DIEGO TRANCANELLI

CONTACT INFORMATION

Dipartimento di Scienze Fisiche, Informatiche e Matematiche (FIM)
University of Modena & Reggio Emilia (UniMORE)
Via G. Campi 213/a, Modena 41125, Italy
email: diego.trancanelli@unimore.it
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website: https://unimore.unifind.cineca.it/resource/person/150275

RESEARCH INTERESTS

String theory, quantum field theory, gravity

EDUCATION

Stony Brook University, Stony Brook NY, USA

Ph.D. in Physics, May 2007

- Dissertation topic: *Studies in gauge/string dualities*
- Advisor: Martin Roček

University of Perugia, Perugia, Italy

Laurea in Fisica Teorica e Generale (110/110 e lode), May 2001

- Thesis topic: *Chiral condensate of 2-dimensional QCD*
- Advisor: Gianluca Grignani

Humboldt University, Berlin, Germany

Erasmus visiting student

Liceo Classico "A. Mariotti", Perugia, Italy

Maturità classica (60/60)

PROFESSIONAL EXPERIENCE

University of Modena & Reggio Emilia, Modena, Italy

Associate professor (abilitato ASN Prima Fascia), Jan. 2019 - present

INFN Sezione di Bologna, Bologna, Italy

Associate researcher, Jan. 2019 - present

University of São Paulo, São Paulo, Brazil

Associate professor *(livre docente)*, Sep. 2013 - Dec. 2022 (on leave of absence from Jan. 2019)

University of São Paulo, São Paulo, Brazil

Assistant professor, Oct. 2011 - Sep. 2013

University of Wisconsin Madison, Madison WI, USA

Postdoctoral scholar, Sep. 2010 - Aug. 2011

University of California Santa Barbara, Santa Barbara CA, USA

Postdoctoral scholar, Sep. 2007 - Aug. 2010

Italian Civil Service *(Servizio Civile)*, Perugia, Italy

Jul. 2001 - Apr. 2002

Fellowships and Awards

Abilitazione Scientifica Nazionale (ASN), professore di prima fascia (Ministero Università e Ricerca), Settore Concorsuale 02/A2 *Fisica Teorica delle Interazioni Fondamentali*,
Nov. 2024 - Nov. 2036

Galileo Galilei Institute (GGI) Florence, Affiliated member,
2022 - present

Brazilian National Research Council (CNPq), *Bolsa de produtividade* level 1D,
Mar. 2020 - Feb. 2024

Abilitazione Scientifica Nazionale (ASN), professore di prima e seconda fascia (MIUR), Settore Concorsuale 02/A2 *Fisica Teorica delle Interazioni Fondamentali*,
Mar. 2017 - Mar. 2029

Brazilian Academy of Sciences, Elected junior member *(membro afiliado)*,
2014

Livre Docência, University of São Paulo,
Sep. 2013

Brazilian National Research Council (CNPq), *Bolsa de produtividade* level 2,
Oct. 2011 - Feb. 2020

Peter B. Kahn award, Stony Brook University,
May 2006

Fulbright fellowship (declined),
Aug. 2001

Post-laurea research fellowship, University of Perugia,
May 2001 - May 2002

Erasmus fellowship, Humboldt-Universität zu Berlin,
Aug. 1999 - Sep. 2000

Professional Activities

Organization of *1st International Conference on Modern Mathematical Physics*, Hangzhou, China, Oct. 2026

Organization of *Holography@25*, ICTP-SAIFR São Paulo, Brazil, Jun. 2023

Organization of *Strings 2021*, São Paulo, Brazil, Jun. 2021

Organization of *Integrability in Gauge and String Theory (IGST)*, ICTP-SAIFR São Paulo, Brazil, Aug. 2020

Organization of the *Mini-workshop on Wilson loops and related topics*, UniMORE, Italy, May 2019

Organization of the *Non-perturbative effects in supersymmetric field theories* school and workshop, IIP Natal, Brazil, Oct. 2018

Organization of the *Latin American workshop on gravity and holography*,
ICTP-SAIFR São Paulo, Brazil, Jun. 2018

Organization of the *XIX Swieca School on Particles and Fields*, Maresias, Brazil, Feb. 2017

