

Jonáš Dujava



■ Info, Links

Email: jonas.dujava@gmail.com

Birth: 2000 in Prešov, Slovakia

GitHub: [jdujava](#)

INSPIRE: [J.Dujava.1](#)

■ Prizes, Awards

The Highest Achievements:

EuPhO — [Latvia 2019](#)

● Absolute Winner ★ [\[Results\]](#)

IPhO — [Israel 2019](#)

● Silver Medal [\[top 25%\]](#)

Flawless Study Record

Obtained scholarships during both of the Bachelor's and Master's studies.

Other Achievements:

Top positions in various competitions (Physics, Mathematics, Informatics).

Slovak Youth Chess

Championship — [Slovakia 2015](#)

● Bronze Medal [\[Category U16\]](#)

■ Other Interests

Linux, Free Software

Optimizing my workflow by creating small handy scripts and customizing minimalistic software.

Tinkering with \LaTeX

Creation of the [T \$\text{\LaTeX}\$ ured Template](#).

Volunteering

Organization of high-school physics and mathematics events.

■ Research Interests

While I am rather mathematically inclined — finding clear mathematical formulations helps me to reason about the structure of the theory and its implications — I greatly enjoy developing the physical intuition, and thinking about “the Big Picture” of fundamental physics.

My main research interests (with some experience) are:

Foundations of Quantum Field Theory

Both fundamental and mathematical aspects of Quantum Field Theory. Symmetries and application of Group Theory in QFT. Interest in the Functorial Approach to axiomatization of QFT, viewed as a formalization of the Path Integral intuition.

QFT in AdS and Conformal Field Theory

Understanding strongly coupled QFT in Anti-de Sitter spacetime through large N expansion and Conformal Field Theory methods.

■ Education

2019 to 2022 — B.Sc. in Physics

[Charles University](#) | Prague | Faculty of Mathematics and Physics

Overall study average: 1.00 (lower is better, best is 1.00)

Total ECTS credits: 219 (from which 16 are acknowledged in Master's)

[Transcript of Completed Study Requirements](#)

Bachelor's Thesis

Title: *Counting operators in Effective Field Theories*

Awarded: Honorable Mention (Dean's Award)

Introduction to group-theoretic techniques used in computing the number of independent operators in Effective Field Theories.

Digital Repository: [original text and reviews](#)

GitHub: [jdujava/CountingInEFT](#)

arXiv: [2211.05759 \[hep-th\]](#) ← [see the latest revision here](#)

2022 to 2025 — studying M.Sc. in Theoretical Physics

[Charles University](#) | Prague | Institute of Theoretical Physics

Current study average: 1.00 (lower is better, best is 1.00)

Current ECTS credits: 159 (16 are acknowledged from Bachelor's)

[Transcript of Currently Completed Study Requirements](#)

Final state examination will be in June 2025.

Master's Thesis

Title: *Strongly Coupled QFT in Anti-de Sitter Spacetime*

Already finished, will upload somewhere soon.

Extending results on the (non-singlet) spectrum of the $O(N)$ model at finite coupling in AdS spacetime. Involves careful development of essential methods and utilized concepts, such as more advanced topics in QFT formalism, Renormalization Group flow, large N expansion, Conformal Field Theory, and QFT in AdS.

■ Preprints

Jonáš Dujava and Petr Vaško.

Finite-coupling spectrum of $O(N)$ model in AdS. 2025.

arXiv: [2503.16345 \[hep-th\]](#) GitHub: [jdujava/ONinAdS](#)

■ Talks, Seminars

May 16th 2023 — Basel, Switzerland

Title: *Counting operators in EFT by the Hilbert series method*

Invited by: Prof. Dr. Admir Greljo

Presentation: [CountingInEFT_presentation.pdf](#)

Mar 27th 2025 — Geneva, Switzerland

Title: *Finite-coupling spectrum of $O(N)$ model in AdS*

Invited by: Dr. Denis Karateev

Presentation: [ONinAdS-talk.pdf](#)

April 4th 2025 — Prague, Czech Republic

Title: *Finite-coupling spectrum of $O(N)$ model in AdS*

IPNP CUNI — Seminar of Theoretical Particle Physics

Presentation: [ONinAdS-seminar.pdf](#)