# Cesare Tronci

List of Publications by Year
in descending order



| 52 | 728 | 516710 16 | 580821 25 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 55 | 55 | 55 | 325 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Singular solutions of a modified two-component Camassa-Holm equation. Physical Review E, 2009, 79, 016601. | 2.1 | 113 |
| 2 | Koopman wavefunctions and classicalâ€“quantum correlation dynamics. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2019, 475, 20180879. | 2.1 | 39 |
| 3 | Hybrid Vlasov-MHD models: Hamiltonian vs. non-Hamiltonian. Plasma Physics and Controlled Fusion, 2014, 56, 095008. | 2.1 | 36 |
| 4 | Reduction theory for symmetry breaking with applications to nematic systems. Physica D: Nonlinear Phenomena, 2010, 239, 1929-1947. | 2.8 | 31 |
| 5 | Geodesic Vlasov equations and their integrable moment closures. Journal of Geometric Mechanics, 2009, 1, 181-208. | 0.8 | 31 |
| 6 | Hamiltonian approach to hybrid plasma models. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 375501. | 2.1 | 30 |
| 7 | Vlasov moments, integrable systems and singular solutions. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 1024-1033. | 2.1 | 24 |
| 8 | Variational approach to low-frequency kinetic-MHD in the current coupling scheme. Plasma Physics and Controlled Fusion, 2017, 59, 045013. | 2.1 | 23 |
| 9 | Neutral Vlasov kinetic theory of magnetized plasmas. Physics of Plasmas, 2015, 22, . | 1.9 | 22 |
| 10 | Euler-PoincarÃ© formulation of hybrid plasma models. Communications in Mathematical Sciences, 2012, 10, 191-222. | 1.0 | 22 |
| 11 | Geodesic flows on semidirect-product Lie groups: geometry of singular measure-valued solutions. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2009, 465, 457-476. | 2.1 | 21 |
| 12 | Variational formulations of guiding-center Vlasov-Maxwell theory. Physics of Plasmas, 2016, 23, 062107. | 1.9 | 21 |
| 13 | Formulation of the relativistic moment implicit particle-in-cell method. Physics of Plasmas, 2007, 14, 042308. | 1.9 | 20 |
| 14 | Madelung transform and probability densities in hybrid quantumâ€“classical dynamics. Nonlinearity, 2020, 33, 5383-5424. | 1.4 | 20 |
| 15 | Geometry of Vlasov kinetic moments: A bosonic Fock space for the symmetric Schouten bracket. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 4184-4196. | 2.1 | 19 |
| 16 | Equivalent Theories of Liquid Crystal Dynamics. Archive for Rational Mechanics and Analysis, 2013, 210, 773-811. | 2.4 | 17 |
| 17 | Geometry of Nonadiabatic Quantum Hydrodynamics. Acta Applicandae Mathematicae, 2019, 162, 63-103. | 1.0 | 16 |
| 18 | Vlasov moment flows and geodesics on the Jacobi group. Journal of Mathematical Physics, 2012, 53, . | 1.1 | 14 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Geometry and symmetry of quantum and classical-quantum variational principles. Journal of Mathematical Physics, 2015, 56, . | 1.1 | 13 |
| 20 | Multiscale turbulence models based on convected fluid microstructure. Journal of Mathematical Physics, 2012, 53, . | 1.1 | 12 |
| 21 | Geometric gradient-flow dynamics with singular solutions. Physica D: Nonlinear Phenomena, 2008, 237, 2952-2965. | 2.8 | 11 |
| 22 | Geometry and dynamics of Gaussian wave packets and their Wigner transforms. Journal of Mathematical Physics, 2017, 58, . | 1.1 | 11 |
| 23 | Double-bracket dissipation in kinetic theory for particles with anisotropic interactions. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2010, 466, 2991-3012. | 2.1 | 9 |
| 24 | The helicity and vorticity of liquid-crystal flows. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2011, 467, 1197-1213. | 2.1 | 9 |
| 25 | A Lagrangian kinetic model for collisionless magnetic reconnection. Plasma Physics and Controlled Fusion, 2013, 55, 035001. | 2.1 | 9 |
| 26 | Koopman wavefunctions and Clebsch variables in Vlasovâ€“Maxwell kinetic theory. Journal of Plasma Physics, 2021, 87, . | 2.1 | 9 |
| 27 | Evolution of hybrid quantumâ€“classical wavefunctions. Physica D: Nonlinear Phenomena, 2022, 440, 133450. | 2.8 | 9 |
| 28 | Geometric dissipation in kinetic equations. Comptes Rendus Mathematique, 2007, 345, 297-302. | 0.3 | 8 |
| 29 | Euler-PoincarÃ© Approaches to Nematodynamics. Acta Applicandae Mathematicae, 2012, 120, 127-151. | 1.0 | 8 |
| 30 | Hamiltonian approach to Ehrenfest expectation values and Gaussian quantum states. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20150777. | 2.1 | 8 |
| 31 | Geometric dynamics on the automorphism group of principal bundles: Geodesic flows, dual pairs and chromomorphism groups. Journal of Geometric Mechanics, 2013, 5, 39-84. | 0.8 | 8 |
| 32 | Momentum maps for mixed states in quantum and classical mechanics. Journal of Geometric Mechanics, 2019, 11, 639-656. | 0.8 | 8 |
| 33 | Energy-Casimir stability of hybrid Vlasov-MHD models. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 185501. | 2.1 | 7 |
| 34 | A variational principle for fluid sloshing with vorticity, dynamically coupled to vessel motion. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2019, 475, 20180642. | 2.1 | 7 |
| 35 | Regularized Born-Oppenheimer molecular dynamics. Physical Review A, 2020, 102, . | 2.5 | 7 |
| 36 | The bohmion method in nonadiabatic quantum hydrodynamics. Journal of Physics A: Mathematical and Theoretical, 2021, 54, 495201. | 2.1 | 6 |

