

2014 CCTP PUBLICATIONS

JAN' –DEC' 2014

- Holographic RG flow and the Quantum Effective Action**
[Elias Kiritsis](#) (Crete U. & CERN & APC, Paris), [Wenliang Li](#), [Francesco Nitti](#) (APC, Paris & IRFU, Saclay & Paris Observ.). Jan 5, 2014. 66 pp.
Published in **Fortsch.Phys.** **62** (2014) **389-454**
CCTP-2013-23, CCQCN-2013-13, CERN-PH-TH/2013-321
DOI: [10.1002/prop.201400007](#)
e-Print: [arXiv:1401.0888](#) [hep-th] | [PDF](#)
- Supersymmetric Perturbations of the M5 brane**
[Vasilis Niarchos](#) (Crete U.). Feb 17, 2014. 33 pp.
Published in **JHEP** **1405** (2014) **023**
CCQCN-2014-23, CCTP-2014-27
DOI: [10.1007/JHEP05\(2014\)023](#)
e-Print: [arXiv:1402.4132](#) [hep-th] | [PDF](#), [arXiv:1402.4132](#) | [PDF](#)
- Dynamical Meson Melting in Holography**
[Takaaki Ishii](#) (Crete U.), [Shunichiro Kinoshita](#) (OCAMI, Osaka), [Keiju Murata](#) (Keio U.), [Norihiro Tanahashi](#) (Tokyo U., IPMU & Cambridge U., DAMTP). Jan 20, 2014. 39 pp.
Published in **JHEP** **1404** (2014) **099**
AP-GR-108, CCTP-2014-26, CCQCN-2014-17, IPMU14-0004, OCU-PHYS-396
DOI: [10.1007/JHEP04\(2014\)099](#)
e-Print: [arXiv:1401.5106](#) [hep-th] | [PDF](#)
- The Geroch group in Einstein spaces**
[Robert G. Leigh](#) (Illinois U., Urbana), [Anastasios C. Petkou](#) (Aristotle U. Thessaloniki), [P. Marios Petropoulos](#) (Ecole Polytechnique, CPHT), [Prasanta K. Tripathy](#) (Indian Institute of Technology, Chennai). Mar 25, 2014. 16 pp.
CPHT-RR051.0613, IITM-PH-TH-2014-1
e-Print: [arXiv:1403.6511](#) [hep-th] | [PDF](#)
- Black holes in N=8 supergravity from SO(4,4) hidden symmetries**
[David D. K. Chow](#), [Geoffrey Compère](#) (Brussels U., PTM & Intl. Solvay Inst., Brussels). Apr 9, 2014. 39 pp.
Published in **Phys.Rev.** **D90** (2014) **2**, **025029**
DOI: [10.1103/PhysRevD.90.025029](#)
e-Print: [arXiv:1404.2602](#) [hep-th] | [PDF](#)
- Effective S=1/2 description of the S=1 chain with strong easy plane anisotropy**
[C. Psaroudaki](#), [J. Herbrych](#), [J. Karadamoglou](#), [P. Prelovšek](#), [X. Zotos](#), [N. Papanicolaou](#) Submitted on 11 Apr 2014
CCTP-2014-07
Journal-ref: Phys. Rev. B 89, 224418 (2014)
- Gravity and axions from a random UV QFT**
[Elias Kiritsis](#) (Crete U. & APC, Paris & CERN). 2014. 29 pp.
Published in **EPJ Web Conf.** **71** (2014) **00068**
DOI: [10.1051/epjconf/20147100068](#)
Conference: [C13-08-28.1](#)

