
Curriculum Vitae of NIKOLAOS KALOGEROPOULOS

CURRENT AFFILIATION AND CONTACT INFORMATION

Center for Research and Applications
of Nonlinear Systems (CRANS),
University of Patras,
Patras 26500, Greece.

E-mail: nikos.physikos@gmail.com
Skype ID: nick-aiki-demic
WhatsApp ID: +30 697 0939052
Zoom Personal ID: 247 680 2635

CITIZEN OF CANADA AND OF GREECE

POST-SECONDARY EDUCATION

- PhD in Theoretical/Mathematical Physics (Defended in August 1995; Awarded in May 1996).
Department of Physics, Syracuse University, Syracuse, NY, United States of America.
PhD Thesis Title: “*Some Applications of Algebraic Topology to Field Theory (Gauge Theory)*”.
- BS in Physics (Completed in July 1989; Awarded in May 1990).
Department of Physics, National and Kapodistrian University of Athens, Athens, Greece.
BS Thesis Title: “*Anomalies in Quantum Field Theories*” (in Greek).

INSTRUCTIONAL ACTIVITIES

1. Senior Researcher, with the rank of Full Professor (July 2017 - Present).
Center for Research and Applications of Nonlinear Systems (CRANS),
University of Patras, Patras 26500, Greece.
Performs research in various aspects of nonlinear dynamical and complex systems, with emphasis on entropy methods, by using geometrical, algebraic, analytical and probabilistic approaches.
2. Associate Professor of Mathematics and Physics (September 2018 - August 2021).
Department of Mathematics and Natural Sciences, The American University of Iraq, Sulaimani, Iraq.
 - (a) Coordinated, developed and taught at various semesters:
 - Algebra and Calculus-based Physics I (Mechanics, Thermal Physics, Fluids)
 - Algebra and Calculus-based Physics II (Electromagnetism, Optics, Atomic/Nuclear Physics)
 - Calculus 1 (Differential and Integral Calculus)
 - Calculus 2 (Integral Calculus, Applications, Series)
 - Calculus 3 (Multivariable Calculus, Vector Analysis)
 - Ordinary Differential Equations
 - Linear algebra
 - General Physics for non-Science majors

- primarily to Science and Engineering majors.
- (b) Member of a Committee which developed a Mathematics Major, a Mathematics Minor, and a Physics Minor at AUIS.
 - (c) Developed and got approval for courses on
 - “Partial Differential Equations”
 - “Calculus of one Complex Variable”
 - “Physics for the Health Sciences” (both the Lecture and the Laboratory parts).
3. Associate Professor (August 2016 - June 2017)
Carnegie Mellon University in Qatar, Doha, Qatar.
 - (a) Developed and taught the Calculus-based: “Physics I for Science Students” to Biological Sciences and Computer Science Majors (Spring 2017).
 - (b) Developed and taught “Introduction to Astronomy” for non-Science Majors (Fall 2016).
 - (c) Developed and taught the Astronomy Laboratory associated to the above Astronomy course (Fall 2016).
 - (d) Developed and taught “Physics for Future Presidents” for non-Science Majors (Fall 2016).
 4. Recipient of the Excellence in Teaching Award
Pre-Medical Program, Weill Cornell Medicine - Qatar, Academic Year 2013 - 2014.
 5. Associate Professor (October 2010 - July 2016)
Weill Cornell Medicine - Qatar, Doha, Qatar.
 - (a) Developed and taught the theory and laboratory portions of the Calculus-based Physics two-semester course sequence for pre-Medical Students.
 - (b) Taught Introductory Physics to Foundation (pre-University) Students.
 - (c) Lead and participated in numerous Physics-related administrative and outreach activities.
 - (d) Advised numerous students of the pre-Medical Program.
 6. Assistant Professor (September 2003 – September 2010). Tenured: September 1, 2008
Department of Science, BMCC – The City University of New York, New York, NY, USA
 - (a) Mentor of student-research in topics of Electronics/Circuits, Classical Mechanics, Electromagnetism, Relativity and Quantum Physics.
 - (b) Taught Algebra-based Physics to Health Science and Pre-Medical majors.
 - (c) Taught General Physics to non-Science majors.
 - (d) Taught Calculus-based Physics to Science and Engineering majors.
 - (e) Coordinator of the Algebra-based Physics sequence.
 - (f) Coordinator of General Physics for non-science majors.
 - (g) Responsible for developing and upgrading the General Physics laboratory manuals. Designed new laboratory exercises for the sequence.
 - (h) Use of computerized methods in pedagogy: Use of Blackboard and other distance education programs and methods.
 - (i) Advisor to Science, Engineering Science as well as Liberal Arts majors.
 7. Assistant Professor (August 2002 – August 2003).
Department of Chemistry and Physics, Florida Southern College, Lakeland, FL, USA

