Curriculum Vitae

First name | Surname : Tajron Jurić

Address
Theoretical Physics Division
Ruđer Bošković Institute
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Born 28 December 1987, Zagreb (Croatia)

Education

1994-1996	Elementary school (*Susedgrad*, Zagreb)
1996-2002	Elementary school (*Ksaver Šandor Đalski*, Donja Zelina)
2002-2006	High school (*Srednja škola Sesvete, opća gimnazija*, Zagreb)
2006-2011	Faculty of Science, University of Zagreb
5 May 2011	**Mag. Phys.** Master thesis: *Feynman approach to electrodynamics and gravity* advisor: dr. sc. Stjepan Meljanac
October 2011- November 2014	PhD student, University of Zagreb
26 November 2014	**Dr. Sc.** PhD thesis: *κ-Minkowski-space and Planck scale physics* advisor: dr. sc. Stjepan Meljanac

Research interests

- Theoretical and Mathematical Physics
- commutative and noncommutative Quantum Field Theory
- noncommutative spaces, generalized symmetries (Hopf algebra and Hopf algebroid), differential geometry and gauge theory
- noncommutative geometry, spectral triples, spectral action and application to particle physics
- quantum-mechanical completeness, symmetry inheritance and nonlinear fields
- mathematical structures behind Feynman integrals (period, motives) and Algebraic renormalization
- Planck scale physics, black holes and entanglement entropy
- quantum physics, Loschmidt echo, quantum termalization and integrable systems

Positions

- July 2011 - December 2014: research assistant at Theoretical Physics Division, Ruđer Bošković Institute, Zagreb, Croatia.
- January 2015 - September 2016: postdoc at Theoretical Physics Division, Ruđer Bošković Institute, Zagreb, Croatia.
- September 2016 - September 2017: postdoc at Instituto de Fisica, Universidade de Brasilia, Brasilia, DF, Brazil
- September 2017 - January 2019 : postdoc at Theoretical Physics Division, Ruđer Bošković Institute, Zagreb, Croatia.
- January 2019 - June 2024 : research associate at Theoretical Physics Division, Ruđer Bošković Institute, Zagreb, Croatia.
- June 2024 - today : Senior research associate at Theoretical Physics Division, Ruđer Bošković Institute, Zagreb, Croatia.

Teaching experience

Doctoral studies at University of Zagreb:

- Methods of Modern Mathematical Physics 2021-2025

Teaching assistant at the University of Zagreb, Department of Physics:

- Physics 1&2 (first year courses for Chemists 2011/12)
- General Physics 1&2 (first year courses for Physicists 2012/13)

- General Physics 3&4 (second year courses for Physicists 2013/14)
- Mathematical methods for physics 1&2 (second year courses for Physicists 2014/15, 2015/16, 2018/19 and 2019/20)

Scientific titles

- July 2011: Research Assistant at RBI
- December 2014: Senior Assistant/Postdoc at RBI
- April 2014: Postdoc, elected by PMF, University of Zagreb
- July 2016: Research Associate, elected by RBI
- July 2024: Senior Research Associate, elected by RBI

