Julian Stenzel Martins

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University of Colorado

EDUCATION & PROFESSIONAL PREPARATION

Master of Arts, Curriculum & Instruction (STEM Education) **December 2024**
from the School of Education Master of Arts Program at the University of Colorado at Boulder
Master of Science, Experimental High-Energy Particle Physics **March 2016**
from the Programa de Pós-Graduação em Física da Universidade Federal do Rio de Janeiro (UFRJ)
Physics Graduate Program of the Federal University of Rio de Janeiro, Rio de Janeiro, RJ, Brazil
Bachelor of Arts, Physics Education **July 2014**
from the Programa de Bacharelado em Física da Universidade Federal Fluminense (UFF)
Physics Bachelor's Degree Program at the Federal Fluminense University (UFF), Niterói, RJ, Brazil

CERTIFICATIONS, ENDORSEMENTS, & AWARDS

- Awarded the "Outstanding Contribution to Community Engagement Award" for Masters Graduates in Education from the University of Colorado at Boulder **2025**
- Awarded the "Bolsa Nota 10" (*A+ Scholarship*) by the CAPES (*Council for the Improvement of Superior Education Personnel*) organization, given to high-performing graduate students **2015**
- Teaching Licensure in Physics (Brazil) **2014**

PROFESSIONAL EXPERIENCE

PEER Physics Director of Development – University of Colorado at Boulder **January 2025 - Present**
Leadership Member of the Physics through Evidence & Empowerment through Reasoning (PEER Physics) curriculum and professional development program

- Member of PEER Physics, a Rate Based Service Activity (RBSA) at CU Boulder
- Serves as Director of Development, overseeing the PEER Physics Development Team in developing, revising, and disseminating physics education curricular resources for high school implementation
- Plans and facilitates PEER Physics curriculum-centered professional learning workshops with practicing high school teachers
- Support in building and maintaining relationships with district representatives and teachers to assess effectiveness of curricular materials and develop responsive curriculum-focused partnerships
- Support partnered PEER Physics teachers with continuing education and professional development, focused on classroom research, participation in national science education conferences, and curriculum development

Graduate Research Assistant – University of Colorado at Boulder **May 2016-December 2024**
Member of the Physics through Evidence & Empowerment through Reasoning (PEER Physics) curriculum and professional development program

- Conducted research on the implementation of the PEER Physics curriculum in high school contexts, including qualitative and quantitative data collection & analysis
- Collaborated with PEER Physics curriculum development team in materials revision & consultation regarding conceptual physics
- Planned and facilitated PEER Physics teacher professional development sessions with practicing high school teachers
- Presented research related to PEER Physics at conferences of the American Association of Physics Teachers (AAPT), Physics Education Research Conference (PERC), and National Science Teachers Association (NSTA)

Graduate Research Assistant – Universidade Federal do Rio de Janeiro (UFRJ) **February 2014–March 2016**
Federal University of Rio de Janeiro, Rio de Janeiro, Brazil

- Member of the Large Hadron Collider-*beauty* experiment (LHCb), Brazilian Group
- Performed research analysis with data from the *Organisation Européenne pour la Recherche Nucléaire* (CERN), specifically collected by the Large Hadron Collider (LHC) particle accelerator
  European Organization for Nuclear Research, Meyrin, Switzerland
- Presented at bi-weekly international virtual LHCb meetings on analysis progress and results

Undergraduate Research Assistant – Universidade Federal Fluminense (UFF) **July 2012–January 2014**
Fluminense Federal University, Niterói, Brazil

- Member of the Programa Institucional de Bolsas de Iniciação à Docência (PIBID) through the Universidade Federal Fluminense
  Institutional Scholarship Program for Teaching Initiation, Federal Fluminense University
- Supporting public school physics teachers in implementing novel teaching strategies & activities, liaison between teachers and university physics / physics education faculty

