

# Marcos Carvalho Brum de Oliveira

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*Academic Production*

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## Publications

- 2020 **Braz. J. of Physics (2021) 51:244-262. DOI:10.1007/s13538-020-00808-0**, arXiv:1909.06232, J. C. A. Barata and M. Brum and V. Chabu and R. Correa da Silva.  
Pure and Mixed States
- 2019 **Symmetry, Integrability and Geometry: Methods and Applications 15 (2019), 060**, arXiv:1708.00538, João C. A. Barata and Marcos Brum.  
Wavepackets on de Sitter spacetime
- 2015 **Class. Quantum Grav 32 (2015) 015013**, arXiv:1405.7916, Marcos Brum and Sergio E. Jorás.  
Hadamard state in Schwarzschild-de Sitter spacetime
- 2014 **Class. Quantum Grav 31 (2014) 025024**, arXiv:1307.0482, Marcos Brum and Klaus Fredenhagen.  
'Vacuum-like' Hadamard states for quantum fields on curved spacetimes
- 2013 **Class. Quantum Grav 30 (2013) 235035**, arXiv:1302.3174, Kolja Them and Marcos Brum.  
States of low energy in homogeneous and inhomogeneous expanding spacetimes

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## Mini-courses lectured

- 2016 **Hadamard States in Quantum Field Theory on Curved Spacetimes**, Institute of Physics, University of São Paulo.  
Brazil
- 2015 **Introduction to Algebraic Quantum Field Theory on Curved Spacetimes**, Brazilian Center for Research in Physics, The Ministry of Science, Technology, Innovation and Communications.  
Brazil

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