ROGERIO TEIXEIRA CAVALCANTI

ABC Federal University
Santo André | SP - Brazil
+55 (11) XXXXXXX
rogerio.cavalcanti@ufabc.edu.br
https://rogeriotc.github.io/

Education

Ph.D in Physics

2013 – 2017 | ABC Federal University (UFABC)
Thesis: Aspects of black hole physics beyond general relativity
Advisor: Dr. Roldão da Rocha Jr.

Master in Applied Mathematics

2011 – 2013 | ABC Federal University (UFABC)
Thesis: Classical and algebraic spinors in Clifford algebras
Advisor: Dr. Roldão da Rocha Jr.

Bachelor in Physics

2011 – 2013 | ABC Federal University (UFABC)

Bachelor in Science & Technology

2008 – 2011 | ABC Federal University (UFABC)

Teaching

Visiting Professor

2020 – | ABC Federal University (UFABC)

Lecturer (Graduate and Undergraduate)

2017 – 2020 | São Paulo State University (UNESP)

Lecturer (Undergraduate)

2016 – 2017 | São Paulo Technology Faculty (FATEC)

Advisor

2018 – | São Paulo State University (UNESP)
Supervising undergraduate and graduate students

Research

Postdoctoral researcher

2017 – 2020 | São Paulo State University (UNESP)
Supervisor: Dr. Julio Hoff Marny

Visiting researcher

2015 – 2016 | Bologna University (Italy)
Collaboration with Dr. Roberto Casadio

Honors and Awards

CAPES|BR Postdoctoral researcher fellowship
CAPES|BR Ph.D researcher fellowship
CAPES|BR International visiting researcher fellowship
CAPES|BR Master degree fellowship

Research Interests

· General relativity
· Black hole physics
· Gravitational wave physics
· Alternative theories of gravitation
· Spinors Clifford algebras

Journals Refereeing

· Gen. relativity and Gravitation
· Modern Physics Letters A
· Universe
· Proc. of the Royal Society A
· Class. and Quantum Gravity
· Adv. in Applied Clifford Algebras
· Journal of Mathematical Physics
· Int. Journal of Modern Physics D
· Physics Letters. B
· The European Physical Journal C
· Journal of High Energy Physics

Computer Skills

· SageMath & SageManifolds (CAS)
· Cadabra 2 (CAS)
· Mathematica (CAS)
· Python programming
· Python scientific modules

Profiles

· ORCID: 0000-0001-7848-5472
· Web of Science: X-3090-2019
· InspireHEP: 1403051
· github: rogeriotc

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Publications

Exotic fermionic fields and minimal length
J.M. Hoff Da Silva, D. Beghetto, R.T. Cavalcanti, R. Da Rocha
Eur.Phys.J.C 80 (2020) 8, 727

Unveiling mapping structures of spinor duals
R.T. Cavalcanti, J.M. Hoff da Silva
Eur.Phys.J.C 80 (2020) 4, 325

Spinor symmetries and underlying properties
J.M. Hoff da Silva, R.T. Cavalcanti, D. Beghetto, R. da Rocha
Eur.Phys.J.C 80 (2020) 2, 117

Further investigation of mass dimension one fermionic duals
J.M. Hoff da Silva, R.T. Cavalcanti
Phys.Lett.A 383 (2019) 15, 1683-1688

Exotic Spinorial Structure and Black Holes in General Relativity
Dino Beghetto, R. T. Cavalcanti, Julio M. Hoff da Silva
Adv.Appl.Clifford Algebras 28 (2018) 5, 96

Revealing how different spinors can be:
the Lounesto spinor classification
J. M. Hoff da Silva, R.T. Cavalcanti
Mod.Phys.Lett.A 32 (2017) 35, 1730032

Strong deflection limit lensing effects in the minimal
geometric deformation and Casadio--Fabbri--Mazzacurati solutions
R.T. Cavalcanti, A. Goncalves da Silva, Roldao da Rocha
Class.Quant.Grav. 33 (2016) 21, 215007

Flag-dipole and flagpole spinor fluid flows in Kerr spacetimes
Roldao da Rocha, R.T. Cavalcanti
Phys.Atom.Nucl. 80 (2017) 2, 329-333

Fluid/gravity correspondence and the CFM black brane solutions
Roberto Casadio, R. T. Cavalcanti, Roldão da Rocha
Eur.Phys.J.C 76 (2016) 10, 556

Horizon of quantum black holes in various dimensions
Roberto Casadio, R. T. Cavalcanti, Andrea Giugno, Jonas Mureika
Phys.Lett.B 760 (2016), 36-44

Dark Spinors Hawking Radiation in String Theory Black Holes
R.T. Cavalcanti, Roldao da Rocha
Adv.High Energy Phys. 2016 (2016), 4681902

Spherically Symmetric Thick Branes Cosmological Evolution
A.E. Bernardini, R.T. Cavalcanti, Roldão da Rocha
Gen.Rel.Grav. 47 (2015) 1, 1840

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Publications

Classification of Singular Spinor Fields and
Other Mass Dimension One Fermions
R.T. Cavalcanti
Int.J.Mod.Phys.D 23 (2014) 14, 1444002

VSR symmetries in the DKP algebra:
the interplay between Dirac and Elko spinor fields
R.T. Cavalcanti, J. M. Hoff da Silva, Roldao da Rocha
Eur.Phys.J.Plus 129 (2014) 11, 246

Flag-Dipole Spinor Fields in ESK Gravities
Roldao da Rocha, Luca Fabbri, J.M. Hoff da Silva,
R.T. Cavalcanti, J.A. Silva-Neto
J.Math.Phys. 54 (2013), 102505

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