Organization of schools and workshops at the ICTP-SAIFR São Paulo, Brazil:
Non-perturbative QCD: hadron structure and hadronic matter, *School and Workshop on random geometries and random matrices*, *School on AdS/CMT correspondence*, Jan. 2013 - present

Organization of the *Colloquia* at the Dept. of Mathematical Physics at USP, Brazil, Jan. 2012 - Dec. 2012

Organization of the *High Energy/Gravity Seminar* at UCSB, USA, Sep. 2008 - Aug. 2009

Scientific referee for the following journals:
Journal of High Energy Physics (JHEP), *Physical Review Letters (PRL)*, *Physical Review D (PRD)*, *Physical Review B (PRB)*, *European Journal of Physics C (EJPC)*, *Physics Letters B (PLB)*, *Brazil-*

ian Journal of Physics, *Journal of Physics A: Mathematical and Theoretical*, *Classical and Quantum Gravity*, *Mathematical Reviews*, *European Physical Journal Plus (EPJP)*, *SciPost*,
Aug. 2007 - present

Scientific referee for *Cambridge University Press (CUP)*,
Sep. 2013 - present.

Editor at:
Modern mathematical physics,
Jan. 2025 - present.

Scientific referee for the following Brazilian funding agencies:
Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP), *Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq)*, *Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES)*,
Jan. 2012 - present.

Scientific referee for the following European funding programs:
Physics for Future (P4F): Marie Curie-Sklodowska postdoctoral programme (MSCA),
Oct. 2025 - present.

Member of examining committees at:
University of São Paulo (USP), numerous MSc and PhD exams; *State University of São Paulo (IFT-UNESP)*, numerous MSc and PhD exams; *Università degli Studi di Milano-Bicocca*, PhD exam XXXIV cycle; *Università degli Studi di Parma*, PhD exam XXXIV cycle.

Member of examining committees at:
Concorso ordinario scuola secondaria superiore – area A020 (Fisica) Emilia Romagna (presidente di commissione), Jun. 2022.

Member of examining committees at:
Concorso per posizione RTDb – Università degli Studi di Catania, Feb. 2024.

Member of examining committees at:
Semestre filtro di Medicina (area fisica), 2025.

Publications

1. M. S. Bianchi, L. Castiglioni, S. Penati, M. Tenser, D. Trancanelli
Strong coupling dynamics of defect RG flows in ABJM,
arXiv:2604.11896 [hep-th].
2. M. S. Bianchi, L. Castiglioni, S. Penati, M. Tenser, D. Trancanelli
Framed defects in ABJ(M),
Phys. Rev. D **113** (2026) 026027 [arXiv:2508.21068 [hep-th]].
3. L. Castiglioni, S. Penati, M. Tenser, D. Trancanelli
Conformal defects and RG flows in ABJM,
PoS CORFU2024 (2025) 345 [arXiv:2502.15877 [hep-th]].
4. M. S. Bianchi, L. Castiglioni, S. Penati, M. Tenser, D. Trancanelli
Framing fermionic Wilson loops in ABJ(M),
JHEP **2412**, 053 (2024) [arXiv:2410.10970 [hep-th]].
5. R. G. Pozzi and D. Trancanelli,
Bootstrap of the defect 1/2 BPS Wilson lines in N=4 Chern-Simons-matter theories,
Phys. Rev. D **110** (2024) 066006 [arXiv:2406.13571 [hep-th]].
6. L. Castiglioni, S. Penati, M. Tenser, D. Trancanelli
Interpolating Bremsstrahlung function in ABJM,
Phys. Rev. D **109** (2024) 126010 [arXiv:2312.13283 [hep-th]].
7. L. Castiglioni, S. Penati, M. Tenser, D. Trancanelli
Wilson loops and defect RG flows in ABJM,

JHEP **2306**, 157 (2023) [arXiv:2305.01647 [hep-th]].