- (a) Taught Calculus-based Physics to Science and Pre-Medical Majors.
 - (b) Taught Algebra-based Physics to Pre-Medical, Pre-Dental, Pre-Veterinarian, Pre-Pharmacy, Teacher Education and a variety of other non-science majors.
 - (c) Taught, run and upgraded the General Physics laboratories.
 - (d) Advisor of the Society of Physics Students of the Department.
 - (e) Served in numerous Committees and Sub-committees that helped run the College and improve the College experience of the Florida Southern College Students.
 - (f) Participated in outreach programs that recruited students and strengthened the ties with the surrounding community.
8. Visiting Assistant Professor (June 1997 – July 2002).
Department of Mathematics, Physics and Computer Science, Ryerson University, Toronto, Canada.
- (a) Taught Calculus-based courses in Physics covering the whole Curriculum for Science and Engineering Majors. The subject matter includes Mechanics, Fluids, Electronics (Electricity and Magnetism), Waves and Optics, Quantum Mechanics and Nuclear Physics. Also taught the associated laboratories.
 - (b) Taught the Introductory two semester course on Physical Science (non-Calculus based) with the associated laboratory.
 - (c) Taught Continuing Education (i.e. evening) courses in Physics (and the associated laboratories) during the regular academic year as well as during the summer sessions.
 - (d) Taught Calculus I, Calculus II and Differential Equations to Science/Engineering Majors during daytime and for Continuing Education, as the need arose in the course allocation of the Department.
 - (e) Supervised the independent study of topics in Physics of some students wishing to study Physics deeper than the standard curriculum.
9. Visiting Assistant Professor (September 1998 - December 1998).
Centennial College, Progress Campus, Toronto, Ontario, Canada.
Taught Electronics (with laboratory) to second year students of the Electronics Technologist Program.
10. Visiting Assistant Professor (August 1995 - June 1996).
Hobart and William Smith Colleges, Geneva, NY, USA.
Taught Introductory Physics Laboratories for Science and Pre-Medical Majors. Also taught a course in Mathematical Methods in Physics for Science and Engineering Juniors and Seniors.
11. Instructor (August 1995 - December 1995).
Physics Department, Syracuse University, Syracuse, NY, USA.
Taught a Graduate level Course in Mathematical Methods in Physics.
12. Supervised a Physics Major from Cornell University in her independent study. Also guided and advised several Physics Majors in their Senior's theses.
13. Teaching Assistant (August 1990 - May 1995).
Physics Department, Syracuse University, Syracuse, NY, USA
Taught the Honors Laboratory and a variety of introductory Physics courses for Science and Engineering Majors. These courses were covering primarily Mechanics and Electronics as well as Waves and Optics.

14. Award for “Outstanding Performance” as the best Teaching Assistant of the Academic Year and Honorary Nomination in the American Association of Physics Teachers (September 1992). Physics Department, Syracuse University, Syracuse, NY, USA.
15. Organized and taught a course in Modern Physics to Science and Engineering Majors (May 1992 - August 1992).
Physics Department, Syracuse University, Syracuse, NY, USA.
16. Helped organize and run the award winning NSF-sponsored program “Research Experience for Undergraduates” (May 1991 - August 1991).
NPAC / Physics Department, Syracuse University, Syracuse, NY, USA.
17. Teaching Assistant in Mathematics (August 1989 - May 1990). Mathematics Department, Syracuse University, Syracuse, NY, USA.
Taught Introductory Calculus and graded a course in Ordinary Differential Equations for Science and Engineering Majors.

ONLINE INSTRUCTIONAL SKILLS

Experienced in using the Blackboard, Canvas and Moodle online learning management systems.

