

NONEXTENSIVE STATISTICAL MECHANICS AND THERMODYNAMICS

BIBLIOGRAPHY (regularly updated): <http://tsallis.cat.cbpf.br/biblio.htm>

BOOKS:

Nonextensive Statistical Mechanics and Thermodynamics

Eds. S.R.A. Salinas and C. Tsallis, Brazilian Journal of Physics, **29**, Number 1 (1999)

<http://www.sbf.if.usp.br/bjp/Vol29/Num1/index.htm>

Nonextensive Statistical Mechanics and Its Applications

Eds. S. Abe and Y. Okamoto, Series *Lectures Notes in Physics* (Springer, Berlin, 2001)

<http://link.springer.de/link/service/series/2669/tocs/t1560.htm>

Classical and Quantum Complexity and Nonextensive Thermodynamics

Eds. P. Grigolini, C. Tsallis and B.J. West, Chaos, Solitons and Fractals **13**, Issue 3 (2002)

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Non Extensive Thermodynamics and Physical Applications

Eds. G. Kaniadakis, M. Lissia and A. Rapisarda, Physica A **305**, Issue 1/2 (2002)

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Nonadditive Entropy and Nonextensive Statistical Mechanics

Ed. M. Sugiyama, Continuum Mechanics and Thermodynamics **16** (Springer, Heidelberg, 2004)

<http://www.springerlink.com/app/home/issue.asp?wasp=ngda3kvhvj2jvellmv56&referrer=parent&backto=journal,2,55;linkingpublicationresults,id:100469,1>

Nonextensive Entropy - Interdisciplinary Applications

Eds. M. Gell-Mann and C. Tsallis (Oxford University Press, New York, 2004)

<http://www.us.oup.com/us/catalog/general/subject/Physics/?ci=0195159772&view=usa>

Anomalous Distributions, Nonlinear Dynamics, and Nonextensivity

Eds. H.L. Swinney and C. Tsallis, Physica D **193**, Issue 1-4 (Elsevier, Amsterdam, 2004)

http://www.elsevier.com/wps/find/homepage.cws_home

News and Expectations in Thermostatistics

Eds. G. Kaniadakis and M. Lissia, Physica A **340**, Issue 1/3 (Elsevier, Amsterdam, 2004)

http://www.elsevier.com/wps/find/homepage.cws_home

Trends and Perspectives on Extensive and Non-Extensive Statistical Mechanics

Eds. H.J. Herrmann, E.M.F. Curado and M. Barbosa, Physica A **344**, Issue 3/4 (Elsevier, Amsterdam, 2004)

http://www.elsevier.com/wps/find/homepage.cws_home

Complexity, Metastability and Nonextensivity

Eds. C. Beck, G. Benedek, A. Rapisarda and C. Tsallis (World Scientific, Singapore, 2005)

<http://www.worldscibooks.com/physics/5961.html>

Nonextensive Statistical Mechanics: New Trends, New Perspectives

Eds. J.P. Boon and C. Tsallis, Europhysics News **36** (6) (European Physical Society, Nov-Dec 2005)

<http://www.europhysicsnews.com/>

News, Expectations and Trends in Statistical Physics

Eds. G. Kaniadakis, A. Carbone and M. Lissia, Physica A **365**, Issue 1 (Elsevier, Amsterdam, 2006)

http://www.elsevier.com/wps/find/homepage.cws_home

Complexity and Nonextensivity – New Trends in Statistical Mechanics

Eds. S. Abe, M. Sakagami and N. Suzuki, Progress of Theoretical Physics Supplement **162** (Physical Society of Japan, Tokyo, 2006)

<http://ptp.ipap.jp/journal/PTPS-162.html>

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Eds. S. Abe, H. Herrmann, P. Quarati, A. Rapisarda and C. Tsallis, American Institute of Physics Conference Proceedings **965** (2007)

<http://www.springer.com/physics/book/978-0-7354-0481-6>

Statistical Power Law Tails in High-Energy Phenomena

Ed. T.S. Biro, European Physical Journal A **40** (3) (Springer, Berlin, 2009)

<http://www.springerlink.com/content/p3p0p0466785/?p=7381936c95f0448c80db083addb1c782&pi=0>

