

Hans J Haubold

List of Publications by Year in descending order

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112
papers

1,986
citations

430874

18
h-index

377865

34
g-index

120
all docs

120
docs citations

120
times ranked

829
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | The H-Function. , 2010, , . | | 328 |
| 2 | Special Functions for Applied Scientists. , 2008, , . | | 237 |
| 3 | On generalized fractional kinetic equations. Physica A: Statistical Mechanics and Its Applications, 2004, 344, 657-664. | 2.6 | 137 |
| 4 | Pathway model, superstatistics, Tsallis statistics, and a generalized measure of entropy. Physica A: Statistical Mechanics and Its Applications, 2007, 375, 110-122. | 2.6 | 125 |
| 5 | The fractional kinetic equation and thermonuclear functions. Astrophysics and Space Science, 2000, 273, 53-63. | 1.4 | 124 |
| 6 | On fractional kinetic equations. Astrophysics and Space Science, 2002, 282, 281-287. | 1.4 | 113 |
| 7 | Unified Fractional Kinetic Equation and a Fractional Diffusion Equation. Astrophysics and Space Science, 2004, 290, 299-310. | 1.4 | 82 |
| 8 | Solution of Generalized Fractional Reaction-Diffusion Equations. Astrophysics and Space Science, 2006, 305, 305-313. | 1.4 | 55 |
| 9 | On generalized distributions and pathways. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 2109-2113. | 2.1 | 42 |
| 10 | Reaction-Diffusion Systems and Nonlinear Waves. Astrophysics and Space Science, 2006, 305, 297-303. | 1.4 | 40 |
| 11 | Further solutions of fractional reactionâ€“diffusion equations in terms of the H -function. Journal of Computational and Applied Mathematics, 2011, 235, 1311-1316. | 2.0 | 34 |
| 12 | Extension of thermonuclear functions through the pathway model including Maxwellâ€™Boltzmann and Tsallis distributions. Astroparticle Physics, 2008, 29, 70-76. | 4.3 | 32 |
| 13 | On a Generalized Entropy Measure Leading to the Pathway Model with a Preliminary Application to Solar Neutrino Data. Entropy, 2013, 15, 4011-4025. | 2.2 | 29 |
| 14 | A heuristic remark on the periodic variation in the number of solar neutrinos detected on Earth. Astrophysics and Space Science, 1995, 228, 113-134. | 1.4 | 25 |
| 15 | On generalized entropy measures and pathways. Physica A: Statistical Mechanics and Its Applications, 2007, 385, 493-500. | 2.6 | 25 |
| 16 | A Certain Class of Laplace Transforms with Applications to Reaction and Reaction-Diffusion Equations. Astrophysics and Space Science, 2006, 305, 283-288. | 1.4 | 24 |
| 17 | Solutions of certain fractional kinetic equations and a fractional diffusion equation. Journal of Mathematical Physics, 2010, 51, 103506. | 1.1 | 24 |
| 18 | On the fourier spectrum analysis of the solar neutrino capture rate. Solar Physics, 1990, 127, 347-356. | 2.5 | 23 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 19 | On the evaluation of an integral connected with the thermonuclear reaction rate in closed form. <i>Astronomische Nachrichten</i> , 1978, 299, 225-232. | 1.2 | 22 |
| 20 | Astrophysical thermonuclear functions for Boltzmann-Gibbs statistics and Tsallis statistics. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004, 344, 649-656. | 2.6 | 20 |
| 21 | On Nuclear Reaction Rate Theory. <i>Annalen Der Physik</i> , 1984, 496, 380-396. | 2.4 | 18 |
| 22 | Astrophysical thermonuclear functions. <i>Astrophysics and Space Science</i> , 1994, 214, 49-70. | 1.4 | 18 |
| 23 | Analysis of Solar Neutrino Data from Super-Kamiokande I and II. <i>Entropy</i> , 2014, 16, 1414-1425. | 2.2 | 16 |
| 24 | On Thermonuclear Reaction Rates. <i>Astrophysics and Space Science</i> , 1997, 258, 185-199. | 1.4 | 15 |
| 25 | Mittag-Leffler functions to pathway model to Tsallis statistics. <i>Integral Transforms and Special Functions</i> , 2010, 21, 867-875. | 1.2 | 14 |
| 26 | A pathway from Bayesian statistical analysis to superstatistics. <i>Applied Mathematics and Computation</i> , 2011, 218, 799-804. | 2.2 | 14 |
| 27 | Boltzmann-Gibbs entropy is sufficient but not necessary for the likelihood factorization required by Einstein. <i>Europhysics Letters</i> , 2015, 110, 30005. | 2.0 | 14 |
| 28 | The search for possible time variations in Davis' measurements of the argon production rate in the solar neutrino experiment. <i>Astronomische Nachrichten</i> , 1985, 306, 203-211. | 1.2 | 13 |
| 29 | Review of mathematical techniques applicable in astrophysical reaction rate theory. <i>Astrophysics and Space Science</i> , 2002, 282, 265-280. | 1.4 | 13 |
| 30 | Zeitlich periodische Variationen des solaren Neutrinoflusses und das Standardmodell der Sonne. <i>Astronomische Nachrichten</i> , 1983, 304, 299-304. | 1.2 | 12 |
| 31 | Wavelet Analysis of the New Solar Neutrino Capture Rate Data for the Homestake Experiment. <i>Astrophysics and Space Science</i> , 1997, 258, 201-218. | 1.4 | 12 |
| 32 | On extended thermonuclear functions through pathway model. <i>Advances in Space Research</i> , 2010, 45, 698-708. | 2.6 | 12 |
| 33 | Generalized Mittag-Leffler Distributions and Processes for Applications in Astrophysics and Time Series Modeling. <i>Thirty Years of Astronomical Discovery With UKIRT</i> , 2010, , 79-92. | 0.3 | 12 |
| 34 | Spectral line profiles and neutron cross sections: New results concerning the analysis of Voigt functions. <i>Astrophysics and Space Science</i> , 1979, 65, 477-491. | 1.4 | 11 |
| 35 | The United Nations Programme on Space Applications: Status and direction for 2010. <i>Space Policy</i> , 2010, 26, 185-188. | 1.5 | 11 |
| 36 | Space-Time Fractional Reaction-Diffusion Equations Associated with a Generalized Riemann-Liouville Fractional Derivative. <i>Axioms</i> , 2014, 3, 320-334. | 1.9 | 11 |

