

# RaÃ¶l Rossignoli

## List of Publications by Year in descending order

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146  
papers

1,917  
citations

257101

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344852

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all docs

146  
docs citations

146  
times ranked

597  
citing authors

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 1  | Ground-state separability and criticality in interacting many-particle systems. Physical Review A, 2022, 105, .  | 1.0 | 0         |
| 2  | Spacetime quantum actions. Physical Review D, 2021, 103, .   | 1.6 | 5         |
| 3  | Many-body entanglement in fermion systems. Physical Review A, 2021, 103, .   | 1.0 | 5         |
| 4  | One-body entanglement as a quantum resource in fermionic systems. Physical Review A, 2020, 102, .  | 1.0 | 9         |
| 5  | Separability and parity transitions in XYZ spin systems under nonuniform fields. Physical Review A, 2020, 101, .   | 1.0 | 2         |
| 6  | Nonlinear effects on the dynamics of quantum harmonic modes coupled through angular momentum. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 215402. | 0.6 | 2         |
| 7  | Complexity of a matter-field Hamiltonian in the vicinity of a quantum instability. Physica A: Statistical Mechanics and Its Applications, 2019, 513, 767-774.                | 1.2 | 5         |
| 8  | Parallel-in-time optical simulation of history states. Physical Review A, 2019, 99, .  | 1.0 | 5         |
| 9  | Conditional states and entropy in qudit-qubit systems. Physical Review A, 2019, 99, .  | 1.0 | 0         |
| 10 | History state formalism for Dirac's theory. Physical Review D, 2019, 99, .   | 1.6 | 22        |
| 11 | History state formalism for scalar particles. Physical Review D, 2019, 100, .  | 1.6 | 20        |
| 12 | Fermionic entanglement in the Lipkin model. Physical Review A, 2019, 100, .  | 1.0 | 16        |
| 13 | Inducing critical phenomena in spin chains through sparse alternating fields. Physical Review B, 2019, 99, .   | 1.1 | 3         |
| 14 | Nonlinear dynamics of a semiquantum Hamiltonian in the vicinity of quantum unstable regimes. Chaos, Solitons and Fractals, 2018, 109, 140-145.                               | 2.5 | 6         |
| 15 | History states of systems and operators. Physical Review A, 2018, 98, .  | 1.0 | 17        |
| 16 | Fermionic entanglement in superconducting systems. Physical Review A, 2018, 97, .  | 1.0 | 14        |
| 17 | Entanglement and coherence in a spin- $XXZ$ system under non-uniform fields. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 095501.                  | 0.6 | 8         |
| 18 | Factorization and Criticality in Finite $XXZ$ Systems of Arbitrary Spin. Physical Review Letters, 2017, 119, 220605.   | 2.9 | 14        |