Schools, workshops and conferences

- „*Sarajevo School of High Energy Physics*“, May 2011, Sarajevo, BiH
- „*The BS2011 School – Cosmology and Particle Physics Beyond the Standard Models*“, Donji Milanovac, Srbija, August 2011
- „*Supersymmetry for toddlers ... and experimentalists*“, IRB, Zagreb, December 2011
- „*2nd Mediterranean Conference on Classical and Quantum Gravity*“, Veli Lošinj, June 2013
- Clay Mathematics Institute Summer School 2014; “*Periods and Motives: Feynman amplitudes in the 21st century*”, ICMAT, Madrid (Spain) June 30 - July 25, 2014
- Summer School: “*Topics in Non-commutative Geometry*”, HIM, Bonn, Germany, September 8-12, 2014
- ESI Program – “*The interrelation between mathematical physics, number theory and non-commutative geometry*”, Erwin Schrödinger International Institute for Mathematical Physics, Vienna, March 2 - March 13, 2015
- Bayrischzell Workshop 2015 “*Quantization, geometry and mathematical physics*” Bayrischzell, May 29- June 1, 2015
  presented a talk entitled “*Towards the classification of differential calculi on kappa-Minkowski space and related field theories*”
- Corfu Summer Institute: “ *Humboldt Kolleg Open Problems in Theoretical Physics: the Issue of Quantum Space-Time*” September 18 - 22, 2015
- Corfu Summer Institute “*Workshop on Noncommutative Field Theory and Gravity*” September 21 - 27, 2015
- Bayrischzell Workshop 2016 “*Quantum spacetime structures: Dualities and new geometries*” Bayrischzell, April 29- May 3, 2016
- XXXVII Max Born Symposium “*Noncommutative geometry, quantum symmetries and quantum gravity II* ”, 4 - 7 July 2016, Wroclaw, Poland.
  presented a talk “*Noncommutative field theories on* $\mathbb{R}^3$”

- "*Quantum Structure of Spacetime and Gravity*", August 21-28, Belgrade, Serbia.
  presented a talk "*Closed star product on noncommutative $\mathbb{R}^3$ and scalar field dynamics*"

- "*Topological and geometrical aspects of quantum spaces field theory and causal structure*", 13 March 2017 - 17 March 2017, SISSA, Trieste, Italy
  presented a talk "*Effects of Noncommutativity on the Black Hole Entropy and QNM*"

- Bayrischzell Workshop 2018 "*On Noncommutativity and Physics: Hopf algebras in Noncommutative Geometry*" Bayrischzell, April 20 - 23, 2018

- "*Conference on Symmetries, Geometry and Quantum Gravity*" 18-22 June 2018, Primošten, Croatia
  preseted a talk "*Quantum space and quantum completeness*"

- "*Noncommutative Geometry and the Standard Model*" 8-9 November 2019, Krakow, Poland

- Master Class and Workshop (in-person meeting) "*Higher Structures Emerging from Renormalisation*" November 8 - 19. 2021, ESI Vienna, Austria

- "*Quantum aspects of Spacetime and Gravity*" 5-9 September 2022 at RBI, Zagreb, Croatia

Research visits

- French Government Grant for visiting scientific institutions in France for young researchers, December 1 - December 29, 2014,
  Laboratoire de Physique Theorique d'Orsay, Host: Prof. J.C. Wallet.
  Invited seminar: "κ-Minkowski space and Planck scale physics"

- French Government and Ruđer Bošković Institute Grant for visiting scientific institutions in France for young researchers, October 26 - November 25, 2015,
  Laboratoire de Physique Theorique d'Orsay, Host: Prof. J.C. Wallet

- February 14 - February 20, 2016: Departamento de Física Teórica, Univesity of Zaragoza, Host: Prof. Amilcar Quiroz and Filiberto Ares. Topics: quantum field theory, noncommutative geometry and entanglement entropy

- March 1 - March 30, 2016: LPT, Orsay, Paris, France, Host: Prof. J.C. Wallet, funded by RBI-T-Winning. Topics: quantum field theory, noncommutative geometry and spectral triples

- April 17-24, 2016: SISSA, Trieste, Italy. Host: Prof. L. Dabrowski. Topics: quantum field theory, noncommutative geometry and spectral triples. Funded by RBI-T-Winning
  Invited seminar "Some examples of NCQFT and NC metric"

- May 20 - June 19, 2016: LPT, Orsay, Paris, France, Host: Prof. J.C. Wallet, funded by Universite Paris-Sud and RBI-T-Winning. Topics: quantum field theory, noncommutative geometry and spectral triples
  Invited seminar "Noncommutative geometry and physics"

- March 3-26, 2017: SISSA, Trieste, Italy. Host: Prof. L. Dabrowski. Topics: quantum field theory, BTZ and spinors in spectral triple approach. Funded by RBI-T-Winning
  Invited seminar "BTZ black hole and NC contributions to entropy"

