

# Assist. Prof. Dimitrios Giataganas



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Research areas : Theoretical High Energy Physics, Gravity, Neural Networks

- Ph.D, Centre for Particle Theory, Durham University, UK (2005 - 2009)
- MSc, Imperial College, UK (2004-2005).
- B.S. and MSc Applied Mathematics and Physical Sciences, National Technical University of Athens (1999-2004).
  
- Assistant Professor, National Sun Yat-sen University, Taiwan (2021)
- Research Fellow, Junior Group Leader, National and Kapodistrian University of Athens (2019-2021).
- IAS Fellow, Institute of Advanced Study, Durham University, UK, (2020).
- Research Scholar, National Center for Theoretical Sciences (NCTS), Taiwan (2015-2019).
- Visiting Postdoctoral Fellow, University of Oxford, United Kingdom, (2014-2015).
- Postdoctoral Fellow, under the Cofund "Excellence" Grant, University of Athens, and University of Patras, (2013 -2015).
- SPARC Prestigious Fellow of University of the Witwatersrand (2013).
- Claude Leon Foundation Postdoctoral Fellow, University of the Witwatersrand, (2011-2012).
- Postdoctoral Fellow, University of the Witwatersrand, S.Africa, (2009-2010).

## Publication List

### A) Research Papers in Scientific Journals

1. "Entropy of Thermal CFTs on Curved Backgrounds", D. Giataganas, N. Tetradis, [arXiv:2012.13443](https://arxiv.org/abs/2012.13443) [hep-th].
2. "Detecting Topological Quantum Phase Transitions via the c-Function", M. Baggioli, D. Giataganas,

- Phys.Rev. D103 (2021) 3, 026009, [arXiv:2007.07273](#) [hep-th].
3. "Analytic Non-Integrability and S-Matrix Factorization", D. Giataganas, [arXiv:1909.02577](#) [hep-th].
  4. "c-Theorem for Anisotropic RG Flows from Holographic Entanglement Entropy", C.-S. Chu, D. Giataganas, Phys.Rev. D101 (2020) 046007, [arXiv:1906.09620](#) [hep-th].
  5. "Entanglement entropy, horizons and holography", D. Giataganas, N. Tetradis, Phys.Lett. B796 (2019) 88-92, [arXiv:1904.13119](#) [hep-th].
  6. "Thermodynamics and Feature Extraction by Machine Learning", S.S. Funai, D. Giataganas, Phys.Rev. Research 2,033145, [arXiv:1810.08179](#) [hep-th].
  7. "Baryons under Strong Magnetic Fields or in Theories with Space-dependent theta-term", D. Giataganas, Phys.Rev. D98 (2018) 106010, [arXiv:1805.08245](#) [hep-th].
  8. "Quantum Fluctuation and Dissipation in Holographic Theories: A Unifying Study Scheme", D. Giataganas, D-S Lee, C-P Yeh, JHEP1808(2018) 110, [arXiv:1802.04983](#) [hep-th].
  9. "Strongly-coupled anisotropic gauge theories and holography", D. Giataganas, U. Gürsoy, J. Pedraza, Phys. Rev. Lett. 121601, [arXiv:1708.05691](#) [hep-th].
  10. "Non-integrability and Chaos with Unquenched Flavor", D. Giataganas, K. Zoubos, JHEP1710(2017) 042, [arXiv:1707.04033](#) [hep-th].
  11. "The Thermal Bath of de Sitter from Holography", C-S Chu, D. Giataganas, Phys.Rev. D96 (2017) 026023, [arXiv:1608.07431](#) [hep-th].
  12. "Towards Holographic Quantum Energy Teleportation", D. Giataganas, F-L. Lin, P-H. Liu, Phys.Rev. D94 (2016) 126013, [arxiv:1608.06523](#) [hep-th].
  13. "AdS/dS CFT Correspondence", C-S Chu, D. Giataganas, Phys.Rev. D94 (2016) 106013, [arXiv:1604.05452](#) [hep-th].
  14. "k-Strings as Fundamental Strings ", D. Giataganas, JHEP1505(2015) 134, [arXiv:1503.09180](#) [hep-th].
  15. "On the holographic width of flux tubes ", D. Giataganas, N. Irges, JHEP1505(2015) 105, [arXiv:1502.05083](#) [hep-th].
  16. "Tension of Confining Strings at Low Temperature", D. Giataganas, K. Goldstein, JHEP 1502 (2015) 123, [arXiv:1411.4995](#) [hep-th].
  17. "The Imaginary Potential of Heavy Quarkonia Moving in Strongly Coupled Plasma", M. Ali-Akbari, D. Giataganas, Z. Rezaei, Phys.Rev. D90 (2014) 086001, [arXiv:1406.1994](#) [hep-th].
  18. "Non-integrability in non-relativistic theories", D. Giataganas, K. Sfetsos, JHEP 1406 (2014) 018, [arXiv:1403.2703](#) [hep-th].
  19. "Heavy Quark Diffusion in Strongly Coupled Anisotropic Plasmas", D.