8. L. Castiglioni, S. Penati, M. Tenser, D. Trancanelli
Interpolating Wilson loops and enriched RG flows,
JHEP **2308**, 106 (2023) [arXiv:2211.16501 [hep-th]].
9. N. Drukker, Z. Kong, M. Probst, M. Tenser and D. Trancanelli
Classifying BPS bosonic Wilson loops in 3d N=4 Chern-Simons-matter theories,
JHEP **2211**, 163 (2022) [arXiv:2210.03758 [hep-th]].
10. I. Jana, F. Montorsi, P. Padmanabhan and D. Trancanelli
Topological Quantum Computation on Supersymmetric Spin Chains,
JHEP **2302**, 251 (2023) [arXiv:2209.03822 [quant-ph]].
11. N. Drukker, Z. Kong, M. Probst, M. Tenser and D. Trancanelli
Conformal and non-conformal hyperloop deformations of the 1/2 BPS circle,
JHEP **2208**, 165 (2022) [arXiv:2206.07390 [hep-th]].
12. N. Drukker, M. Tenser and D. Trancanelli
Notes on hyperloops in $\mathcal{N} = 4$ Chern-Simons-matter theories,
JHEP **2107**, 159 (2021) [arXiv:2012.07096 [hep-th]].
13. P. Padmanabhan, F. Sugino and D. Trancanelli
Local invariants of braiding quantum gates – associated link polynomials and entangling power,
J. Phys. A **54** (2021) 135301 [arXiv:2010.00270 [quanth-ph]].
14. P. Padmanabhan, F. Sugino and D. Trancanelli
Generating W states with braiding operators,
Quant. Inf. & Comp., vol 20, No. 13 & 14 (2020) [arXiv:2007.05660 [quanth-ph]].
15. P. Padmanabhan, F. Sugino and D. Trancanelli
Braiding quantum gates from partition algebras,
Quantum 4, 311 (2020) [arXiv: 2003.00244 [quanth-ph]].
16. P. Padmanabhan, F. Sugino and D. Trancanelli
Quantum entanglement, supersymmetry, and the generalized Yang-Baxter equation,
Quant. Inf. & Comp., vol. 20, No. 1 & 2 (2020) [arXiv:1911.02577 [quant-ph]].
17. N. Drukker, D. Trancanelli, *et al.*
Roadmap on Wilson loops in 3d Chern-Simons-matter theories,
J. Phys. A **53** (2020) 17 [arXiv:1910.00588 [hep-th]].
18. M. Cooke, A. Dekel, N. Drukker, D. Trancanelli and E. Vescovi,
Deformations of the circular Wilson loop and spectral (in)dependence,
JHEP **1901**, 076 (2019) [arXiv:1811.09638 [hep-th]].
19. C. Bercini and D. Trancanelli,
Supersymmetric integrable models from no particle production,
Phys. Rev. D **97** (2018) 105013 [arXiv:1803.03612 [hep-th]].
20. M. Preti, D. Trancanelli and E. Vescovi,
Quark-antiquark potential in defect conformal field theory,
JHEP **1710**, 079 (2017) [arXiv:1708.04884 [hep-th]].
21. P. Padmanabhan, S. J. Rey, D. Teixeira and D. Trancanelli,
Supersymmetric many-body systems from partial symmetries: integrability, localization and scrambling,
JHEP **1705**, 136 (2017) [arXiv:1702.02091 [hep-th]].
22. A. Prudenziati and D. Trancanelli,
Replica trick and string winding,
Phys. Rev. D **96** (2017) 026009 [arXiv:1610.07618 [hep-th]].

23. D. Avila, D. Fernandez, L. Patiño and D. Trancanelli,
Thermodynamics of anisotropic branes,
JHEP **11** (2016) 132 [arXiv:1609.02167 [hep-th]].

24. A. Faraggi, L. A. Pando Zayas, G. A. Silva and D. Trancanelli,
Toward precision holography with supersymmetric Wilson loops,
JHEP **1604**, 053 (2016) [arXiv:1601.04708 [hep-th]].

25. D. Trancanelli,
Physical quantities and dimensional analysis: from mechanics to quantum gravity,
Rev. Bras. Ens. Fis., Vol. 38, N. 2 (2016) [arXiv:1511.02684 [physics.ed-ph]].

26. M. Cooke, N. Drukker and D. Trancanelli,
A profusion of $1/2$ *BPS Wilson loops in* $\mathcal{N} = 4$ *Chern-Simons-matter theories,*
JHEP **1510**, 140 (2015) [arXiv:1506.07614 [hep-th]].

27. D. H. Correa, F. I. S. Massolo and D. Trancanelli,
Cusped Wilson lines in symmetric representations,
JHEP **1508**, 091 (2015) [arXiv:1506.01680 [hep-th]].

