3rd Karl Schwarzschild Meeting (KSM 2017)

Gravity and the Gauge/Gravity Correspondence

Journal of Physics: Conference Series Volume 942

Frankfurt, Germany 24 - 28 July 2017

Editors:

Piero Nicolini Matthias Kaminski Jonas Mureika Marcus Bleicher

ISBN: 978-1-5108-5520-5

ISSN: 1742-6588

Printed from e-media with permission by:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2017) by the Institute of Physics All rights reserved. The material featured in this book is subject to IOP copyright protection, unless otherwise indicated.

Printed by Curran Associates, Inc. (2018)

For permission requests, please contact the Institute of Physics at the address below.

Institute of Physics Dirac House, Temple Back Bristol BS1 6BE UK

Phone: 44 1 17 929 7481 Fax: 44 1 17 920 0979

techtracking@iop.org

Additional copies of this publication are available from:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571 USA Phone: 845-758-0400

Fax: 845-758-2633

Email: curran@proceedings.com Web: www.proceedings.com

Table of contents

Volume 942

3rd Karl Schwarzschild Meeting - Gravity and the	Gauge/Gravity Correspondence
24–28 July 2017, Frankfurt, Germany	
Accepted papers received: 15 December 2017	
Published online: 3 January 2018	

Preface

3rd Karl Schwarzschild Meeting - Gravity and the Gauge/Gravity Correspondence

Piero Nicolini, Matthias Kaminski, Jonas Mureika and Marcus Bleicher

Peer review statement

Papers

Keynote

Imaging black holes: past, present and future

Heino Falcke....1

Accelerating Black Holes

Ruth Gregory.....10

Einstein-Maxwell-Chern-Simons Black Holes

J Kunz, J L Blázquez-Salcedo, F Navarro-Lérida and E Radu.....18

Contributed Paper

Testing the Kerr black hole hypothesis with RELXILL NK

Cosimo Bambi.....26

OJ287 taken to pieces: the origin of a precessing and rotating jet

S Britzen, C Fendt, G Witzel, S-J Qian, I N Pashchenko, O Kurtanidze, M Zajacek, G Martinez, V Karas, M Aller, H Aller, A Eckart, K Nilsson, P Arévalo, J Cuadra and A Witzel.....32

Illusion about weakness of gravity hides new way to unify gravity with particle physics

Alexander Burinskii.....38

Observational signatures of spherically-symmetric black hole spacetimes

Mariafelicia De Laurentis, Ziri Younsi, Oliver Porth, Yosuke Mizuno, Christian Fromm, Luciano Rezzolla and Hector Olivares.....45

Self-consistent geodesic equation and quantum tunneling from charged AdS black holes

Gao-Ming Deng.....51

QED loop effects in the spacetime background of a Schwarzschild black hole

Viacheslav A. Emelyanov.....57

Time dependence of entanglement for steady state formation in AdS₃/CFT₂

M Flory, J Erdmenger, D Fernández, E Megías, A Straub and P Witkowski.....63

Gravity's Rainbow and Black Hole Entropy

Remo Garattini.....69

Quantum post-Newtonian theory for corpuscular Black Holes
Andrea Giugno75
Horizon Quantum Mechanics: spherically symmetric and rotating sources
Andrea Giusti81
Quasinormal Modes of Static Modified Gravity (MOG) Black Holes
Luciano Manfredi, Jonas Mureika and John Moffat86
Finite conformal quantum gravity and spacetime singularities
Leonardo Modesto and Lesław Rachwał92
Thermodynamical aspects of black holes in modified gravity
Lorenzo Sebastiani98
Testing general relativity with X-ray reflection spectroscopy of MCG-06-30-15
Ashutosh Tripathi104
Shear viscosity in QFTs dual to AdS spherical black holes
Matteo Tuveri, Mariano Cadoni and Edgardo Franzin110
Noncommutative Black Holes at the LHC
Elena Michelle Villhauer116
AdS/CFT far from equilibrium in a Vaidya setup
Michael F Wondrak, Matthias Kaminski, Piero Nicolini and Marcus Bleicher122