Nonextensive Statistical Mechanics – Foundations and Applications

Eds. R.S. Mendes, L.C. Malacarne, E.K. Lenzi and L.R. Evangelista, Brazilian Journal of Physics **39** (2A) (2009)

<http://www.sbfisica.org.br/bjp/>

Introduction to Nonextensive Statistical Mechanics – Approaching a Complex World

C. Tsallis (Springer, New York, 2009)

<http://www.springer.com/physics/book/978-0-387-85358-1>

Fundamental Mathematics for Complex Systems – Mathematics for Power Laws and Tsallis Entropy

H. Suyari (Makino Publisher, 2010, in Japanese)

Generalised Thermostatistics

J. Naudts (Springer, London, 2011)

<http://www.springer.com/mathematics/book/978-0-85729-354-1>

Tsallis Entropy

A. Anastasiadis, ed., Special Issue of the MDPI Journal *Entropy* (2011)

http://www.mdpi.com/journal/entropy/special_issues/Tsallis_Entropy

Statistical Mechanics in Earth Physics and Natural Hazards

P. Vallianatos and L. Telesca, eds., Special Issue of Acta Geophysica **60** (3) (2012)

<http://agp.igf.edu.pl/index.php?action=specialissue>

Concepts and Recent Advances in Generalized Information Measures and Statistics

A.M. Kowalski, R.D. Rossignoli and E.M.F. Curado, eds. (Bentham Science Publishers, 2013)

<http://benthamscience.com/ebooks/contents.php?JCode=9781608057603>

Introduction to Tsallis Entropy Theory in Water Engineering

V.P. Singh (CRC Press, Taylor and Francis Group, 2016)

<https://www.crcpress.com/Introduction-to-Tsallis-Entropy-Theory-in-Water-Engineering/Singh/p/book/9781138747944>

Nonadditive Entropies and Complex Systems

A. Rapisarda, S. Thurner and C. Tsallis, eds., Special Issue of the MDPI Journal *Entropy* (2019)

https://www.mdpi.com/journal/entropy/special_issues/Nonadditive_entropies

Nonextensive Statistical Mechanics, Superstatistics and Beyond: Theory and Applications in Astrophysical and Other Complex Systems

C. Beck, G. Benedek, G. Livadiotis, A. Rapisarda, U. Tirnakli and C. Tsallis (European Physical Journal Special Topics, 2020, in press)

<https://epjst.epj.org/open-calls-for-papers/85-epj-st/1546-epjst-special-issue-nonextensive-statistical-mechanics-superstatistics-and-beyond-theory-and-applications-in-astrophysical-and-other-complex-systems>

Generalized Entropies: Equilibrium and Nonequilibrium in Complex Systems

C. Tsallis, E.M.F. Curado and F.D. Nobre (Cambridge University Press, under contract, scheduled for 2021)

Introduction to Nonextensive Statistical Mechanics – Approaching a Complex World (2nd Edition)

C. Tsallis (Springer/Nature, New York, under contract, scheduled for 2021)

MEETINGS:

(The following list only includes meetings whose program content has been integrally, or at least substantially, focused on nonextensive statistical mechanical concepts)

IMS Winter School on Statistical Mechanics: Nonextensive Generalization of Boltzmann-Gibbs Statistical Mechanics and Its Applications

Okazaki, Japan, 15-18 February 1999; Co-chaired by Y. Okamoto and S. Abe

International Workshop on Classical and Quantum Complexity and Nonextensive Thermodynamics

Denton, Texas, USA, 3-6 April 2000; Co-chaired by P. Grigolini, C. Tsallis and B.J. West

<http://www.phys.unt.edu/Complexity/announcement.html>

NEXT2001: International School and Workshop on Non Extensive Thermodynamics and Physical Applications

Cagliari, Italy, 23-30 May 2001; Chaired by M. Lissia

<http://www.ca.infn.it/~lissia/next2001.html>

Interdisciplinary Applications of Ideas from Nonextensive Statistical Mechanics and Thermodynamics

Santa Fe Institute, New Mexico, USA, 8-12 April 2002; Co-chaired by M. Gell-Mann and C. Tsallis

<http://discuss.santafe.edu/nonextensive2001>

NEXT2002: Anomalous Distributions, Nonlinear Dynamics, and Nonextensivity

Santa Fe, New Mexico, USA, 6-9 Nov 2002; Co-chaired by A.R. Bishop, H.L. Swinney, C. Tsallis, V.M. Kenkre, R.E. Ecke, E. Ben-Naim and Z. Toroczkai