28. V. Jahnke, A. S. Misobuchi and D. Trancanelli,
Holographic renormalization and anisotropic black branes in higher curvature gravity,
JHEP **1501**, 122 (2015) [arXiv:1411.5964 [hep-th]].

29. V. Jahnke, A. S. Misobuchi and D. Trancanelli,
Chern-Simons diffusion rate from higher curvature gravity,
Phys. Rev. D **89**, 107901 (2014) [arXiv:1403.2681 [hep-th]].

30. D. Trancanelli,
Observables of a strongly coupled anisotropic plasma,
Dissertation for the *Livre docência* diploma, University of São Paulo, 2013.

31. V. Jahnke, A. Luna, L. Patino and D. Trancanelli,
More on thermal probes of a strongly coupled anisotropic plasma,
JHEP **1401**, 149 (2014) [arXiv:1311.5513 [hep-th]].

32. L. Patino and D. Trancanelli,
Thermal photon production in a strongly coupled anisotropic plasma,
JHEP **1302**, 154 (2013) [arXiv:1211.2199 [hep-th]].

33. M. Chernicoff, D. Fernandez, D. Mateos and D. Trancanelli,
Quarkonium dissociation by anisotropy,
JHEP **1301**, 170 (2013) [arXiv:1208.2672 [hep-th]].

34. M. Chernicoff, D. Fernandez, D. Mateos and D. Trancanelli,
Jet quenching in a strongly coupled anisotropic plasma,
JHEP **1208**, 041 (2012) [arXiv:1203.0561 [hep-th]].

35. M. Chernicoff, D. Fernandez, D. Mateos and D. Trancanelli,
Drag force in a strongly coupled anisotropic plasma,
JHEP **1208**, 100 (2012) [arXiv:1202.3696 [hep-th]].

36. M. P. Heller, D. Mateos, W. van der Schee and D. Trancanelli,
Strong Coupling Isotropization of Non-Abelian Plasmas Simplified,
Phys. Rev. Lett. **108**, 191601 (2012) [arXiv:1202.0981 [hep-th]].

37. D. Mateos and D. Trancanelli,
Thermodynamics and Instabilities of a Strongly Coupled Anisotropic Plasma,
JHEP **1107**, 054 (2011) [arXiv:1106.1637 [hep-th]].

38. D. Mateos and D. Trancanelli,
The anisotropic N=4 super Yang-Mills plasma and its instabilities,
Phys. Rev. Lett. **107**, 101601 (2011) [arXiv:1105.3472 [hep-th]].

39. C. Asplund, D. Berenstein and D. Trancanelli,
Evidence for fast thermalization in the plane-wave matrix model,
Phys. Rev. Lett. **107**, 171602 (2011) [arXiv:1104.5469 [hep-th]].

40. D. Berenstein and D. Trancanelli,
Dynamical tachyons on fuzzy spheres,
Phys. Rev. D **83**, 106001 (2011) [arXiv:1011.2749 [hep-th]].

41. N. Drukker and D. Trancanelli,
A supermatrix model for $\mathcal{N}$=6 super Chern-Simons-matter theory,
JHEP **1002**, 058 (2010), [arXiv:0912.3006 [hep-th]].

42. J. Gomis, T. Okuda and D. Trancanelli,
Quantum 't Hooft operators and S-duality in N=4 super Yang-Mills,
Adv. Theor. Math. Phys. **13**, 1941 (2009) [arXiv:0904.4486 [hep-th]].

43. D. Trancanelli,
Emergent geometry in $\mathcal{N}$=6 Chern-Simons-matter theory,
arXiv:0904.0449 [hep-th].

44. D. Berenstein and D. Trancanelli,
S-duality and the giant magnon dispersion relation,
Eur. Phys. J. C **74**, 2925 (2014) [arXiv:0904.0444 [hep-th]].

45. D. Berenstein and D. Trancanelli,
Three-dimensional $\mathcal{N} = 6$ SCFT's and their membrane dynamics,
Phys. Rev. D **78**, 106009 (2008) [arXiv:0808.2503 [hep-th]].

46. J. Gomis, S. Matsuura, T. Okuda and D. Trancanelli,
Wilson loop correlators at strong coupling: from matrices to bubbling geometries,
JHEP **0808**, 068 (2008) [arXiv:0807.3330 [hep-th]].

