



# List of publications

Antonio M. García-García

## 2017:

- **Analytical Spectral Density of the Sachdev-Ye-Kitaev Model at finite N**  
A. M. García-García, Jacobus J. M. Verbaarschot, [arXiv:1701.06593](https://arxiv.org/abs/1701.06593)

## 2016:

- **Spectral and thermodynamic properties of the Sachdev-Ye-Kitaev model**  
A. M. García-García, Jacobus J. M. Verbaarschot, [Phys. Rev. D 94, 126010 \(2016\)](https://doi.org/10.1103/PhysRevD.94.126010)
- **Transport in a gravity dual with a varying gravitational coupling constant**  
A. M. García-García, B. Loureiro, A. Romero-Bermúdez, [Phys. Rev. D 94, 086007 \(2016\)](https://doi.org/10.1103/PhysRevD.94.086007).
- **Thouless energy and critical statistics on the metallic side of the many-body localization transition**  
B. Coentien, A. M. García-García, [Phys. Rev. B 94, 144201 \(2016\)](https://doi.org/10.1103/PhysRevB.94.144201).
- **Understanding and enhancing superconductivity in FeSe/STO by quantum size effects**  
B. Murta, A. M. García-García, [Phys. Rev. B 94 184508 \(2016\)](https://doi.org/10.1103/PhysRevB.94.184508).
- **Scattering of universal fermionic clusters in the resonating group method**  
P. Naidon, S. Endo, A. M. García-García, [J. Phys. B, 49 034002 \(2016\)](https://doi.org/10.1143/JPSJ.79.034002).
- **Marginal and Irrelevant Disorder in Einstein-Maxwell backgrounds**  
A. M. García-García, B. Loureiro, [Phys. Rev. D 93, 065025 \(2016\)](https://doi.org/10.1103/PhysRevD.93.065025).
- **Drude weight and Mazur-Suzuki bounds in holography**  
A. M. García-García, A. Romero-Bermúdez, [Phys. Rev. D 93, 066015 \(2016\)](https://doi.org/10.1103/PhysRevD.93.066015).
- **Universal clusters as building blocks of stable quantum matter**  
S. Endo, P. Naidon, A. M. García-García, [Phys. Rev. A 93, 053611 \(2016\)](https://doi.org/10.1103/PhysRevA.93.053611).

## 2015:

- **Universal quantum constraints on the butterfly effect**  
D. Berenstein, A. M. García-García, [arxiv:1510.08870](https://arxiv.org/abs/1510.08870)
- **Conductivity and entanglement entropy of high dimensional holographic Superconductors**  
A. Romero-Bermúdez, A. M. García, [JHEP 09 \(2015\) 33](https://doi.org/10.1088/1126-6708/2015/09/33).
- **Global critical temperature in inhomogeneous superconductors induced by multifractality**  
J. Mayoh, A. M. García-García, [Phys. Rev. B 92, 174526 \(2015\)](https://doi.org/10.1103/PhysRevB.92.174526).
- **Defect formation beyond Kibble-Zurek and holography**  
P. M. Chesler, A. M. Garcia-Garcia, H. Liu, [Phys. Rev. X, 5 021015 \(2015\)](https://doi.org/10.1103/PhysRevX.5.021015).

## 2014:

- **Number theory, periodic orbits and superconductivity in nano-cubes**  
J. Mayoh, A. M. García-García, [Phys. Rev. B 90, 014509 \(2014\)](#).
- **Destruction of Long-range Order by Quenching the Hopping Range in One dimension**  
M. Tezuka, A. M. García-García, M. A. Cazalilla, [Phys. Rev. A 90, 053618 \(2014\)](#).
- **Interplay of classical and "quantum" capacitance in a one dimensional array of Josephson junctions**  
P. Ribeiro, A. M. García-García, [Phys. Rev. B 89, 064513 \(2014\)](#).
- **Dissipation in a simple model of a topological Josephson junction**  
P. Matthews, P. Ribeiro, A. M. García-García, [Phys. Rev. Lett. 112, 247001 \(2014\)](#).
- **Size effects in superconducting thin films coupled to a substrate**  
A. Romero-Bermúdez, A. M. García-García, [Phys. Rev. B, 89 024510 \(2014\)](#).
- **Shape resonances and shell effects in thin film multi-band superconductors**  
A. Romero-Bermúdez, A. M. García-García, [Phys. Rev. B, 89 064508 \(2014\)](#).
- **Normal modes and time evolution of a holographic superconductor after quench**  
X. Gao, A. M. García-García, H. Bi Zeng, H.-Q. Zhang, [JHEP 1406 \(2014\) 019](#).
- **A thermal quench induces spatial inhomogeneities in a holographic superconductor**  
A. M. García-García, H. B. Zeng, H. Q. Zhang, [JHEP 1407 \(2014\) 096](#).
- **Strong enhancement of bulk superconductivity by engineering granular materials**  
J. Mayoh, A. M. García-García, [Phys. Rev. B 90, 134513 \(2014\)](#).