<http://cnls.lanl.gov/Conferences/AnomalDist/NEXT02.htm>

Quantum Entanglement, Complexity and the Physical Basis for Quantum Computation

Rio de Janeiro, Brazil, 2-6 December 2002; Co-chaired by C. Tsallis and I.S. Oliveira

<http://www.cbpf.br/q-entanglement/>

NEXT2003: 2nd Sardinian International Conference on News and Expectations in Thermostatistics

Cagliari, Italy, 22-28 September 2003; Co-chaired by E.G.D. Cohen, P. Quarati and C. Tsallis

<http://www.ca.infn.it/~lissia/next2003.html>

Trends and Perspectives on Extensive and Non-Extensive Statistical Mechanics

Angra dos Reis, Brazil, 19-21 November 2003; Co-chaired by E.M.F. Curado, H.J. Herrmann and M. Barbosa

<http://www.cbpf.br/~trends/>

NEXT2004: International Workshop on Complexity, Metastability and Nonextensivity

Ettore Majorana Center, Erice, Italy, 20-26 July 2004; Co-chaired by C. Tsallis, A. Rapisarda and C. Beck

<http://www.ct.infn.it/~rapis/ERICE-COMPLEX04/>

International Workshop on Complexity and Nonextensivity – New Trends in Statistical Mechanics

Kyoto, Japan, 14-18 March 2005; Co-chaired by S. Abe and M. Sakagami

<http://ganesha.phys.h.kyoto-u.ac.jp/CN-Kyoto/index.html>

NEXT2005: News, Expectations and Trends in Statistical Physics

Kolymbari, Crete, Greece, 13-18 August 2005; Chaired by G. Kaniadakis

<http://www2.polito.it/eventi/next-sigmaphi/html/next.html>

Statistical Mechanics of Non-Extensive Systems

Paris, France, 24-25 October 2005; Co-chaired by F. Combes and R. Robert

<http://aramis.obspm.fr/NBS05/index.php>

Introducción a la Mecánica Estadística No Extensiva - Aplicaciones a los Sistemas Complejos

Madrid, Spain, 6-9 February 2006; Chaired by G. Ruiz-Lopez

<http://matap.dmae.upm.es/Tsallis/CursoTsallis.htm>

London Mathematical Society Durham Symposium on Dynamical Systems and Statistical Mechanics

Durham, England, 3-13 July 2006; Co-chaired by C. Beck, C. Dettmann and M. Pollicott

<http://www.maths.dur.ac.uk/lms/2006/DSSM/outline.html>

International Summer School and Workshop on Complex Systems and Nonextensive Statistical Mechanics

Trieste / ICTP, Italy, 30 July - 8 August 2006; Co-chaired by C. Tsallis and U. Tirnakli

http://cdsagenda5.ictp.it/full_display.php?email=0&ida=a05215

Mecânica Estatística Não Extensiva – Aspectos Teóricos, Experimentais, Observacionais e Computacionais

Rio de Janeiro, Brazil, 2-6 April 2007; Chaired by C. Tsallis

<http://tsallis.cat.cbpf.br/NextCurso2007/>

Mecánica Estadística y Termodinámica No Extensivas

Buenos Aires, Argentina, 23-27 April 2007; Chaired by H. Corti

<http://divisionnonlineal.blogspot.com/2007/03/curso-de-mecnica-estadstica-y.html>

NEXT2007: International Workshop on Complexity, Metastability and Nonextensivity

Catania, Italy, 1-5 July 2007; Chaired by A. Rapisarda

<http://www.ct.infn.it/ctnext07/>

Nonextensive Statistical Mechanics

Marmaris, Turquia, 15-20 July 2007; Co-chaired by T. Hakioglu and U. Tirnakli

http://itap-tthv.org/iars/eV/UNIT3/MAIN.asp#2007_2008_Program

Symposium on Nonextensive Statistical Mechanics

International Conference in Statistical Physics

Kolymbari, Crete - Greece, 14-18 July 2008; Co-chaired by S. Abe and C. Tsallis

<http://www2.polito.it/eventi/sigmaphi2008/>

NEXT2008: International Conference on Nonextensive Statistical Mechanics – Foundations and Applications

Iguassu, Brazil, 27-31 October 2008; Chaired by R.S. Mendes

<http://www.dfi.uem.br/next2008/>

Curso Internacional de Mecánica Estadística No Extensiva

Lima, Peru, 9-17 January 2009; Co-chaired by O. Pereyra Ravinez, H.