47. T. Okuda and D. Trancanelli,
Spectral curves, emergent geometry, and bubbling solutions for Wilson loops,
JHEP **0809**, 050 (2008) [arXiv:0806.4191 [hep-th]].

48. N. Drukker, S. Giombi, R. Ricci and D. Trancanelli,
Supersymmetric Wilson loops on S^3,
JHEP **0805**, 017 (2008) [arXiv:0711.3226 [hep-th]].

49. N. Drukker, S. Giombi, R. Ricci and D. Trancanelli,
Wilson loops: From four-dimensional SYM to two-dimensional YM,
Phys. Rev. D **77**, 047901 (2008) [arXiv:0707.2699 [hep-th]].

50. D. Trancanelli,
Studies on gauge/string dualities,
PhD dissertation, Stony Brook University, 2007.

51. N. Drukker, S. Giombi, R. Ricci and D. Trancanelli,
More supersymmetric Wilson loops,
Phys. Rev. D **76**, 107703 (2007) [arXiv:0704.2237 [hep-th]].

52. N. Drukker, S. Giombi, R. Ricci and D. Trancanelli,
On the D3-brane description of some 1/4 BPS Wilson loops,
JHEP **0704**, 008 (2007) [arXiv:hep-th/0612168].

53. S. Giombi, R. Ricci and D. Trancanelli,
Operator product expansion of higher rank Wilson loops from D-branes and matrix models,
JHEP **0610**, 045 (2006) [arXiv:hep-th/0608077].

54. S. Giombi, M. Kulaxizi, R. Ricci and D. Trancanelli,
Half-BPS Geometries and Thermodynamics of Free Fermions,
JHEP **0701**, 067 (2007) [arXiv:hep-th/0512101].

55. S. Giombi, R. Ricci, D. Robles-Llana and D. Trancanelli,
Instantons and matter in $\mathcal{N} = 1/2$ supersymmetric gauge theory,
JHEP **0510**, 021 (2005) [arXiv:hep-th/0505077].

56. S. Giombi, M. Kulaxizi, R. Ricci, D. Robles-Llana, D. Trancanelli and K. Zoubos,
Orbifolding the twistor string,
Nucl. Phys. B **719**, 234 (2005) [arXiv:hep-th/0411171].

57. S. Giombi, R. Ricci, D. Robles-Llana and D. Trancanelli,
A note on twistor gravity amplitudes,
JHEP **0407**, 059 (2004) [arXiv:hep-th/0405086].

58. G. Grignani, M. Orselli, G. W. Semenoff and D. Trancanelli,
The superstring Hagedorn temperature in a pp-wave background,
JHEP **0306**, 006 (2003) [arXiv:hep-th/0301186].

Citations
>3100 (Google Scholar), 8 topcite 100+ and 13 topcite 50+
h-index = 29
More details: `http://inspirehep.net` or `http://scholar.google.com`

Grants

University of São Paulo

Bolsa de Produtividade level 1D, CNPq, Mar. 2020 - Feb. 2024 (frozen from Mar. 2020)

Auxílio Regular (2-year grant), FAPESP-King's College, Sep. 2018 - Aug. 2020 (frozen from Jan. 2019)

Bolsa de Produtividade level 2, CNPq, Apr. 2017 - Feb. 2020 (frozen from Jan. 2019)

Projeto Temático (5-year grant), FAPESP, May 2015 - Mar. 2020 (frozen from Jan. 2019)

Auxílio Regular (2-year grant), FAPESP, Oct. 2015 - Sep. 2017

Bolsa de Produtividade level 2, CNPq, Apr. 2014 - Mar. 2017

Auxílio Regular (2-year grant), FAPESP, Jul. 2013 - Jun. 2015

Bolsa de Produtividade level 2, CNPq, Oct. 2011 - Mar. 2014

3 FAPESP postdoc fellowships

2 FAPESP Ph.D. fellowship

1 FAPESP BEPE fellowship

3 FAPESP M.Sc. fellowships

4 FAPESP *Iniciação Científica* fellowships

The total amount of support of these grants is over R$2.5 millions.

4 other grants from FAPESP, CNPq and CAPES for the organization of events in Maresias and Natal (Brazil).

