Nils Andersson

List of Publications by Year
in descending order

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151 papers	8,266 citations	41344 49 h-index	51608 86 g-index
151 all docs	151 docs citations	151 times ranked	2735 citing authors

#	Article	IF	Citations
1	A New Class of Unstable Modes of Rotating Relativistic Stars. Astrophysical Journal, 1998, 502, 708-713.	4.5	524
2	Gravitational waves from hot young rapidly rotating neutron stars. Physical Review D, 1998, 58, .	4.7	367
3	Towards gravitational wave asteroseismology. Monthly Notices of the Royal Astronomical Society, 1998, 299, 1059-1068.	4.4	354
4	THE R-MODE INSTABILITY IN ROTATING NEUTRON STARS. International Journal of Modern Physics D, 2001, 10, 381-441.	2.1	300
5	The third generation of gravitational wave observatories and their science reach. Classical and Quantum Gravity, 2010, 27, 084007.	4.0	287
6	Relativistic Fluid Dynamics: Physics for Many Different Scales. Living Reviews in Relativity, 2007, 10, 1.	26.7	245
7	Colloquium: Measuring the neutron star equation of state using x-ray timing. Reviews of Modern Physics, 2016, 88, .	45.6	234
8	Gravitational Waves and Pulsating Stars: What Can We Learn from Future Observations?. Physical Review Letters, 1996, 77, 4134-4137.	7.8	219
9	Pulsar Glitches: The Crust is not Enough. Physical Review Letters, 2012, 109, 241103.	7.8	187
10	On the Relevance of therâ€Mode Instability for Accreting Neutron Stars and White Dwarfs. Astrophysical Journal, 1999, 516, 307-314.	4.5	185
11	Gravitational Radiation Limit on the Spin of Young Neutron Stars. Astrophysical Journal, 1999, 510, 846-853.	4.5	175
12	Modelling magnetically deformed neutron stars. Monthly Notices of the Royal Astronomical Society, 0, 385, 531-542.	4.4	163
13	Gravitational waves from instabilities in relativistic stars. Classical and Quantum Gravity, 2003, 20, R105-R144.	4.0	159
14	Neutron star asteroseismology. Axial crust oscillations in the Cowling approximation. Monthly Notices of the Royal Astronomical Society, 2007, 374, 256-268.	4.4	151
15	The inverse problem for pulsating neutron stars: a 'fingerprint analysis' for the supranuclear equation of state. Monthly Notices of the Royal Astronomical Society, 2001, 320, 307-315.	4.4	144
16	Gravitational waves from neutron stars: promises and challenges. General Relativity and Gravitation, 2011, 43, 409-436.	2.0	139
17	On the dynamics of superfluid neutron star cores. Monthly Notices of the Royal Astronomical Society, 2001, 328, 1129-1143.	4.4	118
18	Magnetohydrodynamics of superfluid and superconducting neutron star cores. Monthly Notices of the Royal Astronomical Society, 2011, 410, 805-829.	4.4	114

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19	Freely precessing neutron stars: model and observations. Monthly Notices of the Royal Astronomical Society, 2001, 324, 811-824.	4.4	110
20	Mutual friction in superfluid neutron stars. Monthly Notices of the Royal Astronomical Society, 2006, 368, 162-170.	4.4	99
21	[CLC] [ITAL]r[/ITAL] [/CLC]-Mode Runaway and Rapidly Rotating Neutron Stars. Astrophysical Journal, 2000, 534, L75-L78.	4.5	98
22	Mountains on neutron stars: accreted versus non-accreted crusts. Monthly Notices of the Royal Astronomical Society, 2006, 373, 1423-1439.	4.4	96
23	How viscous is a superfluid neutron star core?. Nuclear Physics A, 2005, 763, 212-229.	1.5	93
24	The Nature of Low T /| W	Dynamical Instabilities in Differentially Rotating Stars. Astrophysical Journal, 2005, 618, L37-L40.	4.5	93
25	Strange stars as persistent sources of gravitational waves. Monthly Notices of the Royal Astronomical Society, 2002, 337, 1224-1232.	4.4	91
26	Gravitational waves from freely precessing neutron stars. Monthly Notices of the Royal Astronomical Society, 2002, 331, 203-220.	4.4	88
27	Elastic or magnetic? A toy model for global magnetar oscillations with implications for quasi-periodic oscillations during flares. Monthly Notices of the Royal Astronomical Society: Letters, 2006, 371, L74-L77.	3.3	81
28	Superfluid neutron star turbulence. Monthly Notices of the Royal Astronomical Society, 2007, 381, 747-756.	4.4	81
29	Slowly rotating general relativistic superfluid neutron stars. Classical and Quantum Gravity, 2001, 18, 969-1002.	4.0	80
30	Slowly rotating superfluid Newtonian neutron star model with entrainment. Astronomy and Astrophysics, 2002, 381, 178-196.	5.1	80
31	Hydrodynamical Trigger Mechanism for Pulsar Glitches. Physical Review Letters, 2009, 102, 141101.	7.8	72
32	Pinning down the superfluid and measuring masses using pulsar glitches. Science Advances, 2015, 1, e1500578.	10.3	71
33	Are Pulsar Glitches Triggered by a Superfluid Two-Stream Instability?. Physical Review Letters, 2003, 90, 091101.	7.8	70
34	A flux-conservative formalism for convective and dissipative multi-fluid systems, with application to Newtonian superfluid neutron stars. Classical and Quantum Gravity, 2006, 23, 5505-5529.	4.0	70
35	Revealing the Physics of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>r</mml:mi></mml:math>Modes in Low-Mass X-Ray Binaries. Physical Review Letters, 2011, 107, 101101.	7.8	68
36	The Spin Distribution of Fast-spinning Neutron Stars in Low-mass X-Ray Binaries: Evidence for Two Subpopulations. Astrophysical Journal, 2017, 850, 106.	4.5	66