MENTORSHIP (NON-ADVISING)

- Trained in Physics and closely supervised the laboratory administrator of the Physics laboratories during her tenure at Weill Cornell Medical College in Qatar (2012-2016).
 - Trained, mentored and supervised at least half a dozen undergraduate students that acted as Physics Teaching Assistants while at Weill Cornell Medical College in Qatar (2010-2016). Some of these students entered doctoral programs with teaching duties, or became full-time teachers themselves.
-

OUTREACH ACTIVITIES

- Member of the Organizing Team of “Mathfest 2019”, an outreach mathematical competition for high school and University level students of Iraq, hosted by the American University of Iraq, Sulaimani on 2 February 2019.
- Organized, directed and participated in the Physics presentations and demonstrations during the “Medicine Unlimited” annual outreach event of Weill Cornell Medicine in Qatar (2010-2016).
- Participated in educational activities of Weill Cornell Medicine in Qatar aimed at Teachers of Qatar Elementary and Secondary Public Schools (2010-2016).
- Made presentations to public (“independent”) junior and senior high school students aspiring to become Medical Doctors while at Weill Cornell Medicine in Qatar (2010-2016).
- Participated in educational development programs for high school teachers while at BMCC - The City University of New York (2003-2010).

ADMINISTRATIVE EXPERIENCE

1. Member of the Executive Committee of the Faculty Senate of the American University of Iraq, Sulaimani (September 2019-September 2020).
2. Member of the Hiring Committee of the Department of Mathematics and Natural Sciences of the American University of Iraq, Sulaimani (January 2020-September 2020).
3. Member of the Faculty Success Committee of the American University of Iraq, Sulaimani (November 2019-September 2020).
Organizing activities that develop the faculty's teaching and research undertakings. Advocating and acquiring resources to support such activities.
4. Chairman of the Institutional Review Board (IRB) of the American University of Iraq, Sulaimani (September 2019-October 2020). Examining and approving research proposals involving human subjects.
5. Member of the Faculty Senate of the American University of Iraq, Sulaimani (September 2018 - September 2020).
Elected Departmental Representative to the highest representative faculty body of the University.
6. Member of the Faculty Promotion (Ad hoc) Committee of the American University of Iraq, Sulaimani (September 2018-September 2019). Responsible for soliciting external reviewers and evaluating the overall dossier of faculty applying for promotion at the American University of Iraq, Sulaimani. Applying international standards in teaching, research and service in evaluating the candidates in accordance with the University policies and procedures.
7. Member of the Faculty Professional Development Committee (September 2018-September 2019) of the American University of Iraq, Sulaiman (AUIS).
Organizing oral presentations, workshops and other events, including internal and external faculty members, with the aim of exchanging ideas toward improving the teaching environment and establishing a research culture at the University and its appreciation from the broader University, academic and local communities.
8. Pre-Medical Admissions Committee Member, Weill Cornell Medicine-Qatar (September 2012-June 2013). Making decisions on the students' applications submitted for admission to the Weill Cornell Medical College. Appointed by the Dean's office on an annual basis.
9. Member of several Ad hoc Committees, Weill Cornell Medicine - Qatar (October 2010-July 2016).
Tasked with providing recommendations to the administration on topics of College-level interest, on an ad hoc basis.
10. Course assignment "czar" in the Science Department of BMCC (September 2009 - September 2010).
Tasked with assigning the Departmental courses to all the full-time faculty members (about 45 in number; mostly tenured) in a fair, equitable and balanced way, by respecting all the departmental, college and the CUNY rules and the individual wishes of all involved faculty members. This task was usually reserved for Associate/Deputy Chairs at the College.
11. Member of the CUNY panel on the PSC-CUNY Awards (September 2008 - September 2010).
Participated at the invitation of the CUNY senior academic leadership, tasked with judging and awarding the very competitive PSC-CUNY research proposals in Physics.