University of Modena and Reggio Emilia & INFN Bologna

Iniziativa specifica INFN *Gauge and String Theory (GAST)*, 2020 - present

Member of COST Action CA22113 - Theory Challenges, 2026

FAR Mission oriented (PI: Rouven Frassek), 2024

FAR Impulso, 2020

Sponsor of visiting professors:
Enrico Bertuzzo, short term 2021
Enrico Bertuzzo, short term 2022
Diego H. Correa, short term 2023
Guillermo A. Silva, full term 2023
Diego H. Correa, long term 2027

Supervisions

University of São Paulo

Supervision of 10 undergraduate students *(Iniciação Científica)* (10 completed)

Supervision of 11 M.Sc. students (11 completed)

Supervision of 7 Ph.D. students (6 completed, 1 ongoing), among them:
Viktor Jahnke (subsequently a postdoc at UNAM México, GIST Gwangju South Korea, IFT São Paulo Brazil), Marcia Tenser (subsequently a postdoc at Milano Bicocca Italy, IIP Natal Brazil), Daniel Teixeira (subsequently a postdoc at UFABC Brazil), Felipe Soares Sá and Gabriel Nagaoka (left physics for private sector).

Supervision of 6 postdocs (6 completed), among them:
Gabrielle Weber (currently a professor at USP Lorena, Brazil), Alberto Faraggi (currently a professor at PUC Santiago, Chile), Andrea Prudenziati (subsequently a postdoc at IIP Natal, Brazil) and Edoardo Vescovi (subsequently a postdoc at Imperial College London, UK, and NORDITA, Sweden, then left physics for the financial sector).

University of Modena and Reggio Emilia

Supervision of 27 undergraduate students *(Tirocinio Laurea Triennale)* (24 completed, 3 ongoing)

Supervision of 6 M.Sc. students *(Laurea Magistrale)* (6 completed)

Supervision of 1 Ph.D. student (1 ongoing):
Riccardo Giordana Pozzi (subsequently a postdoc at ICTP Trieste)

Presentations at Conferences

Over 30 presentations at conferences and workshops world-wide including:
TFI - Theories of Fundamental Interactions, Brescia (Italy), 2026
EuroStrings 2026, Athens (Greece), 2026
Integrability Crossroads of Probability and Physics, Modena (Italy), 2026
Higher-d integrability, Favignana TP (Italy), 2025
XIII Workshop on Geometric Correspondences of Gauge Theories, SISSA Trieste (Italy), 2023
III Latin American Workshop on Gravity and Holography, Santiago (Chile), 2022
Integrable Quantum Many-Body Systems, Bad Honnef (Germany), 2022
Integrability in Gauge and String Theory (IGST) 2019, Nordita Stockholm (Sweden), 2019
Mini-workshop on supersymmetric Wilson loops and related topics, Modena (Italy), 2019
II Latin-American Workshop on High Energy Physics: Particles and Strings, Havana (Cuba), 2016
MexStrings & MexiCuerdas, Colima (Mexico), 2014
III Workshop on Fields, Brasilia (Brazil), 2013
Quantum Gravity in the Southern Cone, Maresias (Brazil), 2013
Hadron Physics: a Challenge to Holography, Natal (Brazil), 2013
XXXIV National Meeting of Particles and Fields, Passa Quatro (Brazil), 2013
IIP School and Workshop on Gravity and Strings, Natal (Brazil), 2012
Great Lakes Strings, Chicago (USA), 2011
Problemi Attuali di Fisica Teorica, Vietri sul Mare (Italy), 2010
Seventh Simons Workshop in Mathematics and Physics, Stony Brook (USA), 2009
BIRS Workshop on Gauge Fields, Cosmology, and Mathematical Physics, Banff (Canada), 2009
Fundamental Aspects of String Theory, Santa Barbara (USA), 2009

Seminar Talks

Over 70 seminars given in universities and institutions world-wide including:
Brown, Caltech, CERN, Charles U. Prague, Chicago, Columbia, Firenze U., FZU Prague, Humboldt U., ICTP Trieste, ICTP-SAIFR, IIP Natal, Imperial College London, King's College London, KITP Santa Barbara, U. of La Plata, LPT-ENS Paris, LPTHE-Jussieu Paris, MCTP Ann Arbor, Modena U., NBI Copenhagen, NYU, Nordita Stockholm, Parma U., Perugia U., Princeton, PUC Chile, Purdue, SISSA, Stony Brook, Torino U., UBC, UCLA, UCSB, UFRJ, University of Athens, UN Brasilia, Uppsala, UW Madison.

