

# Níckolas Alves

Undergraduate Student - Institute of Physics - University of São Paulo

✉ alves.nickolas@usp.com.br

☎ +55 11 97145-8796

📍 São Paulo, Brazil

🌐 <http://fma.if.usp.br/~nickolas>

## Formal Education/Degree

Graduation in progress in Physics

**Institute of Physics - University of São Paulo (IFUSP)**

📅 February 2017 - Ongoing 📍 São Paulo, Brazil

- Undergraduate Research Project: Hyperbolic Equations
- Advisor: João Carlos Alves Barata
- Supported (August 2019 - Ongoing) by São Paulo Research Foundation (FAPESP) grant 2019/12158-4

## Complementary Education

IV Journeys Into Theoretical Physics

**IFT - Perimeter - SAIFR**

📅 July 2019 📍 IFT-UNESP, São Paulo, Brazil

II Jayme Tiomno School in Theoretical Physics

**Dead Physicists Society**

📅 July 2019 📍 IFUSP, São Paulo, Brazil

- Co-organized and attended the school as a student
- Attended the courses in Magnetohydrodynamics and Relativistic Quantum Mechanics

IME-USP's Summer Program

**Institute of Mathematics and Statistics - University of São Paulo (IME-USP)**

📅 January 2018 - February 2018 📍 IME-USP, São Paulo, Brazil

- Attended the course in Linear Algebra

## Organization of Events

Tensorial Reception

**Maruyama, W.; Alves, N. A.; Correa da Silva, R.**

📅 2018 - 2019 📍 São Paulo, Brazil

🌐 <http://fma.if.usp.br/~nickolas/rt/2018/index.html>

🌐 <http://fma.if.usp.br/~nickolas/rt/2019/index.html>

This event consisted in a series of 20 min presentations by (mostly) graduate students about their research projects as a motivation for the Institute's freshmen.

Giants of Physics

**Correa da Silva, R.; Alves, N. A.; Zukanovich Funchal, R. et al.**

📅 April 2018 - May 2019 📍 São Paulo, Brazil

🌐 <http://fma.if.usp.br/~nickolas/gigantes/index.html>

🌐 <http://fma.if.usp.br/~nickolas/sagan/index.html>

A series of events in honor to great physicists. Each event consisted in three presentations related, but not restrained, to his work given by

## Areas of Interest

- Mathematical Physics;
- Quantum Fields and Strings;
- QFT in Curved Spacetime;
- Quantum Gravity.

## More Information

📄 **Academic Record**

<http://fma.if.usp.br/~nickolas/summary.pdf>

📄 **Lattes CV**

<http://lattes.cnpq.br/4933609438452718>

## Olympiad Medals

Brazilian Astronomy and Astronautics Olympiad

**Brazilian Astronomical Society**

📅 2012 - 2016

📍 Brazil

- Four gold medals (2012, 2013, 2014, 2016)
- One silver medal (2015)

Gold Metal at the Mathematical Kangaroo Brazil

**Association Kangourou Sans Frontières**

📅 2015

📍 Brazil

Honorable Mention at the Brazilian Physics Olympiad

**Brazilian Physical Society**

📅 2013

📍 Brazil

Bronze Medal at the Grande ABC's Mathematics Olympiad

**Methodist University of São Paulo**

📅 2011

📍 São Bernardo do Campo, Brazil

graduate students, which were followed by a round table formed by experienced researchers and, finally, a miscellaneous event related to the scientist (a lecture about his life, a movie exhibition, *et cetera*). Details may be found (in portuguese) at the links provided.

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## Jayme Tiomno School in Theoretical Physics

**Alves, N. A.; Tredezini, P. H. T. L.; Maruyama, W.**

📅 2018 - 2019

📍 São Paulo, Brazil

🔗 <http://fma.if.usp.br/~nickolas/jayme/2018/index.html>

🔗 <http://fma.if.usp.br/~nickolas/jayme/2019/index.html>

A winter school organized by students at IFUSP covering topics in Theoretical Physics, Computer Science and Mathematics aimed at undergraduate students.

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## Dead Physicists Society

**Alves, N. A.**

📅 October 2018 - June 2019

📍 São Paulo, Brazil

🔗 <http://fma.if.usp.br/~nickolas/dps/index.html>

A student driven organization at IFUSP. Some of the events sponsored and/or organized by the DPS were: weekly undergraduate seminars (most of them presented fully in english); the II Jayme Tiomno School in Theoretical Physics; a poster session aimed at 2019 freshmen.

I created and directed the organization from October 2018 to June 2019.

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## Bibliographical Production

### An Introduction to $\LaTeX$

**I Jayme Tiomno School in Theoretical Physics**

📅 July 2019

📍 São Paulo, Brazil

🔗 <http://fma.if.usp.br/~nickolas/jayme/2018/latex.html>

Workshop presented at the I Jayme Tiomno School in Theoretical Physics, in which I taught students the fundamentals of  $\LaTeX$ .

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### DPS Seminars

**Dead Physicists Society Undergraduate Seminar**

📅 October 2018 - September 2019

📍 São Paulo, Brazil

🔗 <http://fma.if.usp.br/~nickolas/dps/index.html>

I have so far presented six seminars at the Dead Physicists Society Undergraduate Seminars. Two of them were in portuguese and the remaining four in english. More information (titles, abstracts, presentation dates and slideshows or lecture notes) are available at the link provided.

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### Songs to Solve Electrodynamics to

**Tensorial Reception**

📅 February 2019

📍 São Paulo, Brazil

🔗 <http://fma.if.usp.br/~nickolas/rt/2019/index.html>

Presentation given at the 2019 Tensorial Reception about a (not-so) hand-waving approach to Jefimenko's Equations. Both the abstract and the slideshow are available (in portuguese) at the link provided.

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### As Time Goes By - Seeking a Solution to Maxwell's Equations

**DPS Freshmen Poster Session**

📅 February 2019

📍 São Paulo, Brazil

🔗 [http://fma.if.usp.br/~nickolas/pdf/As\\_Time\\_Goes\\_By\\_\\_\\_Poster.pdf](http://fma.if.usp.br/~nickolas/pdf/As_Time_Goes_By___Poster.pdf)

Poster presented at the 2019 DPS Freshmen Poster Session, regarding a hand-waving approach to Maxwell's and Jefimenko's Equations. The original poster (in portuguese) is available at the provided link.

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## Teaching Assistant

Mathematical Physics I

University of São Paulo (USP)

📅 February 2019 - July 2019

📍 São Paulo, Brazil

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## Languages

Portuguese



English