8. **A Caveat on Building Nonlocal Models of Cosmology**
[N.C. Tsamis](#) (U. Crete), [R.P. Woodard](#) (Florida U.). May 18, 2014. 24 pp.
UFIFT-QG-14-04, CCTP-2014-09
e-Print: [arXiv:1405.4470](#) [astro-ph.CO] | [PDF](#)
9. **Classical Gravitational Back-Reaction**
[N.C. Tsamis](#), [R.P. Woodard](#). May 24, 2014. 14 pp.
CCTP-2014-08, UFIFT-QG-14-03
e-Print: [arXiv:1405.6281](#) [gr-qc] | [PDF](#)
10. **Acoustic geometry through perturbation of mass accretion rate : I - radial flow in general static spacetime**
[Deepika B Ananda](#), [Sourav Bhattacharya](#), [Tapas K. Das](#). Jun 17, 2014. 8 pp.
e-Print: [arXiv:1406.4262](#) [astro-ph.HE] | [PDF](#)
11. **Instantons and the Hartle-Hawking-Maldacena Proposal for dS/CFT**
[Sebastian de Haro](#) (Amsterdam U.), [Anastasio C. Petkou](#) (Aristotle U., Thessaloniki). Jun 24, 2014. 16 pp.
e-Print: [arXiv:1406.6148](#) [hep-th] | [PDF](#)
12. **Holographic Metals and Insulators with Helical Symmetry**
[Aristomenis Donos](#) (Cambridge U., DAMTP), [Blaise Goutéraux](#) (Nordita & Stockholm U.), [Elias Kiritsis](#) (APC, Paris & CERN & Crete U.). Jun 24, 2014. 46 pp.
CCTP-2014-6, CCQCN-2014-26, CERN-PH-TH-2014-035, NORDITA-2014-76
e-Print: [arXiv:1406.6351](#) [hep-th] | [PDF](#)
13. **A Simple Holographic Model of a Charged Lattice**
[Francesco Aprile](#) (Crete U. & ICC, Barcelona U.), [Takaaki Ishii](#) (Crete U.). Jun 27, 2014. 26 pp.
CCTP-2014-11, CCQCN-2014-30
e-Print: [arXiv:1406.7193](#) [hep-th] | [PDF](#)
14. **Universality classes for models of inflation**
[P. Binetruy](#) (APC, Paris & Paris Cent. Cosmol. Phys.), [E. Kiritsis](#) (APC, Paris & Crete U. & CERN), [J. Mabillard](#), [M. Pieroni](#) (APC, Paris & Paris Cent. Cosmol. Phys.), [C. Rosset](#) (APC, Paris). Jul 3, 2014. 43 pp.
CERN-PH-TH-2014-111, CCTP-2014-10, CCQCN-2014-29
e-Print: [arXiv:1407.0820](#) [astro-ph.CO] | [PDF](#)
15. **Acoustic geometry through perturbation of mass accretion rate - axisymmetric flow in static spacetimes**
[Deepika B Ananda](#), [Sourav Bhattacharya](#), [Tapas K Das](#). Jul 8, 2014. 9 pp.
e-Print: [arXiv:1407.2268](#) [astro-ph.HE] | [PDF](#)
16. **Towards Collisions of Inhomogeneous Shockwaves in AdS**
[Daniel Fernández](#). Jul 21, 2014. 4 pp.
CCTP-2014-12, CCQCN-2014-32
e-Print: [arXiv:1407.5628](#) [hep-th] | [PDF](#)
17. **Gravity dual of spin and charge density waves**
[Niko Jokela](#), [Matti Jarvinen](#), [Matthew Lippert](#). Aug 6, 2014. 25 pp.
HIP-2014-16-TH, CCTP-2014-13, CCQCN-2014-33
e-Print: [arXiv:1408.1397](#) [hep-th] | [PDF](#)
18. **Schrodinger Invariance from Lifshitz Isometries in Holography and Field Theory**
[Jelle Hartong](#) (Bohr Inst.), [Elias Kiritsis](#) (Crete U. & APC, Paris), [Niels A. Obers](#) (Bohr Inst.). Sep 4, 2014. 5 pp.