- September 9, 2016 - September 12, 2017: postdoc scholarship within Programa de Pos Doutorado funded by CAPES at IF, UnB, Brasilia, Host: Prof. A. Queiroz and Prof. A. Pinzul

- September 12 - September 26, 2017: LPT, Orsay, Paris, France, Host: Prof. J.C. Wallet, funded by RBI-T-Winning. Topics: NC quantum field theory, twisted trace and KMS condition

- March 16 - April 9, 2018: LPT, Orsay, Paris, France, Host: Prof. J.C. Wallet, funded by RBI-T-Winning. Topics: NC quantum field theory, vacuum energy and the cosmological constant problem

- November 22 - November 29, 2018: LPT, Orsay, Paris, France, Host: Prof. J.C. Wallet, funded by RBI-T-Winning. Topics: NC quantum field theory, vacuum energy and the cosmological constant problem

- December 12 - December 17, 2018: Fizički fakultet, Beograd, Srbija, Host: Prof. M.D.Ćirić, funded by RBI-T-Winning. Topics: NC scalar field on RN background

- December 14, 2022 - January 5, 2023: UnB, Brasilia, funded by HRZZ project. Host: Prof. A. Pinzul. Topics: NC gravity, NCQFT, non-geometric approach to (NC) field theories

- April 19, 2023 - May 23, 2023: UnB, Brasilia, funded by HRZZ project. Host: Prof. A. Pinzul. Topics: NC gravity, non-geometric approach to (NC) field theories, AQFT.

- November 6, 2023 - December 13, 2023: UnB, Brasilia, funded by HRZZ project. Host: Prof. A. Pinzul. Topics: NC geometry, AQFT, quantum origin of gauge theories.

- March 20, 2024 - June 10, 2024: UnB, Brasilia, funded by HRZZ project. Host: Prof. A. Pinzul and C.M. Gregory Topics: NC geometry, AQFT, noncommutative geodesics.

- October 29, 2024 - December 18, 2024: UnB, Brasilia, funded by HRZZ project. Host: Prof. A. Pinzul and C.M. Gregory Topics: noncommutative geodesics from QFT perspectivee.

Research project and organization of workshops

- 098-0000000-2865 "Quantum field theory, noncommutative spaces and symmetries", funded by the Croatian Ministry of Science, Education and Sport, 2011-2014. Function: team member
- IP-2014-09-9582 "Toward quantum gravity: noncommutative geometry, field theory and cosmology", funded by Croatian Science Foundation, 2015-2017. Function: team member and actively participated in the preparation of the project proposal http://thphys.irb.hr/TQG.htm
- RBI-T-WINNING, funded by the European Commission under H2020, 2016-2018. Function: team member and actively participated in the preparation of the project proposal regarding math-phys http://rbi-t-winning.irb.hr/index.php?title=RBI-T-WINNING
- COST-Quantum structure of spacetime, MC-substitute
- Member of the organizing committee for the workshop "Topological and geometric aspects of quantum spaces", March 13-March 17,2017, Trieste, Italy
- Member of the organizing committee for the conference "Conference on Symmetries, Geometry and Quantum Gravity" 18-22 June 2018, Primošten, Croatia
- Head of the "Physics and Geometry seminars" at RBI http://thphys.irb.hr/phygeo/
- HRZZ projekt "Potraga za kvantnim prostorvremenom u spektru KNM za crne rupe i bljeskovima gama zraka", voditelj dr.sc. A. Samsarov, 2021-2025
- Member of the organizing committee for the workshop "*Quantum aspects of Spacetime and Gravity*" 5-9 September 2022 at RBI, Zagreb, Croatia
- COST(CA21109) - Cartan geometry, Lie, Integrable Systems, quantum group Theories for Applications (CaLISTA), member
- COST(CA21136) - Addressing observational tensions in cosmology with systematics and fundamental physics (CosmoVerse), member
- Guest Editor u Symmetry
- Head of the Group for Quantum Gravity at RBI http://thphys.irb.hr/?show=groupsid=math

Invited talks, seminars and lectures

- "Series of seminars in math. phys.: Algebraic approach to (NC)gauge theory, Quantum completnees and smearing of singularities, Towards NC geodesics," Universidade de Brasilia, April-June, 2024
- "*Quantum origin of gauge theories II: noncommutative aspects* ", group seminar, Universidade de Brasilia, Brazil, December 4, 2023
- "*Quantum origin of gauge theories I: Feynman's derivation* ", group seminar, Universidade de Brasilia, Brazil, November 28, 2023.

