10497 [hep-th]].
- [8] F. Benini, G. Bonelli, M. Poggi and A. Tanzini, JHEP **07** (2019), 068 doi:10.1007/JHEP07(2019)068 [arXiv:1807.08482 [hep-th]].
- [9] G. Bonelli, N. Doroud and M. Zhu, JHEP **06** (2018), 149 doi:10.1007/JHEP06(2018)149 [arXiv:1804.10967 [hep-th]].
- [10] G. Bonelli, A. Grassi and A. Tanzini, Lett. Math. Phys. **109** (2019) no.9, 1961-2001 doi:10.1007/s11005-019-01174-y [arXiv:1710.11603 [hep-th]].
- [11] A. Bawane, S. Benvenuti, G. Bonelli, N. Muteeb and A. Tanzini, JHEP **07** (2019), 040 doi:10.1007/JHEP07(2019)040 [arXiv:1710.06283 [hep-th]].
- [12] G. Bonelli, A. Grassi and A. Tanzini, Annales Henri Poincare **19** (2018) no.3, 743-774 doi:10.1007/s00023-017-0643-5 [arXiv:1704.01517 [hep-th]].
- [13] G. Bonelli, O. Lisovyy, K. Maruyoshi, A. Sciarappa and A. Tanzini, doi:10.1007/s11005-017-0983-6 [arXiv:1612.06235 [hep-th]].
- [14] M. Bershtein, G. Bonelli, M. Ronzani and A. Tanzini, J. Geom. Phys. **118** (2017), 40-50 doi:10.1016/j.geomphys.2017.01.012 [arXiv:1606.07148 [hep-th]].
- [15] S. Benvenuti, G. Bonelli, M. Ronzani and A. Tanzini, JHEP **09** (2016), 053 doi:10.1007/JHEP09(2016)053 [arXiv:1606.03036 [hep-th]].

- [16] G. Bonelli, A. Grassi and A. Tanzini, *Lett. Math. Phys.* **107** (2017) no.1, 1-30 doi:10.1007/s11005-016-0893-z [arXiv:1603.01174 [hep-th]].
- [17] M. Bershtein, G. Bonelli, M. Ronzani and A. Tanzini, *JHEP* **07** (2016), 023 doi:10.1007/JHEP07(2016)023 [arXiv:1509.00267 [hep-th]].
- [18] G. Bonelli, A. Sciarappa, A. Tanzini and P. Vasko, *J. Geom. Phys.* **109** (2016), 3-43 doi:10.1016/j.geomphys.2015.10.001 [arXiv:1505.07116 [hep-th]].
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Editorial Activity

- Editor of the Proceedings of the First Solvay Workshop “Higher Spin Gauge Theories” – Bruxelles (May 2004).

Other Publications

- He collaborated to the “*Concise Encyclopedia on SUPERSYMMETRY and noncommutative structures in mathematics and physics*”, Editors: P.Fayet, J. Gates, S. Duplij; Kluwer Academic Publishers, Dordrecht.