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37	Oscillations of general relativistic superfluid neutron stars. Physical Review D, 2002, 66, .	4.7	63
38	Gravitational waves from pulsating stars: Evolving the perturbation equations for a relativistic star. Physical Review D, 1998, 58, .	4.7	62
39	Rotational modes of relativistic stars: Analytic results. Physical Review D, 2000, 63, .	4.7	62
40	r modes and mutual friction in rapidly rotating superfluid neutron stars. Monthly Notices of the Royal Astronomical Society, 2009, 397, 1464-1485.	4.4	62
41	Are Neutron Stars with Crystalline Color-Superconducting Cores Relevant for the LIGO Experiment?. Physical Review Letters, 2007, 99, 231101.	7.8	59
42	Towards real neutron star seismology: accounting for elasticity and superfluidity. Monthly Notices of the Royal Astronomical Society, 2012, 419, 638-655.	4.4	57
43	Rotational evolution of young pulsars due to superfluid decoupling. Nature Physics, 2012, 8, 787-789.	16.7	56
44	The superfluid two-stream instability. Monthly Notices of the Royal Astronomical Society, 2004, 354, 101-110.	4.4	55
45	Ekman layer damping of r modes revisited. Monthly Notices of the Royal Astronomical Society, 2006, 371, 1311-1321.	4.4	55
46	Rotational modes of relativistic stars: Numerical results. Physical Review D, 2003, 68, .	4.7	54
47	Modelling the spin equilibrium of neutron stars in low-mass X-ray binaries without gravitational radiation. Monthly Notices of the Royal Astronomical Society, 2005, 361, 1153-1164.	4.4	54
48	Superfluid signatures in magnetar seismology. Monthly Notices of the Royal Astronomical Society, 2009, 396, 894-899.	4.4	54
49	Magnetic field evolution in superconducting neutron stars. Monthly Notices of the Royal Astronomical Society, 2015, 453, 671-681.	4.4	51
50	Probing Neutron-Star Superfluidity with Gravitational-Wave Data. Physical Review Letters, 2001, 87, 241101.	7.8	49
51	Temperature-dependent pulsations of superfluid neutron stars. Monthly Notices of the Royal Astronomical Society, 2006, 372, 1776-1790.	4.4	49
52	Pulsar spin-down: the glitch-dominated rotation of PSR J0537â˜'6910. Monthly Notices of the Royal Astronomical Society, 2018, 473, 1644-1655.	4.4	48
53	Magnetars: super(ficially) hot and super(fluid) cool. Monthly Notices of the Royal Astronomical Society, 2012, 422, 2632-2641.	4.4	47
54	Superradiance Resonance Cavity Outside Rapidly Rotating Black Holes. Physical Review Letters, 2000, 84, 4537-4540.	7.8	46

