

Name: Eduardo Mucciolo

Job Title: Professor

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(a) Professional Preparation

University of São Paulo	São Paulo, Brazil	Physics	B.S. 1986
MIT	Cambridge, MA	Physics	Ph.D. 1994
NORDITA	Copenhagen, Denmark	Physics	1994-1996

(b) Appointments

- *Chair:* Department of Physics, University of Central Florida (May 2016 – May 2021)
- *Professor:* Department of Physics, University of Central Florida (since August 2010)
- *Associate Professor:* Department of Physics, University of Central Florida (December 2003 – July 2010)
- *Visiting Associate Professor:* Department of Physics, Duke University, Durham, NC (December 2002 – December 2003)
- *Associate Professor:* Department of Physics, Pontifical Catholic University of Rio de Janeiro (PUC-RJ) (October 2002 – December 2005). On leave December 2002 – December 2005
- *Assistant Professor:* Department of Physics, PUC-RJ (August 1996 – September 2002)

(c) Publications

(i) List up to five (5) publications that are the most current ones related to your field

- S. Dhara, G. Goldstein, C. Chamon, and E. R. Mucciolo, *Logical Majorana zero modes in a nanowire network*, Physical Review B **107**, 075402 (2023).
- P. Jouzdani, C. W. Johnson, E. R. Mucciolo, and I. Stetcu, *Alternative approach to quantum imaginary time evolution*, Physical Review A **106**, 062435 (2022).
- B. Blue, R. Tsuchikawa, A. Ahmadi, Z. Zhang, D. Heligman, S. D. Lough, J. Hone, E. R. Mucciolo, and M. Ishigami, *Observation of Wigner cusps in a metallic carbon nanotube*, Solid State Communications **353**, 114834 (2022).
- W. E. Richardson, E. R. Mucciolo, and P. K. Schelling, *Resistivity size effect due to surface steps on ruthenium thin films computed with a realistic tight-binding model*, Journal of Applied Physics **130**, 195108 (2021).
- J. P. Santos Pires, B. Amorim, A. Ferreira, I. Adagideli, E. R. Mucciolo, and J. M. Viana Parente Lopes, *Breakdown of universality in three-dimensional Dirac semimetals with random impurities*, Physical Review Research **3**, 013183 (2021).

(ii) List up to five (5) other significant publications

- C. Chamon, E. R. Mucciolo, and A. E. Ruckenstein, *Quantum statistical mechanics of encryption: Reaching the speed limit of classical block ciphers*, *Annals of Physics* **446**, 169086 (2022).
- L. Zhang, J. A. Reyes, S. Kourtis, C. Chamon, E. R. Mucciolo, and A. E. Ruckenstein, *Nonuniversal Entanglement Level Statistics in Projection-driven Quantum Circuits*, *Physical Review B* **101**, 235104 (2020).
- K. Barmak, S. Ezzat, R. Gusley, A. Jog, S. Kerdsonpanya, A. Khanya, E. Milosevic, W. Richardson, K. Sentosun, A. Zangiabadi, D. Gall, W. E. Kaden, E. R. Mucciolo, P. K. Schelling, A. C. West, and K. R. Coffey, *Epitaxial metals for interconnects beyond Cu*, *Journal of Vacuum Science and Technology A* **38**, 033406 (2020).
- Z.-C. Yang, C. Chamon, A. Hamma, and E. R. Mucciolo, *Two-component structure in the entanglement spectrum of highly excited states*, *Physical Review Letters* **115**, 267206 (2015).
- A. Ferreira and E. R. Mucciolo, *Critical delocalization of chiral zero energy modes in graphene*, *Physical Review Letters* **115**, 106601 (2015).

(d) Graduate teaching experience

- No graduate courses taught within the last 7 years. (12 distinct courses taught in previous years)

(e) Graduate students mentored (to completion, if applicable)

- List up to 5 most recent- Chair of thesis/dissertation committees, overall number, names of students, degree, year graduated

Sayandip Dhara, Physics Ph.D. (December 2022).

Justin Reyes, Physics Ph.D. (July 2020)

Daniel Bonior, Physics Ph.D. (October, 2018)

Sabine Pelton, Physics Ph.D. (August 2017)

Amin Ahmadi, Physics Ph.D. (April 2017)

- List up to 5 most recent- Member of thesis/dissertation committees, overall number, names of students, degree, year graduated

Saad Mahmoud, Physics Ph.D. (July 2022)

Parisa Darbari Kozekana, Computer Science Ph.D. (July 2022)

Danielle Reyes, Physics Ph.D. (November 2020)

Cameron Nickle, Physics Ph.D. (November 2020)

Ramin Izadpaneh, Computer Science Ph.D. (May 2020)

- List total number of graduate students mentored on thesis/dissertation committees over the course of your career.

10 Ph.D. dissertations supervised to completion; currently supervising 3 Ph.D. students.

4 M.S. theses supervised to completion.

(f) Other synergistic activities related to Graduate Education

A list of up to **five distinct examples** that demonstrate the broader impact of the individual's professional and scholarly activities that focuses on the integration and transfer of knowledge as well as its creation. They could include: innovations in teaching and training (e.g., development of graduate curricular materials and pedagogical methods); contributions to the science of learning; development and/or refinement of research tools; computation methodologies, and algorithms for problem-solving; development of databases to support research and education; broadening the participation of groups underrepresented in science, mathematics, engineering and technology; and service to the scientific and engineering community outside of UCF.

- Member, US Department of Energy Quantum Information Science Education Working Group (March 2021).
- Local Organizer, Inclusive Graduate Network National Meeting, Orlando, FL (October, 2019).
- Panelist, Bridge Program Conference, American Physical Society, Miami, FL (October 2015).
- Organizer, *School on Mesoscopic Electronics*. International Center for Condensed Matter Physics, Brasília, Brazil (July 1998).
- Organizer, Latin-American Winter School *Chaos and Quantum Mechanics: Theory and Applications*. Centro Brasileiro de Pesquisas Física, Rio de Janeiro, Brazil (July 1998).