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|----|---|-----|-----------|
| 19 | Bipartite entanglement in fermion systems. <i>Physical Review A</i> , 2017, 95, .   | 1.0 | 22        |
| 20 | Spectrum and normal modes of non-Hermitian quadratic boson operators. <i>Physical Review A</i> , 2017, 96, .  | 1.0 | 9         |
| 21 | Quantum Discord and Entropic Measures of Quantum Correlations: Optimization and Behavior in Finite XY Spin Chains. <i>Quantum Science and Technology</i> , 2017, , 455-471. | 1.5 | 1         |
| 22 | Enseñanza del algebra lineal en una facultad de ingeniería: Aspectos metodológicos y didácticos. <i>Revista Educación En Ingeniería</i> , 2017, 12, 49.                     | 0.1 | 6         |
| 23 | Pair entanglement in dimerized spin-chains. <i>Physical Review B</i> , 2016, 94, .  | 1.1 | 3         |
| 24 | One-body information loss in fermion systems. <i>Physical Review A</i> , 2016, 94, .  | 1.0 | 8         |
| 25 | System-time entanglement in a discrete-time model. <i>Physical Review A</i> , 2016, 93, .   | 1.0 | 24        |
| 26 | Conditional purity and quantum correlation measures in two qubit mixed states. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2016, 49, 215501.       | 0.6 | 1         |
| 27 | Factorization in spin systems under general fields and separable ground-state engineering. <i>Physical Review A</i> , 2016, 94, .   | 1.0 | 9         |
| 28 | Entanglement in fermion systems. <i>Physical Review A</i> , 2015, 92, .   | 1.0 | 37        |
| 29 | Nontransverse factorizing fields and entanglement in finite spin systems. <i>Physical Review B</i> , 2015, 92, .  | 1.1 | 10        |
| 30 | Exact dynamics and squeezing in two harmonic modes coupled through angular momentum. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2015, 48, 165501. | 0.6 | 4         |
| 31 | Quantum Discord and Information Deficit in Spin Chains. <i>Entropy</i> , 2015, 17, 1634-1659.   | 1.1 | 8         |
| 32 | Generalized mean-field description of entanglement in dimerized spin systems. <i>Physical Review B</i> , 2015, 91, .  | 1.1 | 5         |
| 33 | Dynamics of entanglement between two harmonic modes in stable and unstable regimes. <i>Physical Review A</i> , 2014, 89, .  | 1.0 | 15        |
| 34 | Generalized conditional entropy in bipartite quantum systems. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2014, 47, 015302.                                 | 0.7 | 9         |
| 35 | Generalized conditional entropy optimization for qudit-qubit states. <i>Physical Review A</i> , 2014, 90, .   | 1.0 | 9         |
| 36 | Discord and information deficit in theXXchain. <i>Physical Review A</i> , 2013, 88, .   | 1.0 | 15        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 37 | QUANTUM DISCORD AND RELATED MEASURES OF QUANTUM CORRELATIONS IN FINITE XY CHAINS. International Journal of Modern Physics B, 2013, 27, 1345033. | 1.0 | 6         |
| 38 | Entanglement and area laws in weakly correlated Gaussian states. Physical Review A, 2012, 86, .   | 1.0 | 3         |
| 39 | Measurements, quantum discord, and parity in spin-1 systems. Physical Review A, 2012, 86, .   | 1.0 | 18        |
| 40 | Even-odd entanglement in boson and spin systems. Physical Review A, 2011, 83, .   | 1.0 | 4         |
| 41 | Evaluation of entanglement measures in spin systems with the random phase approximation. Journal of Russian Laser Research, 2011, 32, 322-330.  | 0.3 | 0         |
| 42 | Generalized measures of quantum correlations for mixed states. Journal of Russian Laser Research, 2011, 32, 467-475.                            | 0.3 | 0         |
| 43 | Quantum correlations and least disturbing local measurements. Physical Review A, 2011, 84, .  | 1.0 | 15        |
| 44 | Entanglement of two harmonic modes coupled by angular momentum. Physical Review A, 2011, 84, .  | 1.0 | 11        |
| 45 | Evaluation of ground-state entanglement in spin systems with the random phase approximation. Physical Review A, 2010, 82, .                     | 1.0 | 10        |
| 46 | Generalized entropic measures of quantum correlations. Physical Review A, 2010, 82, .   | 1.0 | 46        |
| 47 | Quantum discord in finite $XY$ chains. Physical Review A, 2010, 82, .   | 1.0 | 99        |
| 48 | Separability and entanglement in finite dimer-type chains in general transverse fields. Physical Review B, 2010, 81, .                          | 1.1 | 21        |
| 49 | Stability, complex modes, and nonseparability in rotating quadratic potentials. Physical Review A, 2009, 79, .                                  | 1.0 | 12        |
| 50 | Factorization and entanglement in general XYZ spin arrays in nonuniform transverse fields. Physical Review A, 2009, 80, .                       | 1.0 | 37        |
| 51 | Thermal entanglement in fully connected spin systems and its random-phase-approximation description. Physical Review A, 2008, 78, .             | 1.0 | 13        |
| 52 | Entanglement of finite cyclic chains at factorizing fields. Physical Review A, 2008, 77, .  | 1.0 | 52        |
| 53 | Evaluation of pairwise entanglement in translationally invariant systems with the random phase approximation. Physical Review A, 2008, 78, .    | 1.0 | 6         |
| 54 | Quantum Entanglement in Quasispin Models. AIP Conference Proceedings, 2007, , .   | 0.3 | 0         |