CCTP-2014-17, CCQCN-2014-40
e-Print: [arXiv:1409.1522](#) [hep-th] | [PDF](#)

19. Searches for Large-Scale Anisotropy in the Arrival Directions of Cosmic Rays Detected above Energy of 1019 eV at the Pierre Auger Observatory and the Telescope Array
[Telescope Array](#) and [Pierre Auger](#) Collaborations ([Alexander Aab \(Siegen U.\) et al.](#)). Sep 10, 2014. 15 pp.
Published in *Astrophys.J.* **794 (2014) 2, 172**
FERMILAB-PUB-14-325-AD-AE-CD-TD
DOI: [10.1088/0004-637X/794/2/172](#)
e-Print: [arXiv:1409.3128](#) [astro-ph.HE] | [PDF](#)

20. Lifshitz Space-Times for Schroedinger Holography
[Jelle Hartong \(Bohr Inst.\)](#), [Elias Kiritsis \(Crete U. & APC, Paris\)](#), [Niels A. Obers \(Bohr Inst.\)](#). Sep 4, 2014. 16 pp.
CCTP-2014-16, CCQCN-2014-39
e-Print: [arXiv:1409.1519](#) [hep-th] | [PDF](#)

21. tt^* equations, localization and exact chiral rings in 4d $N=2$ SCFTs
[Marco Baggio](#), [Vasilis Niarchos](#), [Kyriakos Papadodimas](#). Sep 15, 2014. 45 pp.
Published in *JHEP* **1502 (2015) 122**
CCQCN-2014-38, CCTP-2014-15, CERN-PH-TH-2014-173
DOI: [10.1007/JHEP02\(2015\)122](#)
e-Print: [arXiv:1409.4212](#) [hep-th] | [PDF](#)

22. Exact correlation functions in $SU(2)_N=2$ superconformal QCD
[Marco Baggio \(Zurich, ETH\)](#), [Vasilis Niarchos \(Crete U.\)](#), [Kyriakos Papadodimas \(CERN\)](#). Sep 15, 2014. 5 pp.
Published in *Phys.Rev.Lett.* **113 (2014) 25, 251601**
CCTP-2014-18, CCQCN-2014-42, CERN-PH-TH-2014-177
DOI: [10.1103/PhysRevLett.113.251601](#)
e-Print: [arXiv:1409.4217](#) [hep-th] | [PDF](#)

23. On the gluon operator effective potential in holographic Yang-Mills theory
[Elias Kiritsis \(Crete U. & APC, Paris\)](#), [Wenliang Li](#), [Francesco Nitti \(APC, Paris\)](#). Oct 4, 2014. 46 pp.
CCTP-2014-19, CCQCN-2014-43
e-Print: [arXiv:1410.1091](#) [hep-th] | [PDF](#)

24. Non-relativistic Josephson Junction from Holography
[Huai-Fan Li \(Shanxi Datong U.\)](#), [Li Li \(Crete U.\)](#), [Yong-Qiang Wang \(Lanzhou U.\)](#), [Hai-Qing Zhang \(Taguspark, IST\)](#). Oct 21, 2014. 14 pp.
Published in *JHEP* **1412 (2014) 099**
DOI: [10.1007/JHEP12\(2014\)099](#)
e-Print: [arXiv:1410.5578](#) [hep-th] | [PDF](#)

25. A semi-holographic model for heavy-ion collisions
[Edmond Iancu \(IPhT, Saclay\)](#), [Ayan Mukhopadhyay \(IPhT, Saclay & Ecole Polytechnique, CPHT & Crete U.\)](#). Oct 23, 2014. 30 pp.
CPHT043.0814, CCTP-2014-25, CCQCN-2014-50
e-Print: [arXiv:1410.6448](#) [hep-th] | [PDF](#)