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|----|---|-----|-----------|
| 37 | Analytical representation of the thermonuclear reaction rate and fusion energy production in a spherical plasma shock wave. <i>Plasma Physics</i> , 1981, 23, 399-411. | 0.9 | 10 |
| 38 | Analytic Representations of Thermonuclear Reaction Rates. <i>Studies in Applied Mathematics</i> , 1986, 75, 123-137. | 2.4 | 10 |
| 39 | Time variations of the solar neutrino flux. <i>Astrophysics and Space Science</i> , 1985, 112, 397-405. | 1.4 | 9 |
| 40 | Gravitational instability in a multicomponent cosmological medium. <i>Journal of Mathematical Physics</i> , 1988, 29, 2069-2077. | 1.1 | 9 |
| 41 | Der gegenwärtige Stand der Theorie und der analytischen Auswertung von nichtresonanten thermonuklearen Reaktionsraten. <i>Astronomische Nachrichten</i> , 1982, 303, 161-187. | 1.2 | 8 |
| 42 | Solar structure in terms of Gauss' hypergeometric function. <i>Astrophysics and Space Science</i> , 1995, 228, 77-86. | 1.4 | 8 |
| 43 | NEO scientific and policy developments, 1995–2000. <i>Space Policy</i> , 2001, 17, 213-218. | 1.5 | 8 |
| 44 | On resonant thermonuclear reaction rate integrals—closed-form evaluation and approximation considerations. <i>Astronomische Nachrichten</i> , 1979, 300, 63-75. | 1.2 | 7 |
| 45 | On the Nuclear Energy Generation Rate in a Simple Analytic Stellar Model. <i>Annalen Der Physik</i> , 1984, 496, 372-379. | 2.4 | 7 |
| 46 | Computational solutions of unified fractional reaction–diffusion equations with composite fractional time derivative. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2015, 27, 1-11. | 3.3 | 7 |
| 47 | On the q-Laplace Transform and Related Special Functions. <i>Axioms</i> , 2016, 5, 24. | 1.9 | 7 |
| 48 | A possible explanation of the second neutrino burst from SN 1987A. <i>Astrophysics and Space Science</i> , 1987, 138, 421-424. | 1.4 | 6 |
| 49 | Education curricula of the UN-affiliated regional Centres for Space Science and Technology Education. <i>Space Policy</i> , 2003, 19, 67-69. | 1.5 | 6 |
| 50 | Promoting research and education in basic space science: the approach of the UN/ESA workshops. <i>Space Policy</i> , 2003, 19, 215-219. | 1.5 | 6 |
| 51 | Pathway parameter and thermonuclear functions. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2008, 387, 2462-2470. | 2.6 | 6 |
| 52 | Fusion yield: Guderley model and Tsallis statistics. <i>Journal of Plasma Physics</i> , 2011, 77, 1-14. | 2.1 | 6 |
| 53 | Computational Solutions of Distributed Order Reaction-Diffusion Systems Associated with Riemann-Liouville Derivatives. <i>Axioms</i> , 2015, 4, 120-133. | 1.9 | 6 |
| 54 | The forest of QSO absorption lines and cosmological models with unstable dark matter. <i>Astronomische Nachrichten</i> , 1987, 308, 177-181. | 1.2 | 5 |