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|----|--|-----|-----------|
| 55 | Description of thermal entanglement with the static path plus random-phase approximation. Physical Review A, 2007, 76, .                                       | 1.0 | 14        |
| 56 | Entanglement between distant qubits in cyclicXXchains. Physical Review A, 2007, 75, .  | 1.0 | 15        |
| 57 | Entanglement generation resonances inXYchains. Physical Review A, 2007, 75, .  | 1.0 | 7         |
| 58 | THERMAL ENTANGLEMENT IN SPIN SYSTEMS. , 2006, , .  |     | 0         |
| 59 | Majorization relations and disorder in generalized statistics. Physica A: Statistical Mechanics and Its Applications, 2006, 371, 126-129.                      | 1.2 | 10        |
| 60 | Majorization properties of generalized thermal distributions. Physica A: Statistical Mechanics and Its Applications, 2006, 368, 435-441.                       | 1.2 | 10        |
| 61 | Global entanglement inXXZchains. Physical Review A, 2006, 73, .  | 1.0 | 38        |
| 62 | THERMAL ENTANGLEMENT IN SPIN SYSTEMS. International Journal of Modern Physics B, 2006, 20, 5117-5121.  | 1.0 | 2         |
| 63 | General non-additive entropic forms and the inference of quantum density operators. Physica A: Statistical Mechanics and Its Applications, 2005, 348, 121-130. | 1.2 | 5         |
| 64 | Complex modes in unstable quadratic bosonic forms. Physical Review A, 2005, 72, .  | 1.0 | 36        |
| 65 | Global thermal entanglement inn-qubit systems. Physical Review A, 2005, 72, .  | 1.0 | 33        |
| 66 | Separability conditions and limit temperatures for entanglement detection in two-qubit HeisenbergXYZmodels. Physical Review A, 2004, 69, .                     | 1.0 | 25        |
| 67 | Limit temperature for entanglement in generalized statistics. Physics Letters, Section A: General, Atomic and Solid State Physics, 2004, 323, 22-28.           | 0.9 | 8         |
| 68 | Generalized disorder measures and the detection of quantum entanglement. Physica A: Statistical Mechanics and Its Applications, 2004, 344, 637-643.            | 1.2 | 8         |
| 69 | Generalized entropies and quantum entanglement. Physica A: Statistical Mechanics and Its Applications, 2003, 329, 371-376.                                     | 1.2 | 4         |
| 70 | Effects of gap fluctuations on the pair-transfer correlation function in nanometer-scale superconducting grains. Physical Review B, 2003, 67, .                | 1.1 | 2         |
| 71 | Violation of majorization relations in entangled states and its detection by means of generalized entropic forms. Physical Review A, 2003, 67, .               | 1.0 | 31        |
| 72 | Generalized entropic criterion for separability. Physical Review A, 2002, 66, .  | 1.0 | 51        |

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|----|---|-----|-----------|
| 73 | Pairing correlations and particle-number projection methods. <i>Physical Review C</i> , 2002, 66, .   | 1.1 | 44        |
| 74 | Generalized Nonadditive Entropies and Quantum Entanglement. <i>Physical Review Letters</i> , 2002, 88, 170401.  | 2.9 | 67        |
| 75 | Magnetic behavior of nanoscopic superconductors. <i>Physica B: Condensed Matter</i> , 2002, 320, 319-321.   | 1.3 | 3         |
| 76 | Thermal dependence of pairing correlations in small superconducting particles in a finite magnetic field. <i>Physical Review B</i> , 2001, 63, .                                | 1.1 | 9         |
| 77 | Pair transfer spectral function at finite temperature in nanometer-scale superconducting grains. <i>Physical Review B</i> , 2001, 64, .   | 1.1 | 5         |
| 78 | Thermal gap fluctuations in d-wave superconductors. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2000, 276, 149-154.                            | 0.9 | 1         |
| 79 | Paramagnetic breakdown of superconductivity in nanoscale particles at finite temperature. <i>Physical Review B</i> , 2000, 62, 5886-5890.                                       | 1.1 | 10        |
| 80 | Canonical treatment of fluctuations and random phase approximation correlations at finite temperature. <i>Physical Review C</i> , 1999, 59, 185-193.                            | 1.1 | 9         |
| 81 | Microscopic description of hot nuclei: the SPA+RPA approach. <i>Nuclear Physics A</i> , 1999, 654, 719c-722c.   | 0.6 | 3         |
| 82 | Parity and finite size effects in the thermodynamics of small superconductors. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1999, 258, 188-194. | 0.9 | 12        |
| 83 | Non-additive entropies and quantum statistics. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1999, 264, 148-153.                                 | 0.9 | 20        |
| 84 | Fluctuations and Odd-Even Effects in Small Superfluid Systems. <i>Annals of Physics</i> , 1999, 275, 1-26.  | 1.0 | 25        |
| 85 | The RPA strength function in the presence of thermal fluctuations. <i>Nuclear Physics A</i> , 1998, 633, 613-639.   | 0.6 | 11        |
| 86 | Thermal and Quantal Fluctuations for Fixed Particle Number in Finite Superfluid Systems. <i>Physical Review Letters</i> , 1998, 80, 1853-1856.                                  | 2.9 | 72        |
| 87 | Effects of repulsive forces on thermal fluctuations. <i>Physical Review C</i> , 1997, 56, 791-799.  | 1.1 | 12        |
| 88 | The RPA correlations in the presence of thermal fluctuations. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1997, 394, 242-246.     | 1.5 | 31        |
| 89 | Microscopic treatment of fluctuations in finite quantum systems. <i>Zeitschrift FÅ¼r Physik B-Condensed Matter</i> , 1996, 103, 319-321.  | 1.1 | 0         |
| 90 | The minimum norm method for the determination of the charge density from elastic electron scattering data. <i>Zeitschrift FÅ¼r Physik A</i> , 1996, 356, 141-144.               | 0.9 | 0         |

