

PETAR TADIĆ

Nationality: Montenegrin

Contact Details: Sloane Physics Laboratory, 217 Prospect St, New Haven, CT 06511

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Email: petar.tadic@yale.edu

Education

Doctor of Philosophy - Trinity College Dublin Sep/2018 - Aug/2021

- School of Mathematics
- Thesis: Conformal bootstrap and thermalization in holographic CFTs
- Supervisor: Manuela Kulaxizi

Master of Science - University of Oxford Oct/2017 - Jul/2018

- Mathematical and Theoretical Physics
- Thesis: Quasinormal modes of black branes
- Supervisor: Andrei Starinets
- Final grade: Distinction

Bachelor's degree - University of Belgrade, Faculty of Physics Oct/2013 - Jul/2017

- Theoretical and Experimental Physics
- Final grade: 10.00/10.00

Work experience

Postdoctoral Associate - Yale University Sep/2021 - present

- Physics Department

Tutor - Trinity College Dublin Sep/2019 - May/2020

- Statistical Physics I
- Statistical Physics II

Student Internship - Institute of Physics, Belgrade Jun/2016 - Oct/2017

- Group for Gravitation, Particles and Fields
- Studying the relationship between the theory of general relativity and quantum mechanics.

Student Internship - Institute of Physics, Belgrade Jun/2015 - Oct/2015

- Scientific Computing Laboratory
- Studying the structural properties of complex networks

Publications

Improving the five-point bootstrap 2023

D. Poland, V. Prilepina and **P. Tadić**, arXiv preprint.
<https://doi.org/10.48550/arXiv.2312.13344>

The five-point bootstrap 2023

D. Poland, V. Prilepina and **P. Tadić**, J. High Energ. Phys.2023, 153 (2023).
[https://doi.org/10.1007/JHEP10\(2023\)153](https://doi.org/10.1007/JHEP10(2023)153)

CFT correlators, W-algebras and Generalized Catalan Numbers	2022
R. Karlsson, M. Kulaxizi, G. S. Ng, A. Parnachev and P. Tadić , J. High Energ. Phys.2022, 162 (2022). https://doi.org/10.1007/JHEP06(2022)162	
Hydrodynamic dispersion relations at finite coupling	2021
S. Grozdanov, A. O. Starinets and P. Tadić , J. High Energ. Phys.2021, 180 (2021). https://doi.org/10.1007/JHEP06(2021)180	
Thermalization in Large-N CFTs	2021
R. Karlsson, A. Parnachev and P. Tadić , J. High Energ. Phys.2021, 205 (2021). https://doi.org/10.1007/JHEP09(2021)205	
Stress Tensor Sector of Conformal Correlators	2020
R. Karlsson, M. Kulaxizi, A. Parnachev and P. Tadić , J. High Energ. Phys.2020, 19 (2020). https://doi.org/10.1007/JHEP07(2020)019	
Leading multi-stress tensors and conformal bootstrap	2020
R. Karlsson, M. Kulaxizi, A. Parnachev and P. Tadić , J. High Energ. Phys.2020, 76 (2020). https://doi.org/10.1007/JHEP01(2020)076	
The complex life of hydrodynamic modes	2019
S. Grozdanov, P. K. Kovtun, A. O. Starinets and P. Tadić , J. High Energ. Phys.2019, 97 (2019). https://doi.org/10.1007/JHEP11(2019)097	
Convergence of the Gradient Expansion in Hydrodynamics	2019
S. Grozdanov, P. K. Kovtun, A. O. Starinets and P. Tadić , Phys. Rev. Lett. 122, 251601 – 28 June 20 10.1103/PhysRevLett.122.251601	
Black holes and conformal Regge bootstrap	2019
R. Karlsson, M. Kulaxizi, A. Parnachev and P. Tadić , J. High Energ. Phys.2019, 46 (2019). https://doi.org/10.1007/JHEP10(2019)046	

