

# Rodrigo Schmidt Pitombo

## Curriculum Vitae

Rua Dr. Bento Teobaldo Ferraz, 271 - Bloco II  
Barra-Funda - São Paulo/SP  
Brazil

✉ [rs.pitombo@unesp.br](mailto:rs.pitombo@unesp.br)

🌐 [rodphysics.github.io/](https://rodphysics.github.io/)

🐙 RodPhysics

🆔 0000-0001-7573-1551

🔑 4CorU9UAAAAJ

### Personal Information

Birth date **April 25 1999**

Interests **String Theory, AdS/CFT, Supersymmetry, Conformal Field Theories**

### Education

2021–present **PhD. in Theoretical Physics**, *Institute for Theoretical Physics - Unesp, São Paulo*  
Supervisor: Nathan Berkovits

2017–2021 **BsC. in Physics**, *Federal University of Rio de Janeiro, Rio de Janeiro*

### Publications and preprints

- [1] N. Berkovits and R.S. Pitombo, *4D Chern-Simons and the pure spinor  $AdS_5 \times S^5$  superstring*, *Phys. Rev. D* **109** (2024) 106015.
- [2] C. Behan and R.S. Pitombo, *Mellin amplitudes for  $AdS_3 \times S^3$* , *Journal of High Energy Physics* **2024** (2024) 59.
- [3] R.S. Pitombo, M. Vasconcellos, P.P. Abrantes, R. de Melo e Souza, G.M. Penello and C. Farina, *Periodic strings: A mechanical analogy to photonic and phononic crystals*, *American Journal of Physics* **92** (2024) 108.
- [4] R.S. Pitombo, M. Vasconcellos, C. Farina and R. de Melo e Souza, *Source method for the evaluation of multipole fields*, *European Journal of Physics* **42** (2021) 025202.

### Research Experience

2021–present **PhD. Research Project**, *Supervisor: Prof. Nathan Berkovits*, Institute for Theoretical Physics - Unesp, Financial support: FAPESP Doctoral (Direct) Scholarship Investigating aspects of AdS-CFT, with emphasis on bootstrap methods and Superstring Theory in  $AdS_5 \times S^5$   
Led to the papers [1, 2].

2019–2020 **Undergraduate Research Project**, *Supervisor: Prof. Carlos Farina*, Federal University of Rio de Janeiro, Financial Support: FAPERJ Scientific Initiation Scholarship Studied advanced topics in classical mechanics and electrodynamics.  
Led to the papers [3] and [4].

- 2017–2018 **Undergraduate Research Project**, *Supervisor: Prof. João R. T. de Mello Neto*, Federal University of Rio de Janeiro, Financial Support: PIBIC-UFRJ Scientific Initiation Scholarship  
Study on stochastic processes and diffusion with the aid of simulations.

## Teaching Experience

- 2024 **Tutor in the IV ICTP-SAIFR Summer School for Young Physicists**, *Project: Periodic strings, a mechanical analogy to photonic crystals*.  
1-week event in which graduate students supervise high-school students in projects on advanced topics.
- 2020 **Teaching Assistant on Classical Mechanics II**, *Federal University of Rio de Janeiro*, Prof. Carlos Farina
- 2019 **Teaching Assistant on Classical Mechanics I**, *Federal University of Rio de Janeiro*, Prof. Carlos Farina
- 2019 **Monitor at the Didactic Laboratory of the Physics Institute (LADIF)**, *Federal University of Rio de Janeiro*  
Laboratory with guided visits to high school students.
- 2018 **Teaching Assistant on Topics of General Physics II**, *Federal University of Rio de Janeiro*, Prof. Carlos Zarro  
Discipline in which first-year students solve basic classical mechanics problems supervised by the teaching assistants.

## Scholarships and Awards

- 2024 **Financial support for tutors of the IV ICTP-SAIFR Summer School for Young Physicists**
- 2022 **Doctorate (Direct) Scholarship: Fundação de Amparo à Pesquisa do Estado de São Paulo**, *Supervisor: Prof. Nathan Berkovits*, Grant Number: 22/05236-1
- 2021 **Master's Scholarship: Fundação de Amparo à Pesquisa do Estado de São Paulo**, *Supervisor: Prof. Nathan Berkovits*, Grant Number: 20/14489-5  
Interrupted due to start of direct Ph.D.
- 2021 **Award for best work at presentation session at the XLII Journey for Scientific Initiation of the Federal University of Rio de Janeiro**, *Oral presentation*, Work: Periodic strings, a mechanical analogy for photonic crystals.
- 2020 **Scientific Initiation Scholarship: Fundação de Amparo à Pesquisa do Estado do Rio de Janeiro**, *Supervisor: Prof. Carlos Farina*
- 2018 **Scientific Initiation Scholarship: PIBIC-UFRJ**, *Supervisor: Prof. João R. T. de Mello Neto*

## Conferences and Schools

- 2024 **Integrability in Gauge and String Theory**, *ICTP-SAIFR*, Gong show: 4D Chern-Simons and the pure spinor  $AdS_5 \times S^5$  superstring
- 2024 **Bootstrap meets integrability**, *ICTP-SAIFR*
- 2024 **Strings**, *CERN*, Poster: 4D Chern-Simons and the pure spinor  $AdS_5 \times S^5$  superstring

- 2023 **School on Modern Amplitude Methods for Gauge and Gravity Theories**, *ICTP-SAIFR*
- 2023 **Bootstrap 2023**, *ICTP-SAIFR*
- 2023 **Holography@25 Workshop**, *ICTP-SAIFR*
- 2023 **Holography@25 School**, *ICTP-SAIFR*
- 2022 **Spring School on Superstring Theory and Related Topics**, *ICTP-Trieste (virtual attendance)*
- 2021 **Strings**, *ICTP-SAIFR*

## Languages

Portuguese	Native	
English	Fluent	<i>Cambridge FCE, grade A (C1 level)</i>
German	Intermediate	<i>B1 level</i>
Spanish	Basic	