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|-----|--|-----|-----------|
| 91  | Finite temperature canonical treatments in the static path approximation. Nuclear Physics A, 1996, 605, 1-27.  | 0.6 | 25        |
| 92  | Spin-projected treatment of hot rotating nuclei in the static path approximation. Nuclear Physics A, 1996, 607, 250-276.   | 0.6 | 5         |
| 93  | Thermal and microcanonical treatments of a pairing Hamiltonian. Physical Review C, 1996, 54, 1230-1239.  | 1.1 | 11        |
| 94  | Finite size effects in the specific heat of BCS models. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 200, 314-318.   | 0.9 | 1         |
| 95  | Microcanonical averages and the validity of statistical treatments. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 355, 15-20.                                      | 1.5 | 1         |
| 96  | Effective finite temperature mean field approximations in finite systems. Nuclear Physics A, 1995, 591, 15-40.   | 0.6 | 10        |
| 97  | Maximum Entropy-Minimum Norm method for the determination of level densities. Physica A: Statistical Mechanics and Its Applications, 1995, 220, 611-617.   | 1.2 | 5         |
| 98  | Canonical and grand-canonical partition functions and level densities. Physical Review C, 1995, 51, 1772-1776.   | 1.1 | 12        |
| 99  | Nuclear level densities and thermal properties for fixed spin in microscopic treatments. Physical Review C, 1994, 50, 2850-2859.   | 1.1 | 11        |
| 100 | Effective mean field approximation in hot finite systems. Physical Review Letters, 1994, 72, 4070-4073.  | 2.9 | 13        |
| 101 | Projection at Finite Temperature. Annals of Physics, 1994, 235, 350-389.   | 1.0 | 53        |
| 102 | Stability of intrinsic symmetry-breaking mean field approximations at high temperatures in finite systems. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1994, 337, 1-6. | 1.5 | 3         |
| 103 | Correlated finite temperature mean field approximations. Nuclear Physics A, 1994, 570, 217-224.  | 0.6 | 1         |
| 104 | Approximate reconstruction of single particle bound states and potentials from incomplete information. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 185, 133-138.              | 0.9 | 2         |
| 105 | Information theory based methods for the reconstruction of quantum wave functions. Lecture Notes in Physics, 1994, , 412-418.  | 0.3 | 0         |
| 106 | Information Theory Based Methods for the Reconstruction of Quantum Wave Functions. Lecture Notes in Physics, 1994, , 412-418.  | 0.3 | 0         |
| 107 | Ground state of the Hubbard model: a variational approach based on the maximum entropy principle. Physics Letters, Section A: General, Atomic and Solid State Physics, 1993, 176, 353-359.                   | 0.9 | 13        |
| 108 | Lipkin-Nogami method at finite temperature in the static-path approximation. Physical Review C, 1993, 47, 606-611.   | 1.1 | 33        |