## 2013:

- **Inhomogeneous pairing and enhancement of superconductivity in large Sn nanograins**  
J. Mayoh, A. M. García-García, Proceedings "Quantum in Complex Matter: Superconductivity, Magnetism and Ferroelectricity", Ischia, 2013, arXiv:1309.6255
- **Enhancement of superconductivity by nano-engineering (interview)**  
J. Mayoh and A. M. García-García, [Supercond. Week 27, 3 \(2013\)](#).
- **Thermal amplitude fluctuations in arrays of small Josephson junctions**  
A. M. García-García, [J. Supercond. Nov. Magn. \(2013\)](#), DOI: [10.1007/s10948-013-2162-z](#)
- **Phase coherence in one-dimensional superconductivity by power-law hopping**  
A. M. Lobos, M. Tezuka, A. M. García-García, [Phys. Rev. B 88, 134506 \(2013\)](#).

## 2012:

- **Holographic Description of Finite Size Effects in Strongly Coupled Superconductors**  
A. M. García-García, J. E. Santos, B. Way, [Phys. Rev. B 86, 064526 \(2012\)](#).
- **Combined effect of thermal and quantum fluctuations in superconducting nanostructures: a path integral approach**  
P. Ribeiro, A. M. García-García, [Phys. Rev. Lett. 108, 097004 \(2012\)](#).
- **Testing the universality of the many body metal-insulator transition by time evolution of a disordered one-dimensional ultracold fermionic gas**  
M. Tezuka, A. M. García-García, [Phys. Rev. A 85, 031602 \(2012\) \(Rapid\)](#).
- **Quantum Quenches in Disordered Systems: approach to thermal equilibrium without a typical relaxation time**  
E. Khatami, A. Relaño, M. Rigol, A. M. García-García, [Phys. Rev. E 85, 050102 \(2012\) \(Rapid\)](#).
- **Quantifying fluctuations from the tunnelling differential conductance**  
A. M. García-García, P. Ribeiro, [J. Supercond. Nov. Magn. \(2012\)](#), DOI [10.1007/s10948-012-1662-6](#).

## 2011:

- **Enhancement of the critical temperature in iron-pnictide superconductors by finite size effects**  
A. M. García-García, M. A. N. Araujo, P. D. Sacramento, [Phys. Rev. B 84,172502 \(2011\)](#).
- **Experimental observation of thermal fluctuations in single superconducting Pb nanoparticles through tunneling measurements**  
I. Brihuega, A. M. García-García, P. Ribeiro, M. M. Ugeda, C. H. Michaelis, S. Bose and K. Kern, [Phys. Rev. B 84, 104525 \(2011\)](#) (Editor Suggestions)
- **BCS superconductivity in metallic nanograins: Finite-size corrections, low energy excitations, and robustness of shell effects**  
A. M. García-García, J. D. Urbina, E. Yuzbashyan, K. Richter and B. Altshuler, [Phys. Rev. B 83, 014510 \(2011\)](#).

## 2010:

- **Observation of shell effects in superconducting nanoparticles of Sn**  
S. Bose, A. M. Garcia-Garcia, M. M. Ugeda, J. D. Urbina, C. H. Michaelis, I. Brihuega and K. Kern, [Nature Materials 9, 550 \(2010\)](#).
- **Localization in fractal and multifractal media**  
A. M. Garcia-Garcia, Emilio Cuevas, [Phys. Rev. B 82, 033412 \(2010\)](#).
- **Stability of the superfluid state in a disordered 1D ultracold fermionic gas**  
M. Tezuka, A. M. García-García, [Phys. Rev. A 82, 043613 \(2010\)](#).
- **A holographic approach to phase transitions**  
S. Franco, A. M. García-García, D. Rodriguez, [Phys. Rev. D 81, 041901 \(2010\)](#) (Rapid Comm.)
- **A general class of holographic superconductors**  
S. Franco, A.M. García-García, D. Rodriguez, [JHEP 4 \(2010\) 092](#), [arXiv:0906.1214](#).

## 2009:

- **Absence of localization in one-dimensional disordered systems**  
A. M. García-García, E. Cuevas, [Phys. Rev. B 79, 073104 \(2009\)](#).
- **The Anderson transition in a 3d kicked rotor**  
J. Wang and A. M. García-García, [Phys. Rev. E 79, 036206 \(2009\)](#).