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55	Hydromagnetic equilibrium in non-barotropic multifluid neutron stars. Monthly Notices of the Royal Astronomical Society, 2012, 420, 1263-1272.	4.4	44
56	Variational multi-fluid dynamics and causal heat conductivity. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2010, 466, 1373-1387.	2.1	43
57	Thermal dynamics in general relativity. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2011, 467, 738-759.	2.1	43
58	Neutron stars in the laboratory. International Journal of Modern Physics D, 2017, 26, 1730015.	2.1	42
59	Crust-core coupling in rotating neutron stars. Physical Review D, 2006, 74, .	4.7	41
60	Oscillations of dissipative superfluid neutron stars. Physical Review D, 2009, 79, .	4.7	41
61	The transient gravitational-wave sky. Classical and Quantum Gravity, 2013, 30, 193002.	4.0	40
62	Seismology of adolescent neutron stars: Accounting for thermal effects and crust elasticity. Physical Review D, 2015, 92, .	4.7	40
63	Oscillations of rapidly rotating stratified neutron stars. Monthly Notices of the Royal Astronomical Society, 2009, 394, 730-741.	4.4	39
64	Equilibrium spin pulsars unite neutron star populations. Monthly Notices of the Royal Astronomical Society, 2014, 437, 3664-3669.	4.4	38
65	Modelling neutron star mountains. Monthly Notices of the Royal Astronomical Society, 2020, 500, 5570-5582.	4.4	37
66	Glitch Rises as a Test for Rapid Superfluid Coupling in Neutron Stars. Astrophysical Journal, 2018, 865, 23.	4.5	34
67	Relativistic fluid dynamics: physics for many different scales. Living Reviews in Relativity, 2021, 24, 1.	26.7	34
68	The spin evolution of nascent neutron stars. Monthly Notices of the Royal Astronomical Society, 2002, 333, 943-951.	4.4	33
69	ÂQuick and dirtyÂ methods for studying black-hole resonances. Classical and Quantum Gravity, 2003, 20, 3441-3463.	4.0	33
70	Stability of Precessing Superfluid Neutron Stars. Physical Review Letters, 2008, 100, 081101.	7.8	32
71	Inertial modes of non-stratified superfluid neutron stars. Monthly Notices of the Royal Astronomical Society, 2004, 348, 625-637.	4.4	28
72	Oscillations of rapidly rotating superfluid stars. Monthly Notices of the Royal Astronomical Society, 2009, 396, 951-963.	4.4	28

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73	A covariant action principle for dissipative fluid dynamics: from formalism to fundamental physics. Classical and Quantum Gravity, 2015, 32, 075008.	4.0	28
74	Axial quasi-normal modes of neutron stars: accounting for the superfluid in the crust. Classical and Quantum Gravity, 2009, 26, 155016.	4.0	27
75	Do superfluid instabilities prevent neutron star precession?. Monthly Notices of the Royal Astronomical Society, 2009, 394, 1908-1924.	4.4	27
76	Tidal deformations of neutron stars: The role of stratification and elasticity. Physical Review D, 2011, 84, .	4.7	27
77	Using gravitational-wave data to constrain dynamical tides in neutron star binaries. Physical Review D, 2018, 97, .	4.7	27
78	Tidal deformations of neutron stars with elastic crusts. Physical Review D, 2020, 101, .	4.7	27
79	Modelling neutron star mountains in relativity. Monthly Notices of the Royal Astronomical Society, 2021, 507, 116-128.	4.4	27
80	The dynamics of pulsar glitches: contrasting phenomenology with numerical evolutions. Monthly Notices of the Royal Astronomical Society, 2010, , .	4.4	26
81	Gravitational waves from transient neutron star <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>f</mml:mi></mml:math> -mode oscillations. Physical Review D, 2020, 101, .	4.7	26
82	A consistent first-order model for relativistic heat flow. Classical and Quantum Gravity, 2011, 28, 195023.	4.0	25
83	Tidal Deformations of Hybrid Stars with Sharp Phase Transitions and Elastic Crusts. Astrophysical Journal, 2020, 895, 28.	4.5	25
84	Waves and instabilities in dissipative rotating superfluid neutron stars. Monthly Notices of the Royal Astronomical Society, 0, 385, 335-348.	4.4	24
85	r-modes in low temperature color-flavor-locked superconducting quark stars. Physical Review D, 2010, 82, .	4.7	24
86	Buoyancy and g-modes in young superfluid neutron stars. Monthly Notices of the Royal Astronomical Society, 2016, 455, 1489-1511.	4.4	24
87	Ejector and propeller spin-down: how might a superluminous supernova millisecond magnetar become the 6.67 h pulsar in RCW 103. Monthly Notices of the Royal Astronomical Society: Letters, 2017, 464, L65-L69.	3.3	24
88	Thermal aspects of neutron star mergers. Physical Review D, 2021, 104, .	4.7	24
89	Lagrangian perturbation theory of non-relativistic rotating superfluid stars. Monthly Notices of the Royal Astronomical Society, 2004, 355, 918-928.	4.4	23
90	Oscillations of general relativistic multifluid/multilayer compact stars. Physical Review D, 2008, 78, .	4.7	23