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|----|--|-----|-----------|
| 55 | Education curricula in space science and technology: the approach of the UN-affiliated regional centres. <i>Space Policy</i> , 2003, 19, 221-223. | 1.5 | 5 |
| 56 | International Heliophysical Year 2007: Basic space science initiatives. <i>Space Policy</i> , 2007, 23, 121-126. | 1.5 | 5 |
| 57 | Proposal for a United Nations Basic Space Technology Initiative. <i>Advances in Space Research</i> , 2009, 43, 1847-1853. | 2.6 | 5 |
| 58 | Stochastic Processes via the Pathway Model. <i>Entropy</i> , 2015, 17, 2642-2654. | 2.2 | 5 |
| 59 | Mathematical Aspects of Krätzel Integral and Krätzel Transform. <i>Mathematics</i> , 2020, 8, 526. | 2.2 | 5 |
| 60 | The resonant thermonuclear reaction rate. <i>Journal of Mathematical Physics</i> , 1986, 27, 2203-2207. | 1.1 | 4 |
| 61 | World Space Observatory/ultraviolet (WSO/UV): progress report. <i>Advances in Space Research</i> , 2004, 34, 2200-2202. | 2.6 | 4 |
| 62 | Jun Ishiwaras Text über Albert Einsteins Gastvortrag an der Universität zu Kyoto am 14. Dezember 1922. <i>Archive for History of Exact Sciences</i> , 1986, 36, 271-279. | 0.5 | 3 |
| 63 | On the Cosmological Origin of Population III Objects. <i>Annalen Der Physik</i> , 1987, 499, 519-523. | 2.4 | 3 |
| 64 | On gravitational instability in a multi-component cosmological medium. <i>Astronomische Nachrichten</i> , 1991, 312, 1-6. | 1.2 | 3 |
| 65 | Title is missing!. <i>Astrophysics and Space Science</i> , 2002, 282, 341-357. | 1.4 | 3 |
| 66 | Threats from space: 20 years of progress. <i>Bulletin of the Atomic Scientists</i> , 2014, 70, 85-93. | 0.6 | 3 |
| 67 | United Nations Human Space Technology Initiative (HSTI). <i>Acta Astronautica</i> , 2014, 104, 582-588. | 3.2 | 3 |
| 68 | A Versatile Integral in Physics and Astronomy and Fox's H-Function. <i>Axioms</i> , 2019, 8, 122. | 1.9 | 3 |
| 69 | Space Science and Technology Education, Teaching, Research. <i>Space Policy</i> , 2020, 53, 101384. | 1.5 | 3 |
| 70 | United Nations Education Program in Space Science and Technology 1988-2018. <i>Creative Education</i> , 2019, 10, 2219-2231. | 0.4 | 3 |
| 71 | Neutrino oscillations in neutron star matter. <i>Astrophysics and Space Science</i> , 1982, 82, 457-461. | 1.4 | 2 |
| 72 | An analytic approach to the connection between stellar structure parameters and the neutrino emission rate in a simple stellar model. <i>Astronomische Nachrichten</i> , 1986, 307, 1-7. | 1.2 | 2 |