- Giataganas, H. Soltanpanahi, JHEP 1406 (2014) 047, [arXiv:1312.7474](#) [hep-th].
20. "On Marginal Deformations and Non-Integrability", D. Giataganas, L. Pando Zayas, K. Zoubos, JHEP 1401 (2014) 129, [arXiv:1311.3241](#) [hep-th].
  21. "Universal Properties of the Langevin Diffusion Coefficients", D. Giataganas, H. Soltanpanahi, Phys.Rev. D89 (2014) 026011, [arXiv:1310.6725](#) [hep-th].
  22. "Generalised cusp anomalous dimension in beta-deformed super Yang Mills theory", G. Georgiou, D. Giataganas, JHEP 10 (2013)079, [arXiv:1306.6620](#) [hep-th].
  23. "The Imaginary Part of the Static Potential in Strongly Coupled Anisotropic Plasma", K. Bitaghsir Fadafan, D. Giataganas, H. Soltanpanahi, JHEP 1311 (2013) 107, [arXiv:1306.2929](#) [hep-th]
  24. "Non-singlet Baryons in Less Supersymmetric Backgrounds", D. Giataganas, Y. Lozano, M. Picos, K. Siampos, JHEP 1206 (2012)123, [arXiv:1203.6817](#) [hep-th].
  25. "Probing strongly coupled anisotropic plasma", D. Giataganas, JHEP 1207 (2012) 031, [arXiv:1202.4436](#) [hep-th].
  26. "Giant Graviton Oscillators," R. d. M. Koch, M. Dessein, D. Giataganas, C. Mathwin, JHEP 1110 (2011) 009, [[arXiv:1108.2761](#) [hep-th]].
  27. "Flavor Corrections in the Static Potential in Holographic QCD," D. Giataganas and N. Irges, Phys. Rev. D 85 (2012) 046001, [[arXiv:1104.1623](#) [hep-th]].
  28. "Gluon Scattering Amplitudes in Finite Temperature Gauge/Gravity Dualities," G. Georgiou, D. Giataganas, JHEP 1108 (2011) 045, [[arXiv:1011.6339](#) [hep-th]].
  29. "Semiclassical strings in marginally deformed toric AdS/CFT," D. Giataganas, JHEP 1112 (2011) 051, [[arXiv:1010.1502](#) [hep-th]].
  30. "On the non-BPS string solutions in Sasaki-Einstein gauge / gravity duality," D. Giataganas, JHEP 1006 (2010) 016. [[arXiv:0912.3624](#) [hep-th]].
  31. "Semi-classical Strings in Sasaki-Einstein Manifolds," D. Giataganas, JHEP 0910 (2009) 087. [[arXiv:0904.3125](#) [hep-th]].
  32. "UV-divergences of Wilson Loops for Gauge/Gravity Duality," C. -S. Chu, D. Giataganas, JHEP 0812 (2008) 103. [[arXiv:0810.5729](#) [hep-th]].
  33. "Near BPS Wilson Loop in beta-deformed Theories," C. -S. Chu, D. Giataganas, JHEP 0710(2007) 108. [[arXiv:0708.0797](#) [hep-th]].

## B)Reviews

1. "Stochastic Motion of Heavy Quarks in Holography: A Theory-Independent Treatment", D. Giataganas, PoS Corfu2017 (2017) 032. [arXiv:1805.09011](#) [hep-th].
2. "Properties of Confinement in Holography", D. Giataganas, PoS Corfu2014 (2015) 150, [arXiv:1505.07065](#) [hep-th]
3. "Observables in Strongly Coupled Anisotropic Theories", D. Giataganas, PoS Corfu2012 (2013) 122, [arXiv:1306.1404](#) [hep-th]

### **C)Conference Proceedings**

1. "Non-singlet baryons in gauge/gravity duality", Y. Lozano, D. Giataganas, K. Siampos, PoS Corfu2012 (2013) 126.
2. "Orthogonal Wilson loops in flavor backreacted confining gauge/gravity duality", D. Giataganas and N. Irges, PoS CORFU2011 (2011) 020.
3. "Scattering amplitudes in string/gauge theory correspondence", D. Giataganas, PoS KRUGER2010 (2011) 059.
4. "String solutions in Sasaki-Einstein manifolds and their marginally deformed versions", D. Giataganas, Nucl. Phys. Proc. Suppl. 216 (2011) 227-228.