TEACHING / COACHING EXPERIENCE

Instructor – Energy & Interactions (PHYS / EDUC 1580) **January 2019–December 2024**
At the University of Colorado at Boulder – 24 students per semester for 10 semesters, ~240 students

- Teaching undergraduate non-physics majors using adapted Physics through Evidence & Empowerment through Reasoning (PEER) curriculum; emphasis in conceptual physical science through inquiry-based and non-traditional pedagogy

Assistant Soccer Coach Fall / Winter Practice Season **September 2018–January 2019**
At Boulder Indoor Soccer (BIS) – Age group 6-10 years, groups of 5-15 at a time

- Implementing Boulder Indoor Soccer practice sessions alongside head coaches, other assistant coaches, and leading practice sessions for separate groups. On Saturdays, acting as head coach for youth teams of 5-10 players at a time

Instructor – Energy & Interactions (PHYS / EDUC 1580) **January 2018–May 2018**
At the University of Colorado at Boulder – 1 section in 1 semester, ~25 students

- Teaching undergraduate non-physics majors using adapted Physics and Everyday Thinking (PET-HS) curriculum; emphasis in physical science through inquiry-based and non-traditional pedagogy

Instructor – Becoming a Learning Assistant (EDUC 4610) ONLINE course **August 2017–May 2018**
At the University of Colorado at Boulder – 3 sections over 2 semesters, ~80 students

- Teaching online sections of undergraduate students enrolled in the Learning Assistant (LA) Program at the University of Colorado at Boulder and Front Range Community College (FRCC) in educational theory, content, and science pedagogy

Co-Instructor – Energy & Interactions (GRTE 5030 / EDUC 6804) SUMMER course **June 2017**
At the University of Colorado at Boulder – 1 section, ~12 practicing science teachers as students

- Co-teaching in-service secondary science instructors for graduate credit and professional development; using adapted PET-HS curriculum

Co-Instructor – Becoming a Learning Assistant (EDUC 4610) **January 2017–May 2017**
At the University of Colorado at Boulder – 1 section in 1 semester, ~25 students

- Co-teaching a face-to-face section of undergraduate students enrolled in the LA Program at the University of Colorado at Boulder in educational theory, content, and science pedagogy

Teaching Resident – Colégio Estadual Joaquim Távora (CEJOTA) **January 2013–January 2014**
Joaquim Távora State Public School, Niterói, RJ, Brazil – 8 classes in grades 9-12, ~180 students

- Co-teaching grades 9-12 physical science (general mechanics, electromagnetism, thermodynamics) with mentor teacher

Physics Intern & Guest Lecturer – Centro Educational de Niterói (CEN) **September 2011–December 2012**
Educational Center of Niterói (Private High School), Niterói, RJ, Brazil

- Teaching grades 9-12 physical science (general mechanics, electromagnetism, thermodynamics)
- Coordinator of after-school physical science help sessions and one-on-one instruction

PUBLICATIONS & AUTHORED WORKS

Martins, J. S., & Lindsay, W. E. (2022). Evaluation of high school student responses to the Colorado Learning Attitudes about Science Survey. *Physical Review Physics Education Research*, *18*(1), 010132. DOI: https://doi.org/10.1103/PhysRevPhysEducRes.18.010132

Martins, J. S., Belleau, S. N., & Otero, V. K. (2021). PEER Physics: An evidence-based framework for inclusive physics curricula. *The Physics Teacher*, *59*(9), 730-731. DOI: https://doi.org/10.1119/10.0007417

Martins, Julian S. (2016). *Contribution to the Analysis of the B^+_c to K^+K^-pi^+ decay in the LHCb Experiment*. CERN-THESIS-2016-027, featured in INSPIRE-HEP.

PRESENTATIONS & WORKSHOPS

Martins, Julian S. (2025). *Foster Collaboration and Inclusion*. Workshop at the Science Teachers Association of New York State (STANYS) Conference in Syracuse, NY, November 08.

Martins, Julian S. (2025). *Engaging Students in Rich Discourse*. Workshop at the Science Teachers Association of New York State (STANYS) Conference in Syracuse, NY, November 09.