## 2008:

- **BCS theory for finite size superconductors**  
A. M. García-García, J. D. Urbina, E. Yuzbashyan, K. Richter and B. Altshuler, [Phys. Rev. Lett., 100, 187001 \(2008\)](#).
- **Finite size corrections to the blackbody radiation laws**  
A. M. García-García, [Phys. Rev. A, 78, 023806 \(2008\)](#).
- **A semiclassical theory of the Anderson transition**  
A. M. García-García, [Phys. Rev. Lett., 100, 076404 \(2008\)](#).
- **Universality in quantum chaos and the one parameter scaling theory**  
A. M. García-García, J. Wang, [Phys. Rev. Lett., 100, 070603 \(2008\)](#).
- **Classical and quantum anomalous diffusion in a system of 2d Kicked Quantum Rotors**  
A. M. García-García, J. Wang, [Int. J. Mod. Phys. B, 22, 5261 \(2008\)](#).

## 2007:

- **Dimensional dependence of the metal-insulator transition**  
A. M. García-García, E. Cuevas, [Phys. Rev. B 75, 174203 \(2007\)](#).
- **Anderson localization in quantum chaos: scaling and universality**  
A.M. García-García, J. Wang, [Acta Phys. Pol, 112, 635, \(2007\)](#). Proceedings 3rd Workshop on Quantum Chaos and Anderson localization, Warsaw, 2007.
- **Chiral phase transition in QCD as a metal insulator transition**  
A. M. García-García, J. Osborn, [Phys. Rev. D 75, 034503 \(2007\)](#).
- **Is the chiral phase transition induced by a metal insulator transition?**  
A. M. García-García, J. Osborn, Proceedings Infrared QCD, [Braz. J. of Phys., 37, 246 \(2007\)](#).
- **Role of Anderson localization in the QCD chiral phase transition**  
A. M. García-García, Proceedings International Conference of Nuclear Physics 2007, Tokyo.

## 2006:

- **Is it possible to observe experimentally a metal-insulator transition in ultra cold atoms?**  
A. M. García-García, J. Wang, [Phys. Rev. A 74, 063629 \(2006\)](#).
- **Anderson transition in systems with chiral symmetry**  
A. M. García-García, E. Cuevas, [Phys. Rev. B 74, 113101 \(2006\)](#).
- **A semiclassical description of the autocorrelations in Nuclear Masses**  
A. M. García-García, J. G. Hirsch, A. Frank, [Phys. Rev. C 74 \(2006\) 024324](#).
- **Chiral phase transition and Anderson localization in the Instanton Liquid Model for QCD**  
A. M. García-García, J.C. Osborn, [Nucl. Phys. A 769, 251 \(2006\)](#).
- **Power spectrum characterization of the Anderson transition**  
A. M. García-García, [Phys. Rev. E 73, 026213 \(2006\)](#).
- **Semi-Poisson statistics in quantum chaos**  
A. M. García-García, J. Wang, [Phys. Rev. E 73, 03621\(2006\)](#).
- **Localization in the Instanton Liquid model of QCD**  
A. M. García-García, 'International Colloquium on Group Theoretical Methods in Physics', New York, June 2006.

## 2005:

- **Classical singularities and Semi-Poisson statistics in disordered systems**  
A. M. García-García, [Phys. Rev. E. 72, 066210 \(2005\)](#).
- **The Anderson transition in quantum chaos**  
A. M. García-García, J. Wang, [Phys. Rev. Lett. 94, 244102\(2005\)](#).
- **Chiral phase transition as an Anderson transition in the Instanton liquid model of QCD**  
A. M. García-García, James C. Osborn, [PoS LAT2005 \(2005\) 265](#).

## 2004:

- **Long range disorder and Anderson transition in systems with chiral symmetry**  
A. M. García-García, K. Takahashi, [Nucl. Phys. B, 700 \(2004\) 361](#).
- **The QCD vacuum as a disordered medium: A simplified model of the QCD Dirac operator**  
A. M. García-García, J. Osborn, [Phys. Rev. Lett. 93 132002 \(2004\)](#).
- **Classical intermittency and quantum Anderson transition**  
A. M. García-García, [Phys. Rev. E 69 \(2004\) 066216](#).
- **Effect of a magnetic flux on the critical behavior of a system with long range hopping**  
A. M. García-García, [Phys. Rev. B 69 \(2004\) 245121](#).

## 2003-:

- **Critical statistics in quantum chaos and Calogero Sutherland model at finite temperature**  
A. M. García-García, J.J.M. Verbaarschot, [Phys.Rev. E 67, 046104\(2003\)](#).
- **Chiral phase transition and Anderson localization in the Instanton liquid model of QCD**  
A. M. García-García, Proceedings 'Quantum mechanics and chaos', Kyoto, 2003.
- **Critical statistics for non hermitian matrices**  
A. M. García-García , J.J.M. Verbaarschot, S. Nishigaki, [Phys. Rev. E 66 016132 \(2002\)](#).
- **Spectral properties of a generalized chGUE**  
A. M. García-García, [Phys. Rev. E 64 066121 \(2001\)](#).
- **Critical statistics for chiral ensembles**  
A. M García-García, J.J.M.Verbaarschot, [Nucl. Phys. B 586 \(2001\) 668](#).