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91	Time evolution of the linear perturbations of a rotating Newtonian polytrope. Monthly Notices of the Royal Astronomical Society, 2002, 334, 933-940.	4.4	22
92	Exploring the effective tidal deformability of neutron stars. Physical Review D, 2020, 101, .	4.7	22
93	Relativistic two-stream instability. General Relativity and Gravitation, 2010, 42, 413-433.	2.0	21
94	The intimate relation between the low T/W instability and the corotation point. Monthly Notices of the Royal Astronomical Society, 2015, 446, 555-565.	4.4	20
95	A Superfluid Perspective on Neutron Star Dynamics. Universe, 2021, 7, 17.	2.5	20
96	A Gravitational-Wave Perspective on Neutron-Star Seismology. Universe, 2021, 7, 97.	2.5	20
97	Resistive relativistic magnetohydrodynamics from a charged multifluids perspective. Physical Review D, 2012, 86, .	4.7	19
98	Population synthesis of accreting neutron stars emitting gravitational waves. Monthly Notices of the Royal Astronomical Society, 2019, 488, 99-110.	4.4	19
99	The dynamics of neutron star crusts: Lagrangian perturbation theory for a relativistic superfluid-elastic system. Classical and Quantum Gravity, 2019, 36, 105004.	4.0	18
100	The phenomenology of dynamical neutron star tides. Monthly Notices of the Royal Astronomical Society, 2021, 503, 533-539.	4.4	18
101	CRUSTAL FAILURE DURING BINARY INSPIRAL. Astrophysical Journal Letters, 2012, 749, L36.	8.3	17
102	Dynamics of dissipative multifluid neutron star cores. Physical Review D, 2012, 86, .	4.7	16
103	Lagrangian perturbation theory for rotating magnetic stars. Monthly Notices of the Royal Astronomical Society, 2007, 377, 630-644.	4.4	15
104	ENTROPY ENTRAINMENT AND DISSIPATION IN FINITE TEMPERATURE SUPERFLUIDS. International Journal of Modern Physics D, 2011, 20, 1215-1233.	2.1	15
105	Dynamical tides in neutron stars: the impact of the crust. Monthly Notices of the Royal Astronomical Society, 2021, 504, 1273-1293.	4.4	15
106	Gravitational-Wave Astronomy. , 2019, , .		15
107	Nonlinear radial oscillations of neutron stars. Physical Review D, 2009, 80, .	4.7	14
108	Quantised vortices and mutual friction in relativistic superfluids. Classical and Quantum Gravity, 2016, 33, 245010.	4.0	14

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109	Hydrodynamics of rapidly rotating superfluid neutron stars with mutual friction. Monthly Notices of the Royal Astronomical Society, 2011, 413, 47-70.	4.4	13
110	Superfluid instability of r-modes in â€œdifferentially rotatingâ€•neutron stars. Physical Review D, 2013, 87, .	4.7	13
111	Beyond ideal magnetohydrodynamics: from fibration to 3â€‰â€‰+â€‰â€‰1 foliation. Classical and Quantum Gravity, 2017, 34, 125003.	4.0	13
112	Beyond ideal magnetohydrodynamics: resistive, reactive and relativistic plasmas. Classical and Quantum Gravity, 2017, 34, 125002.	4.0	13
113	A variational approach to resistive relativistic plasmas. Classical and Quantum Gravity, 2017, 34, 125001.	4.0	13
114	Instabilities in neutron-star postmerger remnants. Physical Review D, 2020, 102, .	4.7	12
115	Modelling the dynamics of superfluid neutron stars. Astrophysics and Space Science, 2007, 308, 395-402.	1.4	11
116	Lagrangian perturbation theory for a superfluid immersed in an elastic neutron star crust. Monthly Notices of the Royal Astronomical Society, 2011, , no-no.	4.4	11
117	Conservation laws and evolution schemes in geodesic, hydrodynamic, and magnetohydrodynamic flows. Physical Review D, 2017, 96, .	4.7	11
118	Merger-inspired rotation laws and the low-T/W instability in neutron stars. Monthly Notices of the Royal Astronomical Society, 2020, 498, 5904-5915.	4.4	11
119	The g-mode spectrum of reactive neutron star cores. Monthly Notices of the Royal Astronomical Society, 0, , .	4.4	10
120	Does elasticity stabilize a magnetic neutron star?. Monthly Notices of the Royal Astronomical Society, 2020, 499, 2636-2647.	4.4	10
121	Multifluid cosmology: An illustration of fundamental principles. Physical Review D, 2012, 85, .	4.7	9
122	A minimal model for finite temperature superfluid dynamics. Classical and Quantum Gravity, 2013, 30, 235025.	4.0	9
123	Early neutron star evolution in high-mass X-ray binaries. Monthly Notices of the Royal Astronomical Society, 2020, 494, 44-49.	4.4	9
124	The I-Love-Q Relations for Superfluid Neutron Stars. Universe, 2021, 7, 111.	2.5	9
125	Covariant approach to relativistic large-eddy simulations: The fibration picture. Physical Review D, 2021, 104, .	4.7	9
126	COSMIC RECYCLING OF MILLISECOND PULSARS. Astrophysical Journal Letters, 2011, 730, L36.	8.3	7