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|---|---|---|---|
| 37 | A low-frequency variational model for energetic particle effects in the pressure-coupling scheme. Journal of Plasma Physics, 2018, 84, . | 2.1 | 5 |
| 38 | Hybrid models for perfect complex fluids with multipolar interactions. Journal of Geometric Mechanics, 2012, 4, 333-363. | 0.8 | 5 |
| 39 | Kinetic models of oriented self-assembly. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 344010. | 2.1 | 4 |
| 40 | Emergent singular solutions of nonlocal density-magnetization equations in one dimension. Physical Review E, 2008, 77, 036211. | 2.1 | 4 |
| 41 | From liquid crystal models to the guiding-center theory of magnetized plasmas. Annals of Physics, 2016, 371, 323-337. | 2.8 | 4 |
| 42 | From Quantum Hydrodynamics toÂKoopman Wavefunctions I. Lecture Notes in Computer Science, 2021, , 302-310. | 1.3 | 4 |
| 43 | CLUSTER: A high-frequency H-mode coupled cavity linac for low and medium energies. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 579, 924-936. | 1.6 | 3 |
| 44 | From Quantum Hydrodynamics toÂKoopman Wavefunctions II. Lecture Notes in Computer Science, 2021, , 311-319. | 1.3 | 3 |
| 45 | Electron inertia and quasi-neutrality in the Weibel instability. Journal of Plasma Physics, 2017, 83, . | 2.1 | 2 |
| 46 | Variational mean-fluctuation splitting and drift-fluid models. Plasma Physics and Controlled Fusion, 2020, 62, 085006. | 2.1 | 2 |
| 47 | Collisionless kinetic theory of rolling molecules. Kinetic and Related Models, 2013, 6, 429-458. | 0.9 | 2 |
| 48 | CLUSTER: concept study and design of a low-medium Î² accelerating structure. Nuclear Physics, Section B, Proceedings Supplements, 2007, 172, 277-279. | 0.4 | 1 |
| 49 | Equivalent variational approaches to biaxial liquid crystal dynamics. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20150308. | 2.1 | 1 |
| 50 | Existence of global weak solutions to a hybrid Vlasov-MHD model for magnetized plasmas. Proceedings of the London Mathematical Society, 2017, 115, 854-896. | 1.3 | 1 |
| 51 | A geometric diffuse-interface method for droplet spreading. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20190222. | 2.1 | 1 |
| 52 | Grid coupling mechanism in the semi-implicit adaptive Multi-Level Multi-Domain method. Journal of Physics: Conference Series, 2016, 719, 012019. | 0.4 | 0 |