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|----|---|-----|-----------|
| 73 | A note on the linear stellar model. <i>Astronomische Nachrichten</i> , 1987, 308, 313-318. | 1.2 | 2 |
| 74 | Analytical Results Connecting Stellar Structure Parameters and Neutrino Fluxes. <i>Annalen Der Physik</i> , 1987, 499, 103-116. | 2.4 | 2 |
| 75 | The United Nations Basic Space Science Initiative for IHY 2007. <i>Proceedings of the International Astronomical Union</i> , 2006, 2, 295-302. | 0.0 | 2 |
| 76 | Third UN/ESA/NASA Workshop on the International Heliophysical Year 2007 and Basic Space Science. <i>Earth, Moon and Planets</i> , 2009, 104, 141-159. | 0.6 | 2 |
| 77 | Regional Centres for Space Science and Technology Education and ICG Information Centres affiliated to the United Nations. <i>Advances in Space Research</i> , 2009, 43, 1863-1865. | 2.6 | 2 |
| 78 | Erdélyi-Kober fractional integral operators from a statistical perspective -II. <i>Cogent Mathematics</i> , 2017, 4, 1309769. | 0.4 | 2 |
| 79 | Analytic Representation of Maxwell-Boltzmann and Tsallis Thermonuclear Functions with Depleted Tail. <i>Axioms</i> , 2021, 10, 115. | 1.9 | 2 |
| 80 | Neutrinooszillationen in Neutronensternmaterie. <i>Astronomische Nachrichten</i> , 1981, 302, 223-226. | 1.2 | 1 |
| 81 | Closed-form evaluation and approximation considerations of the non-resonant thermonuclear reaction rate. <i>Astrophysics and Space Science</i> , 1981, 75, 531-534. | 1.4 | 1 |
| 82 | Analytic solar structure. <i>Astrophysics and Space Science</i> , 1991, 176, 51-59. | 1.4 | 1 |
| 83 | Analytic stellar structure. <i>Astrophysics and Space Science</i> , 1992, 197, 153-161. | 1.4 | 1 |
| 84 | Computational aspects of the gravitational instability problem for a multicomponent cosmological medium. <i>Astrophysics and Space Science</i> , 1994, 214, 139-149. | 1.4 | 1 |
| 85 | Potential of interplanetary torques and solar modulation for triggering terrestrial atmospheric and lithospheric events. <i>Earth, Moon and Planets</i> , 1995, 70, 179-181. | 0.6 | 1 |
| 86 | Space law and space science at the United Nations. <i>Earth, Moon and Planets</i> , 1996, 73, 165-166. | 0.6 | 1 |
| 87 | Developing basic space science world wide: progress report. <i>Advances in Space Research</i> , 2004, 34, 2178-2181. | 2.6 | 1 |
| 88 | Report on the Twelfth United Nations/European Space Agency Workshop on Basic Space Science (Beijing, P.R. China, 24-28 May 2004). <i>Astrophysics and Space Science</i> , 2006, 305, 325-330. | 1.4 | 1 |
| 89 | International Heliophysical Year 2007: A Report from the UN/NASA Workshop Bangalore, India, 27 November-1 December 2006. <i>Earth, Moon and Planets</i> , 2008, 103, 9-24. | 0.6 | 1 |
| 90 | Preface to the Proceedings of the European General Assembly on IHY 2007. <i>Earth, Moon and Planets</i> , 2009, 104, 1-2. | 0.6 | 1 |