Loro Ramirez, J. Solano Salinas, R. Ochoa Jimenez and M. Aparicio

<http://fc.uni.edu.pe/gff/cursos/>

Mathematical Aspects of Generalized Entropies and their Applications

Kyoto, Japan, 7-9 July 2009; Co-chaired by H. Suyari, A. Ohara and T. Wada

<http://www.icsd3.tj.chiba-u.jp/~rims2009/>

Nonextensive Statistical Mechanics – Concepts and Applications

Pala, Kerala, India; 6-8 January 2011; Chaired by A. M. Mathai

<http://www.cmsintl.org/>

Workshop on Nonextensive Statistical Mechanics and Integrable Spin Chains

Madrid - Spain; 17 March 2011; Chaired by P. Tempesta et al

<http://www.cbpf.br/nonextensive/2011ComplutenseWorkshop.pdf>

Introducción a Mecánica Estadística No Extensiva

Granada - Spain, 9-13 January 2012; Chaired by J. Sanchez Dehesa

NEXT2012: Anomalous Statistics, Generalized Entropies, and Information Geometry

Nara, Japan, 6-10 March 2012; Co-chaired by H. Suyari, T. Wada, A. Ohara, S. Furuichi and Y. Sato

<http://sites.google.com/site/next2012nara/>

International Workshop on Tsallis Entropy and its Applications

Wuhan - China, 16-19 October 2012; Chaired by Wei Li

<http://blog.sciencenet.cn/blog-4673-624051.html>

Heavy Ion Forum on the Tsallis Function and its Applications

CERN, ALICE/LHC Collaboration, Geneva, Switzerland, 1 February 2013

<http://indico.cern.ch/conferenceDisplay.py?confId=232225>

Complex Systems - Foundations and Applications

Rio de Janeiro, Brazil, 28 October to 1 November 2013

<http://www.cbpf.br/~compsyst/>

Heavy Ion Forum on Tsallis Function

CERN, ALICE/LHC Collaboration, Geneva, Switzerland, 13 January 2014

<http://indico.cern.ch/conferenceDisplay.py?confId=285968>

Statistical Mechanics Foundations of Complexity – Where do we stand?

Santa Fe Institute, New Mexico, USA, 8-10 May 2014; Co-chaired by M. Gell-Mann, C. Tsallis and S. Thurner

<https://www.santafe.edu/events/statistical-mechanics-foundations-of-complexi>

International Course on New Trends in Statistical Mechanics Foundations of Complexity: Applications in high energy and plasma physics, long-range interactions, edge of chaos and elsewhere

Ettore Majorana Center, Erice, Italy, 27 July to 3 August 2015; Co-chaired by G. Benedek, R. Galvao, A. Rapisarda and C. Tsallis

<https://sites.google.com/site/ericecomplexity2015/home>

International Workshop and Latin-American School on Foundations of Complexity – Nonadditive Entropies and Nonextensive Statistical Mechanics

Rio de Janeiro, Brazil, 4 to 30 October 2015; Co-chaired by C. Tsallis, E.M.F. Curado and F.D. Nobre
<http://www.cbpf.br/~complex/>

Workshop on Nonextensive Statistical Mechanics, Superstatistics and Beyond: Theory and Applications in Astrophysical and Other Complex Systems

Erice, Italy, 2 to 6 July 2019; Co-chaired by A. Rapisarda, C. Beck, G. Benedek, G. Livadiotis, U. Tirnakli and C. Tsallis
<https://sites.google.com/view/supernext2019/home>

LIGHT READING:

Constantino Tsallis – Describing a New Entropy, by Rex Graham, Santa Fe Institute Bulletin (2000)
<https://sfi-edu.s3.amazonaws.com/sfi-edu/production/uploads/publication/2016/10/31/fall2000v15n2.pdf>

Roll over Boltzmann, by Jon Cartwright, Physics World (2014)
<https://physicsworld.com/a/roll-over-boltzmann/>

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