- "*A Noncommutative differential geometry and application to gravity* ", series of seminars, Universidade de Brasilia, Brazil, April 26 - May 17 , 2023.
- "*Open problems in mathematical physics*", Physics and Geometry Seminars at RBI, Zagreb, Croatia, October 17, 2019.
- "*Quantum space and quantum completeness*", talk at "*Conference on Symmetries, Geometry and Quantum Gravity*" 18-22 June 2018, Primošten, Croatia
- "*Noncommutative Geometry and Physics*", Colóquio do IF, Universidade de Brasilia, Brazil, May 11, 2017.
- "*BTZ black hole and NC contributions to entropy*", invited seminar at SISSA, Trieste, March 23, 2017.
- "*Effects of Noncommutativity on the Black Hole Entropy and QNM*", talk at workshop "*Topological and geometrical aspects of quantum spaces field theory and causal structure*", 13 March 2017 - 17 March 2017, SISSA, Trieste, Italy
- "*Closed star product on noncommutative* $\mathbb{R}^3$ *and scalar field dynamics*", talk at school "*Quantum Structure of Spacetime and Gravity*", August 21-28, 2016, Belgrade, Serbia.
- "*Noncommutative field theories on* $\mathbb{R}^3$", talk at the XXXVII Max Born Symposium "*Noncommutative geometry, quantum symmetries and quantum gravity II* ", 4 - 7 July 2016, Wroclaw, Poland.
- "*Noncommutative geometry and physics*", invited lecture by SInJe, LPT-Orsay, France, June 14, 2016.
- "*Some examples of NCQFT and NC metric*", invited seminar at SISSA, Trieste, April 19, 2016.
- "*Towards the classification of differential calculi on kappa-Minkowski space and related field theories*", talk at workshop "*Quantization, geometry and mathematical physics*" Bayrischzell, May 29- June 1, 2015
- "*κ-Minkowski space and Planck scale physics*", invited seminar at LPT-Orsay, France, December 17, 2014.
- "*κ-Poincare algebra and Hopf algebroid structure of phase space*", Theoretical Physics Seminar at RBI, Zagreb, Croatia, September 9, 2014.
- "*Paradoxes in QM and selfadjoint extension*", Journal Club Seminar at RBI, Zagreb, Croatia, October 26, 2012.

List of publications

1. E. Harikumar, **T. Jurić** and S. Meljanac, "*Electrodynamics on κ-Minkowski space-time*," **Phys. Rev. D 84**, 085020 (2011) [arXiv:1107.3936 [hep-th]].

2. E. Harikumar, **T. Jurić** and S. Meljanac, "*Geodesic equation in κ-Minkowski spacetime*," **Phys. Rev. D 86** (2012) 045002 [arXiv:1203.1564 [hep-th]].

3. **T. Jurić**, S. Meljanac and R. Štrajn, "*Differential forms and κ-Minkowski spacetime from extended twist*," **Eur. Phys. J. C 73** (2013) 2472 [arXiv:1211.6612 [hep-th]].

4. **T. Jurić**, S. Meljanac and R. Strajn, "*κ-Poincaré-Hopf algebra and Hopf algebroid structure of phase space from twist*," **Phys. Lett. A 377** (2013) 2472 [arXiv:1303.0994 [hep-th]].

5. **T. Jurić**, S. Meljanac and R. Strajn, "*Twists, realizations and Hopf algebroid structure of kappa-deformed phase space*," **Int. J. Mod. Phys. A 29** (2014) 5, 1450022 [arXiv:1305.3088 [hep-th]].