Martins, Julian S. (2025). *A More Human Experience of Science Learning*. Contributed presentation for the Physics Breakfast at the Science Teachers Association of New York State (STANYS) Conference in Syracuse, NY, November 09.

PEER Physics Summer Innovators. Curriculum-centered professional learning workshop series for partnered teachers to collaborate in developing curricular resources. Planned and facilitated workshop series during:

- July 2025

PEER Physics Research Cohort (Y2+). Professional learning workshop series for partnered teachers to perform classroom research and present at national science education conferences. Planned and facilitated workshop series during:

- 2024/25 Academic Year, *June 21, August 3, September 21, November 9 (2024), February 22, April 26, June 7 (2025)*

PEER Physics Summer Institute. Curriculum-centered workshop for physics teachers at newly-partnered districts. Planned and facilitated workshops at:

- Rochester City School District, *August 24-26, 2025*
- Clarkstown Central School District, *June 9-11, 2025*
- St. Vrain Valley School District, *May 28-29, 2025*
- San Juan Capistrano Unified School District, *August 11-13, August 28-30, October 07-09, 2024*

Martins, Julian S. (2025). *PEER Physics: Pedagogy, Opportunities, and Resources*. Contributed presentation at the CO/WY Regional Conference of the American Association of Physics Teachers (AAPT) in Castle Rock, CO, April 05.

Martins, Julian S. (2024). *From Lecturing in Brazil to PEER Physics: An International Personal Trajectory.* Contributed talk at the National Science Teaching Association (NSTA) conference in Denver, CO, March 23.

Martins, Julian S., Lindsay, William E., Otero, V. (2017). *Curricular Resources for NGSS Implementation: PER in an NGSS-aligned classroom.* Contributed poster presentation at the Physics Education Research Conference (PERC) 2017 in Cincinnati, OH, July 26.

Martins, Julian S., Lindsay, William E., Belleau, S., Otero, V. (2017). *Curricular Resources for NGSS Implementation: PER in an NGSS-aligned classroom.* Contributed presentation at the American Association of Physics Teachers (AAPT) 2017 Summer Meeting, Cincinnati, OH, July 24.

Martins, Julian S. (2015). *Search for rare decays of the B_c meson.* Presented at the XXXVI Encontro Nacional de Física de Partículas e Campos (36th National Meeting of Field and Particle Physics), Caxambu, Minas Gerais, Brazil, September 15.

Martins, Julian S. (2013). *Implementação de técnicas de ensino não-tradicionais em escola pública.* (Implementation of non-traditional teaching strategies in public schools). Presented at the Semana Acadêmica (Academic Week) at the Universidade Federal Fluminense (Fluminense Federal University), Niterói, Brazil, August 23.

SKILLS

Languages

- Native/Academic/Bilingual fluency in *American English*
- Native/Academic/Bilingual fluency in *Brazilian Portuguese*
- Elementary Proficiency in *US Spanish*

Computer & Media Proficiency

- Basic operating systems: *Microsoft Windows, MacOS, Linux*
- Presentation software: *Microsoft Office, Google Suite*
- Productivity (text, database management, data analysis): *Microsoft Office, Google Suite*
- Graphic design & media production: *CyberLink PowerDirector/DirectorSuite/AudioDirector, Adobe Illustrator, Adobe InDesign*
- Basic programming and data analysis: *C++, RStudio, Stata*

Writing & Communication

- Public speaking and in-person presentation experience, in informal and academic contexts
- Academic writing & presentation experience including multiple publications
- Developed and revised multiple physics & earth science education curricular resources for high school contexts, including:
    - *Anchoring phenomenon-focused classroom activities*
    - *Scientific/technical readings*
    - *Mathematical modeling activities & worksheets*
    - *Teacher-facing instructional materials*
- Planned and facilitated multiple professional learning sessions for high school teachers regarding non-traditional curriculum implementation and classroom research support