12. Member of the Library and Information Technology Committee of the University Faculty Senate of CUNY (September 1, 2008 - September 2010).
Advising the CUNY administration on issues pertaining to the Library system and to the information technology issues and needs of the University.
13. BMCC Delegate to the University Faculty Senate of CUNY (May 2007 - September 2010).
Represented the College (BMCC) at the most senior-level faculty-controlled governing body of the City University of New York.
14. Member of the Academic Senate of BMCC (September 2007 - September 2010).
Senior faculty representative in the faculty government of BMCC.
15. Member of the College Council of BMCC (September 2007 - September 2010).
Senior faculty representative in the faculty governance structure of BMCC.
16. Member of the Student Affairs Committee of BMCC (September 2009 - September 2010).
Overlooking, advising and suggesting appropriate actions as well as coordinating with the office of Students Affairs of BMCC.
17. Member of the Instruction Committee of BMCC (September 2007 - August 2009).
Tackling numerous issues related to the instructional mission of BMCC.
18. Member of the Institutional Review Board (IRB) of BMCC (September 2007 - August 2009).
Balancing the needs of researchers and protecting the rights and anonymity of human subjects involved in such research, as per federal US statutes.
19. Member of the Assessment and Scientific Reasoning Committee of the BMCC Science Department (September 2006 - September 2010).
Evaluating and suggesting improvements on the various instructional approaches adopted by Departmental courses. Also interfacing with other Departments whose students are taught by the Science Department of BMCC in addressing their instructional needs and wishes.

INVITED LECTURES/PRESENTATIONS

- *“On the dynamical foundations of entropies”*
Invited talk at the “26th Summer School and Conference on Dynamical Systems and Complexity”, July 19-24, 2021, Greece (Online).
- *“q-entropy, Riemannian Submersions and Metric Measure Spaces”*
Invited Seminar, Mathematics group, Kuwait College of Science and Technology, Kuwait City, 24 March 2021.
- *“Topological defects; bubbles, curvature, homotopy...”*
Invited Colloquium, Mathematics Department, Kuwait University, Kuwait City, 20 January 2021.
- *“Cones and surface measures for q-entropy”*
Invited Talk at the “Nonextensive Statistical Mechanics, Superstatistics and Beyond: Theory and Applications in Astrophysical and Other Complex systems”, Ettore Majorana Foundation and Centre for Scientific Culture, International School on Complexity - XVI Course, Erice Italy, 2-8 July 2019.

- *“Symplectic geometry and convexity concepts with potential applications to Statistical Physics”*
Invited Talk in the “Applications of Differential Geometry in Gravitation and Cosmology” Seminar Series. Department of Mathematics, University of Athens, Athens, Greece, 17 January 2019. (Professor P. Stavrinou, Organizer).
- *“Nonextensive entropies”*
Invited Talk at the 25th Summer School - Conference in “Dynamical Systems and Complexity”, National Center for Scientific Research “Demokritos”, Athens, Greece, 13 July 2018.
- *“Non-additive entropies for black holes?”*
Contributed talk at SigmaPhi 2017, International Conference on Statistical Physics, Corfu, Greece, 12 July 2017.
- *“The Legendre Transform and Non-additive Entropies.”*
Contributed talk in the Workshop on “Kappa Distributions and Statistical Mechanics” in SigmaPhi 2017, International Conference on Statistical Physics, Corfu, Greece, 13 July 2017.
- *“Moduli of curve families and (quasi-)conformality of power law entropies.”*
Invited Seminar at the National Center for Scientific Research “Demokritos”, Athens, Greece, 23 December 2015.
- *“Non-additive entropies in ... gravity?”*
Contributed talk to the Second LeCosPA International Symposium: “Everything About Gravity”, National Taiwan University, Taipei, Taiwan, 15 December 2015.
- *“Independence, symplectic rigidity and entropies.”*
Seminar at the National Center for Scientific Research “Demokritos”, Athens, Greece, 22 July 2015.
- *“Balls, polytopes and entropies.”*
Contributed Talk in the International School on Complexity. New Trends in Statistical Mechanical Foundations of Complexity: Applications in high energy and plasma physics, long-range interactions, edge of chaos and elsewhere. Ettore Majorana Foundation and Center for Scientific Culture, Erice, Sicily, Italy, July 27 - August 3, 2015.
- *“A non-additive entropy: analytic and geometric aspects.”*
Invited Seminar in the Physics and Astronomy Department, University of Central Florida, Orlando, FL, USA, 26 June 2015.
- *“From Newton to Einstein: The mathematical formalism of General Relativity”*
Invited Seminar at Southwest Research Institute, San Antonio, TX, USA, 22 June 2015.
- *“The Principle of Stationary Action: From Classical Mechanics to Quantum Gravity”*
Invited Seminar at Southwest Research Institute, San Antonio, TX, USA, 15 December 2014.
- *“Quasi-Conformality of a Non-Extensive Entropy and Kappa Distributions”*
Invited Talk at the American Geophysical Union Fall Meeting, San Francisco, CA, USA, 18 December 2014.
- *“A non-extensive entropy: foundations and implications”*
Invited Seminar at the Texas A & M (Qatar) Advanced Scientific Computing Seminar Series, Doha, Qatar, 25 November 2014.
- *“Non-additive Entropy and Geometry”*
Invited Seminar, Mathematics Department, University of Patras, Patras, Greece, 20 November 2014.