6. **T. Jurić**, S. Meljanac and R. Strajn, "*Universal κ-Poincaré covariant differential calculus over κ-Minkowski space*," **Int. J. Mod. Phys. A 29** (2014) 1450121 [arXiv:1312.2751 [hep-th]].

7. K. S. Gupta, E. Harikumar, **T. Juric**, S. Meljanac and A. Samsarov, "*Effects of Noncommutativity on the Black Hole Entropy*," **Adv. High Energy Phys**. Vol. 2014 (2014), Article ID 139172, arXiv:1312.5100 [hep-th]

8. **T. Juric**, D. Kovacevic and S. Meljanac, "*κ-Deformed Phase Space, Hopf Algebroid and Twisting*," **SIGMA 10**, 106 (2014), [arXiv:1402.0397 [math-ph]].

9. **T. Jurić**, S. Meljanac, D. Pikutić and R. Štrajn, "*Toward the classification of differential calculi on κ-Minkowski space and related field theories*," **JHEP 1507**, 055 (2015), [arXiv:1502.02972 [hep-th]].

10. K. S. Gupta, E. Harikumar, **T. Jurić**, S. Meljanac and A. Samsarov, "*Noncommutative scalar quasinormal modes and quantization of entropy of a BTZ black hole*," **JHEP 1509**, 025 (2015), [arXiv:1505.04068 [hep-th]].

11. **T. Jurić**, S. Meljanac and A. Samsarov, "*Light-like κ-deformations and scalar field theory via Drinfeld twist*," **J. Phys. Conf. Ser. 634**, no. 1, 012005 (2015), [arXiv:1506.02475 [hep-th]].

12. **T. Juric**, S. Meljanac and D. Pikutic, "*Realizations of κ-Minkowski space, Drinfeld twists and related symmetry algebras*," **Eur. Phys. J. C 75**, no. 11, 528 (2015), [arXiv:1506.04955 [hep-th]].

13. A. Géré, **T. Jurić** and J. C. Wallet, "*Noncommutative gauge theories on $\mathbb{R}^3_\lambda$: Perturbatively finite models*," **JHEP** 12 (2015) 045, arXiv:1507.08086 [hep-th].

14. **T. Jurić**, S. Meljanac and A. Samsarov, "*Twist deformations leading to κ-Poincaré Hopf algebra and their application to physics*," **J. Phys. Conf. Ser. 670** (2016) 1, 012027 [arXiv:1511.05592 [hep-th]].

15. **T. Jurić** and A. Samsarov, "*Entanglement Entropy Renormalization for the NC scalar field coupled to classical BTZ geometry*," **Phys. Rev. D 93**, no. 10, 104033 (2016), arXiv:1602.01488 [hep-th].

16. A. Borowiec, **T. Juric**, S. Meljanac and A. Pachol, "*Noncommutative tetrads and quantum spacetimes*," Int. J. Geom. Meth. Mod. Phys. **13** (2016) no.08, 1640005 arXiv:1602.01292 [hep-th].

17. **T. Jurić**, T. Poulain and J. C. Wallet, "*Closed star product on non-commutative $\mathbb{R}^3$ and scalar field dynamics*," **JHEP 1605**, 146 (2016) arXiv:1603.09122 [hep-th].

18. **T. Jurić**, T. Poulain and J. C. Wallet, "*Involutive representations of coordinate algebras and quantum spaces*," **JHEP 1707** (2017) 116, arXiv:1702.06348 [hep-th].

19. K. S. Gupta, **T. Jurić** and A. Samsarov, "*Noncommutative duality and fermionic quasinormal modes of the BTZ black hole*," **JHEP 1706** (2017) 107, arXiv:1703.00514 [hep-th].

20. **T. Jurić**, "Quantum space and quantum completeness," JHEP **1805** (2018) 007, arXiv:1802.09873 [hep-th].