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127	The nonlinear development of the relativistic two-stream instability. Classical and Quantum Gravity, 2013, 30, 145007.	4.0	6
128	Dissipation Triggers Dynamical Two-Stream Instability. Particles, 2019, 2, 457-480.	1.7	6
129	Exploring universality in neutron star mergers. Monthly Notices of the Royal Astronomical Society, 2020, 497, 5480-5484.	4.4	6
130	Linearizing a non-linear formulation for general relativistic dissipative fluids. Classical and Quantum Gravity, 2021, 38, 065009.	4.0	6
131	Oscillations in the neutron star crust. Astrophysics and Space Science, 2007, 308, 581-583.	1.4	5
132	Whispers from the Edge of Physics. Journal of Astrophysics and Astronomy, 2017, 38, 1.	1.0	5
133	The physics of non-ideal general relativistic magnetohydrodynamics. Monthly Notices of the Royal Astronomical Society, 2021, 509, 3737-3750.	4.4	5
134	Formulating bulk viscosity for neutron star simulations. Physical Review D, 2022, 105, .	4.7	5
135	Pinning Down the Superfluid and Nuclear Equation of State and Measuring Neutron Star Mass Using Pulsar Glitches. , 2017, , .		4
136	A variational approach to relativistic superfluid vortex elasticity. Classical and Quantum Gravity, 2020, 37, 085014.	4.0	4
137	GRAVITATIONAL-WAVE INSTABILITIES IN ROTATING STARS. International Journal of Modern Physics A, 2002, 17, 2645-2650.	1.5	3
138	A toy model for global magnetar oscillation. Astrophysics and Space Science, 2007, 308, 607-611.	1.4	3
139	Cosmological two-stream instability. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2012, 715, 289-292.	4.1	3
140	A Multifluid Perspective on Multimessenger Modeling. Frontiers in Astronomy and Space Sciences, 2021, 8, .	2.8	3
141	Dynamical tides in superfluid neutron stars. Monthly Notices of the Royal Astronomical Society, 2022, 514, 1494-1510.	4.4	3
142	Black hole dynamics: A survey of black hole physics from the point of view of perturbation theory. Journal of Astrophysics and Astronomy, 1999, 20, 269-280.	1.0	2
143	The road to gravitational-wave astronomy. Progress in Particle and Nuclear Physics, 2011, 66, 239-248.	14.4	1
144	Gravitational waves from neutron stars. Proceedings of the International Astronomical Union, 2009, 5, 137-140.	0.0	0

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145	Trying to catch the wave. Nature Physics, 2010, 6, 484-485.	16.7	0
146	Relativistic multi-fluid dynamics, superfluids and heat conduction. , 2010, , .		0
147	Neutron star seismology. Proceedings of the International Astronomical Union, 2012, 8, 159-159.	0.0	0
148	Magnetars are super hot and super cool. Proceedings of the International Astronomical Union, 2012, 8, 396-398.	0.0	0
149	GRAVITATIONAL WAVES: PROBING THE EXTREMES OF PHYSICS. , 2003, , .		0
150	Modelling the dynamics of superfluid neutron stars. , 2007, , 395-402.		0
151	Inferring the dense nuclear matter equation of state with neutron star tides. EPJ Web of Conferences, 2022, 258, 07002.	0.3	0