- *“From General Relativity to Quantum Gravity: a centennial assessment”*
Invited Public Lecture, “Orion”: Astronomical Society of Patras, Patras, Greece, 19 November 2014.
- *“Entropy: additive and non-additive”*
Invited Colloquium, Department of Mathematics, University of Patras, Patras, Greece, 19 November 2014.
- *“Tsallis entropy composition and geometry”*
Workshop on Kappa Distributions in SigmaPhi 2014 Statistical Mechanics Conference, Rhodes, Greece, July 10, 2014.
- *“Geometric Aspects of a Non-Extensive Entropy”*
SigmaPhi 2014 Statistical Mechanics Conference, Rhodes, Greece, July 10, 2014.
- *“From classical to generalized entropy formulations: Consequences in Statistical Mechanics”*
Southwest Research Institute, San Antonio, TX, USA, May 19, 2014.
- *“Tsallis entropy composition: a geometric view”*
National Center for Scientific Research “Demokritos”, Athens, Greece, 19 December 2013.
- *“Space-time, strings and space-filling curves”*
19th International Symposium on Particles, Strings and Cosmology, 20-26 November 2013, Taipei, Taiwan.
- *“Tsallis entropy composition: geometric aspects”*
Contributed Talk at Complex Systems: Foundations and Applications. 29 October - 1 November 2013, CBPF, Rio de Janeiro, Brazil.
- *“Tsallis entropy and hyperbolicity”*
at the 11th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2013), 21-27 September 2013, Rhodes, Greece.
- *“Asymptotic cones and quantum gravity”*
at the International Conference on Mathematical Modeling in Physical Sciences (IC-MSQUARE 2013), 1-5 September 2013, Prague, Czech Republic.
- *“Solvable and Nilpotent Structures in Physics: Generalized Uncertainty Principles and the Tsallis Entropy”* (joint work with A.J. Creaco). Refereed Poster presentation at the Qatar Foundation Annual Research Forum 2012, 21 - 23 October 2012, Doha, Qatar.
- *“(Sub-)Riemannian aspects of the Tsallis entropy”* at the International Symposium on Tsallis entropy and its Applications, 16 - 18 October 2012, Wuhan, China.
- *“Nilpotent Structures in Physics: Generalized Uncertainty Principles and the Tsallis Entropy”* (joint work with A.J. Creaco) at the International Conference on Mathematical Modeling in Physical Sciences (IC-MSQUARE 2012), 3 - 7 September 2012, Budapest, Hungary.
- *“Convexity and the Pythagorean metric of space(-time)”*
National Technical University of Athens, Athens, Greece, January 7, 2010
- *“Black Hole Entropy and Horizon Systoles”*
Invited Address at the First Mediterranean Conference in Classical and Quantum Gravity, Kolymbari, Chania, Greece, September 14 - 18, 2009. (Declined due to lack of travel funds).

- *“Metrics, Measures and Spectra in Quantum Physics”*
Weill-Cornell Medical College in Qatar, Doha, Qatar, March 30, 2009.
- *“The entropic parameter and the N-Ricci curvature of metric-measure spaces”*
Research Center for Astronomy and Applied Mathematics, Academy of Athens, June 2008.
- *“The Geodesic Rule and the Spectrum of the Laplacian”*
Physics Department, National and Kapodistrian University of Athens, January 2006.
- *“Three topics loosely related to the holographic principle”*
Physics Section, National Technical University of Athens, January 2006.
- *“Algebraic structures and Calculus from Tsallis thermostatics”*
Physics Section, National Technical University of Athens, June 2005.
- *“Derivation of the geodesic rule for Global Defects”*
Physics Section, National Technical University of Athens, November 2004.