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|-----|---|-----|-----------|
| 91 | Preface to the Proceedings of the European General Assembly and the United Nations Workshop. Earth, Moon and Planets, 2009, 104, 139-140. | 0.6 | 1 |
| 92 | Progress in basic space science education and research: The UNBSSI. Space Policy, 2010, 26, 61-63. | 1.5 | 1 |
| 93 | A generalized entropy optimization and Maxwell's Boltzmann distribution. European Physical Journal B, 2018, 91, 1. | 1.5 | 1 |
| 94 | Entropy Optimization, Maxwell's Boltzmann, and Rayleigh Distributions. Entropy, 2021, 23, 754. | 2.2 | 1 |
| 95 | A. M. Mathai Centre for Mathematical and Statistical Sciences: A Brief History of the Centre and Prof. Dr. A. M. Mathai's Research and Education Programs at the Occasion of His 85th Anniversary. Creative Education, 2020, 11, 356-405. | 0.4 | 1 |
| 96 | Analytic solution to the problem of nuclear energy generation rate in a simple stellar model. Astronomische Nachrichten, 1986, 307, 9-12. | 1.2 | 0 |
| 97 | The LMC supernova (SN 1987 A) as a probe for the outcome of stellar collapse. Astronomische Nachrichten, 1987, 308, 329-331. | 1.2 | 0 |
| 98 | The formation of primordial stars triggered by the evolution of large-scale density perturbations. Astronomische Nachrichten, 1988, 309, 291-294. | 1.2 | 0 |
| 99 | W. HILLEBRANDT, R. KUHFUSS, F. MÄELLER, J. W. TRURAN (Eds.): Nuclear Astrophysics. Astronomische Nachrichten, 1989, 310, 60-60. | 1.2 | 0 |
| 100 | The evolution of gravitational instabilities: Amplification by coupling of perturbation modes. Astrophysics and Space Science, 1989, 159, 295-300. | 1.4 | 0 |
| 101 | Relativistic Astrophysics and Gravitation. Astronomische Nachrichten, 1990, 311, 145-145. | 1.2 | 0 |
| 102 | Explosive perturbations in the expanding Universe. Astronomische Nachrichten, 1990, 311, 202-202. | 1.2 | 0 |
| 103 | The dynamical behaviour of aN-shell model for an expanding universe. Astrophysics and Space Science, 1993, 199, 175-183. | 1.4 | 0 |
| 104 | United Nations Contributions to the Worldwide Development of Astronomy. Annals of the New York Academy of Sciences, 1997, 822, 621-630. | 3.8 | 0 |
| 105 | Fourier spectrum analysis of the new solar neutrino capture rate data for the Homestake experiment. Nuclear Physics A, 1997, 621, 341-344. | 1.5 | 0 |
| 106 | Analytical study of thermonuclear reaction probability integrals. Astrophysics and Space Science, 2000, 273, 43-52. | 1.4 | 0 |
| 107 | Report on the eight UN/ESA Workshop on Basic Space Science: Scientific Exploration from Space. Astrophysics and Space Science, 2000, 273, 331-341. | 1.4 | 0 |
| 108 | Letters to the Editor. Isis, 2007, 98, 799-800. | 0.5 | 0 |

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|-----|---|-----|-----------|
| 109 | University satellites and space science education. <i>Eos</i> , 2007, 88, 172-172. | 0.1 | 0 |
| 110 | The United Nations Basic Space Science Initiative (UNBSSI). <i>Advances in Space Research</i> , 2009, 43, 1854-1862. | 2.6 | 0 |
| 111 | Analytical Results Connecting Stellar Structure Parameters and Extended Reaction Rates. <i>Journal of Astrophysics</i> , 2014, 2014, 1-12. | 0.4 | 0 |
| 112 | Scientific Endeavors of A.M. Mathai: An Appraisal on the Occasion of his Eightieth Birthday, 28 April 2015. <i>Axioms</i> , 2015, 4, 213-234. | 1.9 | 0 |