Conferences, Seminars and Schools

Days of Diaspora and Scientific Partners of Montenegro - University of Montenegro	Oct/2023
· Topic: Bootstrapping quantum field theories	
Seminar - Particle Theory Group, Yale University	Sep/2023
· Topic: The five-point bootstrap	
Bootstrap 2023 - Workshop - ICTP, Sao Paulo	Jun/2023
· Topic: The five-point bootstrap	
Seminar - University of Pisa	Jun/2023
· Topic: The five-point bootstrap	
Seminar - Institute of Physics, Belgrade	Mar/2023
· Topic: Conformal bootstrap of the five-point correlators	

Seminar - Columbia University	Mar/2023
· Topic: Conformal bootstrap of the five-point correlators	
Seminar - Mathematical Institute, University of Oxford	Jun/2022
· Topic: Hydrodynamic dispersion relations at finite coupling	
Seminar - Boston University	Dec/2021
· Topic: Stress tensor sector of Holographic CFTs	
Seminar - Particle Theory Group, Yale University	Oct/2021
· Topic: Stress tensor sector of Holographic CFTs	
Seminar - Institute of Physics, Belgrade	Apr/2021
· Topic: Convergence of the gradient expansion in hydrodynamics	
XVI Avogadro meeting	Dec/2020
· Topic: Thermalization in large-N CFTs	
Seminar - University of Ljubljana	Nov/2020
· Topic: Stress tensor sector of Holographic CFTs	
HoloTube Junior	Oct/2020
· Topic: Stress tensor sector of Holographic CFTs	
Hamilton School on Mathematical Physics	Aug/2020
· Gong talk show	
CERN Winter School on Supergravity, Strings and Gauge Theory 2020	Feb/2020
· Participation	
Hamilton School on Mathematical Physics	May/2019
· Poster presentation	
Seminar - Trinity College Dublin	Apr/2019
· Topic: Convergence of the Gradient Expansion in Hydrodynamics	
Scientific congress of students - University of Belgrade, Faculty of Physics	Dec/2015
· Topic: Structural properties of complex networks	
Seminar - Institute of Physics, Belgrade	Oct/2015
· Topic: Structural properties of complex networks	

Honors and Awards

The award for the best student in class 2017. - University of Belgrade	Sep/2018
Annual prize for the best students in Nikšić. - Nikšić, Montenegro	Sep/2017
Annual prize for the exceptional success during the undergraduate studies in physics. - Foundation 'Prof. Dr Đorđe Živanović', University of Belgrade	Oct/2015
Annual prize for the best young scientist in Montenegro. - Ministry of Science, Montenegro	Dec/2012

Scholarships and Fellowships

Ussher Fellowship - Trinity College Dublin	Sep/2018 - Aug/2021
Dulverton Thrust Scholarship - University of Oxford	Oct/2017 - Jul/2018
Ministry of Education, Science and Technological Development - Belgrade, Serbia	Oct/2013 - Jul/2017
Ministry of Education - Podgorica, Montenegro	Sep/2013 - Jun/2017
University of Belgrade - Foundation 'Prof. Dr Đorđe Živanović'	Oct/2015 - Jun/2016
Ministry of Education - Podgorica, Montenegro	Sep/2012 - Jul/2014

Academic service

Organizer of Particle Theory Seminars	Sep/2022 - Jun/2024
· Yale University	
Referee	Jan/2020
· Nucl. Phys. B, JHEP	
Organizer of PhD/Postdoc Journal Club for PhD students and postdocs	Sep/2019 - May/2020
· Trinity College Dublin	
Lecturer for prospective University of Belgrade physics students	Oct/2015

Language skills

Serbian	Native
English	Fluent
French	Basic knowledge

International Physics Olympiads

Denmark, Copenhagen	2013
· Bronze medal	
Estonia, Tallinn and Tartu	2012
· Bronze medal	
Thailand, Bangkok	2011
· Participation	

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Publication list

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| Improving the five-point bootstrap | 2023 |
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| The five-point bootstrap | 2023 |
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| CFT correlators, \mathcal{W}-algebras and generalized Catalan numbers | 2022 |
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| Hydrodynamic dispersion relations at finite coupling | 2021 |
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| Thermalization in large-N CFTs | 2021 |
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https://doi.org/10.1007/JHEP09(2021)205 | |
| Stress Tensor Sector of Conformal Correlators | 2020 |
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| The complex life of hydrodynamic modes | 2019 |
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