26. Fermi surface behavior in the ABJM M2-brane theory
[Oliver DeWolfe](#), [Oscar Henriksson](#) ([Colorado U.](#)), [Christopher Rosen](#) ([Crete U.](#)). Oct 26, 2014. 60 pp.
 CCTP-2014-27, CCQCN-2014-53, COLO-HEP-585
 e-Print: [arXiv:1410.6986](#) [hep-th] | [PDF](#)
27. Large-N transitions of the connectivity index
[Francesco Aprile](#), [Vasilis Niarchos](#) ([Crete U.](#)). Oct 28, 2014. 39 pp.
 Published in **JHEP** **1502** (2015) **083**
 CCQCN-2014-47, CCTP-2014-22
 DOI: [10.1007/JHEP02\(2015\)083](#)
 e-Print: [arXiv:1410.7773](#) [hep-th] | [PDF](#)
28. Energy-momentum balance in a particle domain wall perforating collision
[D.V. Gal'tsov](#), [E.Yu. Melkumova](#) ([Moscow State U.](#)), [P.A. Spirin](#) ([Moscow State U.](#) & [Crete U.](#)).
 Nov 1, 2014. 13 pp.
 Published in **Phys.Rev. D****90** (2014) **12**, 125024
 DOI: [10.1103/PhysRevD.90.125024](#)
 e-Print: [arXiv:1411.0122](#) [hep-th] | [PDF](#)
29. Weak Field Collapse in AdS: Introducing a Charge Density
[Elena Caceres](#) ([Colima U.](#) & [Texas U.](#) & [Texas U., TCC](#)), [Arnab Kundu](#) ([Barcelona U., Dept. Fund. Phys.](#) & [ICC, Barcelona U.](#)), [Juan F. Pedraza](#) ([Texas U.](#) & [Texas U., TCC](#) & [Perimeter Inst. Theor. Phys.](#)), [Di-Lun Yang](#) ([Crete U.](#) & [Taiwan, Chung Yuan Christian U.](#)). Nov 6, 2014. 49 pp.
 UTTG-22-14, TCC-024-14, CCTP-2014-24, CCQCN-2014-49
 e-Print: [arXiv:1411.1744](#) [hep-th] | [PDF](#)
30. Time Evolution of Entanglement Entropy in Quenched Holographic Superconductors
[Xiaojian Bai](#) ([Georgia Tech., Atlanta](#)), [Bum-Hoon Lee](#) ([CQUeST, Seoul](#) & [Sogang U.](#)), [Li Li](#) ([Crete U.](#)),
[Jia-Rui Sun](#) ([East China U. Sci. Tech.](#)), [Hai-Qing Zhang](#) ([Utrecht U.](#)). Dec 17, 2014. 19 pp.
 e-Print: [arXiv:1412.5500](#) [hep-th] | [PDF](#)
31. Frequency dependence of anomalous transport in field theory and holography
[Eugenio Megías](#) ([Barcelona, Autònoma U.](#) & [Barcelona, IFAE](#)), [Francisco Pena-Benitez](#) ([Madrid, IFT](#) & [Madrid, Autònoma U.](#) & [Crete U.](#)). 2014.
 Published in **EPJ Web Conf.** **80** (2014) **00009**
 DOI: [10.1051/epjconf/20148000009](#)

ASSOCIATED MEMBERS

1. Magnetohydrodynamics, charged currents and directed flow in heavy ion collisions
[Umut Gursoy](#) ([Utrecht U.](#)), [Dmitri Kharzeev](#) ([Brookhaven](#) & [SUNY, Stony Brook](#)), [Krishna Rajagopal](#) ([MIT, Cambridge, CTP](#)). Jan 15, 2014. 13 pp.
 Published in **Phys.Rev. C****89** (2014) **054905**
 DOI: [10.1103/PhysRevC.89.054905](#)
 e-Print: [arXiv:1401.3805](#) [hep-ph] | [PDF](#)
2. Charge transport in holography with momentum dissipation
[B. Goutéraux](#) ([Stockholm U.](#) & [Nordita](#)). Jan 21, 2014. 31 pp.
 Published in **JHEP** **1404** (2014) **181**
 NORDITA-2014-7
 DOI: [10.1007/JHEP04\(2014\)181](#)
 e-Print: [arXiv:1401.5436](#) [hep-th] | [PDF](#)

