

Tomáš Procházka

Curriculum Vitae

Láskova 1817
Praha 4 - Chodov, 14800
☎ (+420) 607 812 801
✉ proct2am@seznam.cz



Basic Info

Date of Birth **7. December 1982**
Place of Birth **Bratislava, Czechoslovakia**
Nationalities **Czech and Slovak**

Education

2007–2011 **Ph.D. in Physics**,
Scuola Internazionale Superiore di Studi Avanzati (SISSA), Trieste, Italy,
Holographic superconductors with direct current
Supervisor: Matteo Bertolini

2002–2007 **Master in Physics**,
Faculty of Mathematics and Physics, Charles University, Prague, Czech Republic,
Two-photon decay of the Higgs boson, precise predictions of the Standard Model
Supervisor: Jiří Hořejší

Work Experience

2021–present **Institute of Physics, ASCR, Prague, Czech Republic**

2015–2020 **Ludwig-Maximilians-Universität, Munich, Germany**,
postdoc (Ivo Sachs)

2012–2015 **Institute of Physics, ASCR, Prague, Czech Republic**,
postdoc (Martin Schnabl)

Selected Publications

2017 “*Webs of W -algebras*”,
in *Journal of High Energy Physics* [arXiv:1711.06888](https://arxiv.org/abs/1711.06888),
with M. Rapčák

2015 “ *W -symmetry, topological vertex and affine Yangian*”,
in *Journal of High Energy Physics* [arXiv:1512.07178](https://arxiv.org/abs/1512.07178)

2012 “*The semiclassical limit of W_N CFTs and Vasiliev theory*”,
in *Journal of High Energy Physics* [arXiv:1210.8452](https://arxiv.org/abs/1210.8452),
with E. Perlmutter and J. Raeymaekers

Teaching

- 2022 **Lecturer**, *Introduction to String Theory*
- 2020 **Teaching Assistant**, *Thermodynamics and Stat. Physics*, Prof. Ilka Brunner
- 2020 **Teaching Assistant**, *Quantization of Gauge Theories*, Prof. Ivo Sachs
- 2019-2020 **Main Teaching Assistant**, *Quantum Mechanics II*, Prof. Viacheslav Mukhanov
- 2019 **Teaching Assistant**, *Quantum Field Theory*, Prof. Ivo Sachs
- 2018-2019 **Teaching Assistant**, *Advanced Quantum Mechanics*, Prof. Ilka Brunner
- 2018 **Main Teaching Assistant**, *Theoretical Mechanics*, Prof. Viacheslav Mukanov
- 2017-2018 **Teaching Assistant**, *Advanced Quantum Mechanics*, Prof. Ilka Brunner
- 2017 **Teaching Assistant**, *Classical Electrodynamics*, Prof. Ivo Sachs
- 2016-2017 **Teaching Assistant**, *Differential Geometry*,
Prof. Ivo Sachs and Prof. Thomas Vogel
- 2016 **Teaching Assistant**, *Instantons and Solitons*, Prof. Peter Mayr
- 2016 **Teaching Assistant**, *Quantum Field Theory*, Prof. Livia Ferro
- 2015-2016 **Teaching Assistant**, *Quantum Mechanics*, Prof. Ivo Sachs
- 2013-2014 **Teaching Assistant**, *Conformal Field Theory*, Martin Schnabl

Attended Workshops and Conferences

- 2019 **“Geometric Correspondences of Gauge Theories”**, Trieste, Italy,
Talk: “ \mathcal{W} symmetry, topological vertex and affine Yangian”
- 2019 **“ESI Workshop on Higher Spins and Holography”**, Vienna, Austria,
Talk: “W-algebras and Instanton R-matrix”
- 2019 **“Workshop on Higher Symmetries and Quantum Gravity”**, Potsdam,
Germany,
Talk: “Webs of W-algebras”
- 2018 **“String-Math 2018”**, Sendai, Japan
- 2015 **“Strings 2015”**, Bangalore, India
- 2014 **“Strings 2014”**, Princeton, USA
- 2013 **“Higher Spins, Strings and Duality”**, Florence, Italy

Invited Talks

- 2023 **“W-algebras and Bethe ansatz in 2d CFT”**, Exact results and holographic correspondences, Mainz
- 2019 **“W-algebras”**, University of Denver
- 2018 **“Instanton R-matrix and W-algebras”**, AdS_3/CFT_2 Workshop, ETH
- 2017 **“Webs of W-algebras”**, Fields and Duality, LMU Munich
- 2017 **“ \mathcal{W} symmetry, topological vertex and affine Yangian”**, Perimeter Institute
- 2015 **“Higher spin symmetries and \mathcal{W}_∞ and triality”**, LMU Munich
- 2015 **“ \mathcal{W}_∞ and triality”**, IHES
- 2014 **“ \mathcal{W}_∞ and triality”**, ULB Bruxelles

List of publications

- T. Procházka, A. Watanabe - On Bethe equations of 2d conformal field theory (2023), arXiv: 2301.05147
- M. Enriquez-Rojo, T. Procházka, I. Sachs - On deformations and extensions of $Diff(S^2)$ (2021), JHEP 10 (2021) 133
- L. Eberhardt, T. Procházka - The Grassmannian VOA (2020), JHEP 09 (2020) 150
- T. Procházka - On even spin \mathcal{W}_∞ (2019), JHEP 06 (2020) 057
- L. Eberhardt, T. Procházka - The matrix extended $\mathcal{W}_{1+\infty}$ algebra (2019), JHEP 12 (2019) 175
- T. Procházka - Instanton R-matrix and W-symmetry (2019), JHEP 12 (2019) 099
- T. Procházka, M. Rapčák - W-algebra Modules, Free Fields, and Gukov-Witten Defects (2018), JHEP 05 (2019) 159
- T. Procházka, M. Rapčák - Webs of W-algebras (2017), JHEP 11 (2018) 109
- O. Hulík, T. Procházka, J. Raeymaekers - Multi-centered AdS_3 solutions from Virasoro conformal blocks (2017), JHEP 1703 (2017) 129
- T. Procházka - W-symmetry, topological vertex and affine Yangian (2015), JHEP 1610 (2016) 077
- T. Procházka - Exploring \mathcal{W}_∞ in the quadratic basis (2014), JHEP 1509 (2015) 116
- A. Campoleoni, T. Procházka, J. Raeymaekers - A note on conical solutions in 3D Vasiliev theory (2013), JHEP 1305 (2013) 052
- E. Perlmutter, T. Procházka, J. Raeymaekers - The semiclassical limit of W_N CFTs and Vasiliev theory (2012), JHEP 1305 (2013) 007
- D. Arean, M. Bertolini, C. Krishnan, T. Procházka - Quantum Critical Superfluid Flows and Anisotropic Domain Walls (2011), JHEP 1109 (2011) 131
- D. Arean, M. Bertolini, C. Krishnan, T. Procházka - Type IIB Holographic Superfluid Flows (2011), JHEP 1103 (2011) 008
- D. Arean, M. Bertolini, J. Evslin, T. Procházka - On Holographic Superconductors with DC Current (2010), JHEP 1007 (2010) 060