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|-----|---|-----|-----------|
| 109 | Projected statistics and level densities. Physical Review Letters, 1993, 70, 1061-1064.   | 2.9 | 32        |
| 110 | WKB wave functions without matching. Physical Review A, 1993, 47, 3530-3537.  | 1.0 | 13        |
| 111 | Maximum Entropy Descriptions of Quantum Wave Functions. , 1993, , 155-161.  |     | 0         |
| 112 | Maximum Entropy Variational Approach to Collective States. , 1993, , 339-346.   |     | 0         |
| 113 | Information Theory-Based Variational Approach in Correlated Fermion Lattice. , 1993, , 331-337.   |     | 0         |
| 114 | Dynamical dependence of thermal phase transformations in finite systems. Physical Review C, 1992, 45, 3027-3029.  | 1.1 | 1         |
| 115 | Maximum-entropy approach to critical phenomena in ground states of finite systems. Physical Review A, 1992, 45, 7104-7110.  | 1.0 | 22        |
| 116 | Quantal entropy, fluctuations, and the description of many-body ground states. Physical Review C, 1992, 45, 1162-1170.  | 1.1 | 16        |
| 117 | Correlated finite-temperature Hartree-Fock approximation and the thermal behavior of finite systems. Physical Review C, 1992, 45, 2260-2266.                                    | 1.1 | 3         |
| 118 | Correlated finite temperature BCS approximation in finite systems. Physics Letters, Section A: General, Atomic and Solid State Physics, 1992, 167, 84-88.                       | 0.9 | 2         |
| 119 | Finite temperature projected calculations in the static path approximation. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1992, 297, 9-13.  | 1.5 | 34        |
| 120 | Correlated finite temperature mean field approximations. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1992, 277, 18-22.                    | 1.5 | 9         |
| 121 | Approximate angular momentum projection using the maximum entropy principle. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1992, 284, 6-10. | 1.5 | 2         |
| 122 | Maximum-entropy-correlated ground state and the description of collective excitations. Nuclear Physics A, 1992, 550, 453-472.   | 0.6 | 21        |
| 123 | Ground States of Finite Systems and Information Theory. , 1992, , 63-68.  |     | 1         |
| 124 | Information Theory and Quantum Wave Functions. , 1992, , 69-77.   |     | 1         |
| 125 | Finite Temperature Correlated Mean Field Treatments and Information Theory. , 1992, , 87-96.  |     | 0         |
| 126 | Finite temperature correlated quasiparticle approach. Nuclear Physics A, 1991, 534, 303-326.  | 0.6 | 7         |



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|-----|--|-----|-----------|
| 127 | High temperature superfluidity with abnormal fermionic occupancy. Zeitschrift für Physik A, 1991, 340, 35-39.  | 0.9 | 0         |
| 128 | Canonical mean field calculations at finite temperature. Journal of Physics G: Nuclear and Particle Physics, 1991, 17, 1107-1114.                        | 1.4 | 3         |
| 129 | Finite-temperature mean-field and higher-order approaches in canonical ensembles. Physical Review C, 1991, 43, 1599-1609.                                | 1.1 | 14        |
| 130 | Information theory and energy spectra. Physical Review A, 1991, 43, 1145-1152.   | 1.0 | 12        |
| 131 | High Temperature Superconductivity in an Exactly Solvable Model. , 1991, , 203-217.  |     | 0         |
| 132 | Maximum entropy principle for many-body ground states. Nuclear Physics A, 1990, 512, 492-508.  | 0.6 | 33        |
| 133 | Extended mean-field treatments and information theory. Physical Review A, 1990, 42, 2065-2075.   | 1.0 | 9         |
| 134 | Temporal Evolution of Fluctuations. , 1990, , 341-344.   |     | 0         |
| 135 | Ground-state wave functions and maximum entropy. Physical Review A, 1989, 40, 519-525.   | 1.0 | 52        |
| 136 | Generalized statistical self-consistent approach. Physical Review C, 1989, 40, 1798-1805.  | 1.1 | 11        |
| 137 | Systematic procedure for going beyond the time-dependent Hartree-Fock approximation. Physical Review C, 1988, 37, 320-327.                               | 1.1 | 1         |
| 138 | Fluctuations and the thermal mean-field approach. Physical Review C, 1988, 37, 314-319.  | 1.1 | 12        |
| 139 | Peculiarities of the Hartree approach to the temperature-dependent anharmonic oscillator. Journal of Physics A, 1988, 21, 729-738.                       | 1.6 | 9         |
| 140 | Truncation, statistical inference, and single-particle description. Physical Review C, 1987, 36, 1595-1603.  | 1.1 | 5         |
| 141 | Asymptotic density matrix for many-body ground states. Nuclear Physics A, 1986, 453, 417-428.  | 0.6 | 7         |
| 142 | The minimum norm method for the determination of the charge density from elastic electron scattering data. Zeitschrift für Physik A, 1986, 356, 141-144. | 0.9 | 0         |
| 143 | Temperature-dependent anharmonic oscillator: A Hartree approach. Physical Review D, 1986, 33, 1709-1713.   | 1.6 | 11        |
| 144 | Maximum overlap, critical phenomena and the coherence of generating functions. Nuclear Physics A, 1985, 444, 35-48.                                      | 0.6 | 6         |

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|-----|---|-----|-----------|
| 145 | Thermal effects and the interplay between pairing and shape deformations. Physical Review C, 1985, 32, 1040-1048.       | 1.1 | 27        |
| 146 | Quasispin seniority and the variational description of the nuclear free energy. Physical Review C, 1984, 30, 1360-1362. | 1.1 | 8         |