21. **T. Jurić**, T. Poulain and J. C. Wallet, "Vacuum energy and the cosmological constant problem in κ-Poincaré invariant field theories," Phys. Rev. D **99** (2019) no.4, 045004, arXiv:1805.09027 [hep-th].

22. K. S. Gupta, **T. Jurić**, A. Samsarov and I. Smolić, "Noncommutativity and the Weak Cosmic Censorship," JHEP **1910** (2019) 170, arXiv:1908.07402 [hep-th]

23. A. Bokulić, T. Jurić and I. Smolić, "Black hole thermodynamics in the presence of nonlinear electromagnetic fields," Phys. Rev. D **103** (2021) no.12, 124059, arXiv:2102.06213 [gr-qc].

24. T. Jurić, "Observables in Quantum Mechanics and the Importance of Self-Adjointness," Universe **8** (2022) no.2, 129 [arXiv:2103.01080 [quant-ph]].

25. T. Jurić and H. Nikolić, "Arrival time from the general theory of quantum time distributions," Eur. Phys. J. Plus **137** (2022) no.5, 631 [arXiv:2107.08777 [quant-ph]].

26. A. Bokulić, T. Jurić and I. Smolić, "Nonlinear electromagnetic fields in strictly stationary spacetimes," Phys. Rev. D **105** (2022) no.2, 024067 [arXiv:2111.10387 [gr-qc]].

27. A. Bokulić, I. Smolić and T. Jurić, 'Constraints on singularity resolution by nonlinear electrodynamics," Phys. Rev. D **106** (2022) no.6, 064020 [arXiv:2206.07064 [gr-qc]].

28. T. Jurić and H. Nikolić, "Passive quantum measurement: Arrival time, quantum Zeno effect and gambler's fallacy," Fortsch. Phys. **71** (2023) no.10-11, 2300014 [arXiv:2207.09140 [quant-ph]].

29. K. S. Gupta, T. Jurić, A. Samsarov and I. Smolić, "Noncommutativity and logarithmic correction to the black hole entropy," JHEP **02** (2023), 060 [arXiv:2209.07168 [hep-th]].

30. T. Jurić and F. Požar, "Noncommutative correction to the entropy of charged BTZ black hole," Symmetry **15** (2023) no.2, 417 [arXiv:2212.06496 [hep-th]].

31. T. Jurić and H. Nikolić, "Arrival time from Hamiltonian with non-hermitian boundary term," [arXiv:2307.01501 [quant-ph]].

32. N. Herceg, T. Jurić, A. Samsarov, I. Smolić and K. S. Gupta, "Gravitational probe of quantum spacetime," [arXiv:2310.06018 [gr-qc]].

33. N. Herceg, T. Jurić, A. Samsarov and I. Smolić, "Metric perturbations in Noncommutative Gravity," [arXiv:2310.06038 [hep-th]].

34. A. Bokulić, E. Franzin, T. Jurić and I. Smolić, "Lagrangian reverse engineering for regular black holes," [arXiv:2311.17151 [gr-qc]].

35. N. Herceg, T. Jurić, A. Samsarov and I. Smolić, "Towards gravitational QNM spectrum from quantum spacetime," J. Phys. Conf. Ser. **2667** (2023) no.1, 012074 [arXiv:2311.16968 [hep-th]].

36. R. Alves Batista, G. Amelino-Camelia, D. Boncioli, J. M. Carmona, A. di Matteo, G. Gubitosi, I. Lobo, N. E. Mavromatos, C. Pfeifer and D. Rubiera-Garcia, *et al.* "White Paper and Roadmap for Quantum Gravity Phenomenology in the Multi-Messenger Era," [arXiv:2312.00409 [gr-qc]].

37. A. Bokulić, T. Jurić and I. Smolić, "Hexadecapole at the heart of nonlinear electromagnetic fields," Class. Quant. Grav. **41** (2024) no.15, 157002 [arXiv:2403.08909 [gr-qc]]

38. M. Dimitrijević Ćirić, T. Jurić, N. Konjik, A. Samsarov and I. Smolić, "Noncommutative Reissner-Nordström black hole from noncommutative charged scalar field," Symmetry **17** (2025), 54 [arXiv:2404.03755 [hep-th]].