3. **Towards a general fluid/gravity correspondence**
[Natalia Pinzani-Fokeeva \(Amsterdam U.\)](#), [Marika Taylor \(Southampton U.\)](#). Jan 23, 2014. 57 pp.
e-Print: [arXiv:1401.5975 \[hep-th\]](#) | [PDF](#)
4. **Comments on scale and conformal invariance**
[Adam Bzowski \(Leuven U.\)](#), [Kostas Skenderis \(Southampton U.\)](#). Feb 13, 2014. 41 pp.
Published in **JHEP 1408 (2014) 027**
DOI: [10.1007/JHEP08\(2014\)027](#)
e-Print: [arXiv:1402.3208 \[hep-th\]](#) | [PDF](#)
5. **Progress in Gauge-Higgs Unification on the Lattice**
[Francesco Knechtli](#), [Kyoko Yoneyama](#), [Peter Dziennik \(Bergische U., Wuppertal \(main\)\)](#),
[Nikos Irges \(Natl. Tech. U., Athens\)](#). Feb 14, 2014. 9 pp.
Published in **PoS LATTICE2013 (2014) 061**
Conference: [C13-07-29.1 Proceedings](#)
e-Print: [arXiv:1402.3491 \[hep-lat\]](#) | [PDF](#)
6. **Non-equilibrium dynamics and AdS4 Robinson-Trautman**
[Ioannis Bakas \(Natl. Tech. U., Athens\)](#), [Kostas Skenderis \(Southampton U.\)](#). Apr 18, 2014. 47 pp.
e-Print: [arXiv:1404.4824 \[hep-th\]](#) | [PDF](#)
7. **Inhomogeneity simplified**
[Marika Taylor](#), [William Woodhead \(Southampton U.\)](#). Jun 18, 2014. 59 pp.
e-Print: [arXiv:1406.4870 \[hep-th\]](#) | [PDF](#)
8. **Polarized solutions and Fermi surfaces in holographic Bose-Fermi systems**
[Francesco Nitti \(APC, Paris & IRFU, Saclay & Paris Observ.\)](#), [Giuseppe Policastro \(Ecole Normale Superieure\)](#), [Thomas Vanel \(UPMC, Paris \(main\) & Paris, LPTHE\)](#). Jul 1, 2014. 46 pp.
e-Print: [arXiv:1407.0410 \[hep-th\]](#) | [PDF](#)
9. **(Non)renormalization of Anomalous Conductivities and Holography**
[Umut Gursoy](#), [Aron Jansen](#). Jul 11, 2014. 35 pp.
e-Print: [arXiv:1407.3282 \[hep-th\]](#) | [PDF](#)
10. **R_2 inflation from scale invariant supergravity and anomaly free superstrings with fluxes**
[Costas Kounnas \(Ecole Normale Superieure\)](#), [Dieter Lüst \(Munich, Max Planck Inst. & Munich U., ASC\)](#), [Nicolaos Toumbas \(Cyprus U.\)](#). Sep 24, 2014. 24 pp.
LPTENS-14-12, LMU-ASC-59-14, MPP-2014-349
DOI: [10.1002/prop.201400073](#)
e-Print: [arXiv:1409.7076 \[hep-th\]](#) | [PDF](#)
11. **Multi-field inflation from holography**
[Jaume Garriga \(Barcelona U., Dept. Fund. Phys. & ICC, Barcelona U.\)](#), [Kostas Skenderis \(Southampton U.\)](#), [Yuko Urakawa \(Barcelona U., Dept. Fund. Phys. & ICC, Barcelona U. & Nagoya U.\)](#). Oct 13, 2014. 27 pp.
Published in **JCAP 1501 (2015) 01, 028**
DOI: [10.1088/1475-7516/2015/01/028](#) e-Print: [arXiv:1410.3290 \[hep-th\]](#) | [PDF](#)
12. **AdS/CFT and the Axial Sector of Large- N Yang-Mills Theory**
[Francesco Nitti \(APC, Paris\)](#). 2014. 7 pp.

Published in **Acta Phys.Polon.Supp. 7 (2014) 3, 525**
DOI: [10.5506/APhysPolBSupp.7.525](https://doi.org/10.5506/APhysPolBSupp.7.525)