Visiting Appointments

Uppsala University, Uppsala (Sweden), Sep. 2018
Universidad Nacional de La Plata, La Plata (Argentina), Aug. 2016, Dec. 2017 & Nov. 2019
Perimeter Institute for Theoretical Physics, Waterloo ON (Canada), Jan. 2009
CERN, Geneva (Switzerland), Nov. - Dec. 2008 & May - Jun. 2009

Teaching

University of São Paulo

Undergraduate level courses, Jan. 2012 - Dec. 2018
Physics II (Course of Molecular Sciences),
Electromagnetism I,
Electromagnetism II,
General relativity

Graduate level courses, Oct. 2011 - Dec. 2018
Quantum mechanics I,
Quantum mechanics II,
Introduction to the AdS/CFT correspondence,
Introduction to Conformal Field Theory

University of Modena and Reggio Emilia

Courses for high school teachers
Elementi di fisica moderna per le scuole superiori (15 hours), 2024 - present, every year

Undergraduate level courses
General physics for geologists (60 hours), 2019 - 2022, every year
Advanced topics in modern physics (48 hours), 2019 - present, every year

Graduate level courses (Laurea Magistrale in Physics)
Relativity (48 hours), 2019 - present, every year
Quantum Field Theory (48 hours), 2019 - present, every year

Mini-courses

PhD course UniMORE, Apr. 2026
Introduction to the conformal bootstrap program

PhD course UniMORE, Apr. 2025
Introduction to the renormalization group and critical phenomena

Indian Institute of Technology Bhubaneswar, Apr. 2022
Symmetries in General Relativity

Erasmus+ visiting professor, Uppsala University, Sep. 2018
Introduction to the renormalization group and critical phenomena

School and workshop on supersymmetric localization, ICTP Trieste, Jul. 2018
Introduction to supersymmetric Wilson loops

Latin American School on Particles and Strings, Havana, Cuba, Jul. 2016
Introduction to the AdS/CFT correspondence

XVIII Swieca School on Particles and Fields, Campos do Jordão SP, Brazil, Jan. 2015
Introduction to the AdS/CFT correspondence

III Semana Académica UFSC, Florianopolis SC, Brazil, Sep. 2014
Introduction to the AdS/CFT correspondence

Escola de Inverno UNICAMP, Campinas SP, Brazil, Jul. 2014
Introduction to Quantum Field Theory

OUTREACH

Public engagement

The Theoretical Minimum, USP, 2013

The Theoretical Minimum, UniMORE, 2020 - 2021

Notte Europea della Ricerca, UniMORE, 2021 - present

Una Settimana da Scienziato, UniMORE, 2021 - present

Several public seminars at
Convite à Física (IFUSP, São Paulo),
Papos de física/Pint of Science (ICTP-SAIFR, São Paulo),
Física para todos (Biblioteca Mario de Andrade, São Paulo),
and at high schools in São Paulo and in Modena, 2012 - present

Several interviews on newspapers, social media and YouTube.

COMMITTEES

University of São Paulo

Research Committee (Comissão de Pesquisa, CPq) IF-USP, 2018

Undergraduate Committee (Comissão de Graduação, CG) Ciências Moleculares-USP, 2016- 2018

Post-graduate Committee (Comissão de Pós-graduação, CPG) IF-USP, 2015 - 2018

Congregação do Instituto de Física IF-USP, 2015 - 2018

Library Committee (Comissão de Biblioteca, CB) IF-USP, 2012 - 2018

Conselho do Departamento de Física Matemática IF-USP, 2011 - 2018

University of Modena and Reggio Emilia

Research Committee (Commissione Ricerca) UniMORE, 2020 - present

Collegio docenti del Dottorato in Physics and Nanoscience UniMORE, 2021 - 2024

Admission Committee, XXXVIII Cycle PhD Program UniMORE, 2022

LANGUAGES

Italian (native), English (fluent), Portuguese (fluent), German (intermediate), Spanish (intermediate)

MORE INFORMATION

`http://personale.unimore.it/Rubrica/dettaglio/dtrancan`
`fma.if.usp.br/~dtrancan/`

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