39. A. Hrelja, T. Jurić and F. Požar, "Entropy of black holes, charged probes and noncommutative generalization," [arXiv:2407.13233 [hep-th]].

40. N. Herceg, T. Jurić, A. N. Kumara, A. Samsarov and I. Smolić, "Noncommutative quasinormal modes of Schwarzschild black hole," [arXiv:2409.01402 [gr-qc]].

41. N. Herceg, T. Jurić, A. N. Kumara, A. Samsarov and I. Smolić, "Near-horizon aspects of black holes in quantum spacetime," J. Phys. Conf. Ser. **2912** (2024) no.1, 012032 [arXiv:2410.00088 [gr-qc]].

Track record (according to INSPIRE, February 2025)
41 scientific papers with total 771 citations and h-index 17.

Languages

Croatian (native speaker), English (very good command), Portuguese (very

good command), German (basic communication skills)

Menthorships

- 2023- voditelj doktorskog studenta Filipa Požara
- 2024 voditelj diplomskog rada "Feynmanovi integrali po putevima," student Mihael Banozic, Sveuciliste u Rijeci
- 2023 voditelj diplomskog rada "The entropy of black holes: quantum aspects," student Axel Hrelja
- 2022 voditelj diplomskog rada "The Geometry of the Standard Model," student Filip Požar
- 2021 voditelj diplomskog rada "Hopfove algebre u fizici," student Nikola Herceg
- 2022/23 mentor Istraživačkog seminara (peta godina Istraživačkog studija fizike na PMF-u): "Kvantne korekcije entropije crne rupe", student Axel Hrelja
- 2022/23 mentor Istraživačkog seminara (peta godina Istraživačkog studija fizike na PMF-u): "Termodinamika crnih rupa", student David Leko
- 2021/22 mentor Istraživačkog seminara (peta godina Istraživačkog studija fizike na PMF-u): "Matematički temelji kvantne mehanike", student Nino Kovačić
- 2021/22 mentor Istraživačkog seminara (peta godina Istraživačkog studija fizike na PMF-u): "Geometrija baždarnih teorija", student Filip Požar
- 2020/21 mentor Istraživačkog seminara (peta godina Istraživačkog studija fizike na PMF-u): "Particle statistics", student Nikola Herceg
- 2019/20 mentor Istraživačkog seminara (peta godina Istraživačkog studija fizike na PMF-u): "Noncommutative Geometry", student Jamal Hammoud
- 2019/20 mentor Istraživačkog seminara (peta godina Istraživačkog studija fizike na PMF-u): "Quantum completeness", student Karlo Delić

Awards and scholarships

- Stipedija Grada Zagreba za školsku godinu 2004/05 i 2005/06
- Stipendija Hrvatskog Olimpijskog odbora za vrhunske sportaše (III. kategorija) 2008. i 2009.
- Stipendija Nacionalne zaklade za potporu učeničkom i studentskom standardu 2010/11.

- Stipendija Veleposlanstva Republike Francuske za sufinanciranje kratkoročnog posjeta znanstvenim institucijama Republike Francuske 2014.
- Stipendija Veleposlanstva Republike Francuske i IRB-a za sufinanciranje kratkoročnog posjeta znanstvenim institucijama Republike Francuske 2015.
- Godišnja nagrada IRB-a za izvrstan znanstveni rad u 2013.
- Godišnja nagrada IRB-a za izvrstan znanstveni rad u 2018.
- Godišnja nagrada IRB-a za izvrstan znanstveni rad u 2021.
- Poslijedoktorska stipendija "Programa de Pos Doutorados", CAPES, IF, UnB, Brasilia, 2016

Other

recenzent za EPJC, Phys.Scripta, Class. Quant. Grav, IJMPA, EPL, Universe, IJP, JPA te clan strucnih povjerenstava za prosudbu udzbenika i ENM za osnovnu i srednju skolu