GRANTS

Title: **Metrics and Measures in Field Theory and Gravity** (Principal Investigator)
 Funding Agency: CUNY, Duration: September 1, 2009 - June 30, 2010. Amount: \$ 19,520.00

Title: **The Rough Geometry of Field Theory and Statistical Mechanics** (Principal Investigator)
 Funding Agency: PSC-CUNY Duration: June 1, 2009 - May 31, 2010. Amount: \$ 2,755.00

Title: **Physical Applications of Metric Geometry and Length Spaces** (Principal Investigator)
 Funding Agency: PSC-CUNY Duration: July 1, 2006 - December 31, 2007. Amount: \$ 3,155.00

Title: **Curvature of configuration spaces and effective potentials** (Principal Investigator)
 Funding Agency: PSC-CUNY Duration: July 1, 2004 - June 30, 2005. Amount: \$ 3,600.00

REFeree FOR

1. Nature.
2. Symmetry.
3. Physica A.
4. Asian Journal of Probability and Statistics.
5. Indian Journal of Physics.
6. Dynamics.
7. Mathematics in Computer Science.
8. Journal of Algebraic Combinatorics.
9. European Physical Journal Plus.

10. Mathematics.
11. Universe.
12. International Journal of Geometric Methods in Modern Physics.
13. International Journal of Modern Physics D.
14. Journal of Intelligent and Fuzzy Systems.
15. Axioms.
16. Journal of Statistical Mechanics: theory and experiment.
17. Chaos: An Interdisciplinary Journal of Nonlinear Science.
18. Glasgow Mathematical Journal.
19. European Physical Journal B.
20. International Journal of Modern Physics B.
21. Entropy.
22. Advances in High Energy Physics.
23. Physics Letters A.
24. Modern Physics Letters A.
25. Open Physics (formerly Central European Physics) Journal.
26. Meccanica.
27. Kuwait Journal of Science.

SHORT-TERM VISITING POSITIONS

- Isaac Newton Institute of Mathematical Sciences, Cambridge, United Kingdom; May-June 2001.
- Courant Institute of Mathematical Sciences, New York, NY, USA; July-August 2000.

PROFESSIONAL AFFILIATIONS

- Member of the American Mathematical Society (Effective: January 2022).
- Member of the International Society on General Relativity and Gravitation (2015 - Present).
- Member of the Hellenic Society on Relativity, Gravitation and Cosmology (2010-2016).
- Member of the Complex Systems and Applications Group (COSA), Greece (2013 - Present).
- Member of the American Geophysical Union (2014).

PAPERS (PUBLISHED AND PREPRINTS)

1. *Floer homology for phase transitions*
by Nikolaos Kalogeropoulos, December 2021, Work in progress.
2. *Boundary measures for power-law entropies*
by Nikolaos Kalogeropoulos, December 2021, Work in progress.
3. *Planetary formation from symplectic staircases*
by Nikolaos Kalogeropoulos, December 2021, In preparation.
4. *Entropy and hyperbolicity*
by Nikolaos Kalogeropoulos and Christos Kokorelis, December 2021, In preparation.
5. *Quantization in Cartesian coordinates and the Hofer metric*
by Nikolaos Kalogeropoulos and Christos Kokorelis, arXiv:2111.14350 [math-ph]
6. *Coarse-graining and symplectic non-squeezing*
by Nikolaos Kalogeropoulos, Accepted for publication by Physica A, 28 November 2021.
arXiv:2106.14154 [cond.mat-stat.mech]
7. *Non-linear Fokker-Planck equations from conformal deformations, and scalar curvature*
by Nikolaos Kalogeropoulos, 15 November 2019, arXiv:1911.06626 [cond-mat.stat-mech]
8. *Riemannian submersions and q -entropies*
by Nikolaos Kalogeropoulos, Int. J. Geom. Methods Mod. Physics **18**(14), 2150229 (2021).
9. *Toward a relative q -entropy*
by Nikolaos Kalogeropoulos, Physica A **545**, 123270 (2020).
10. *Systolic aspects of black hole entropy*
by Nikolaos Kalogeropoulos, Axioms **9**(1), 30 (2020).
11. *Irreversibility from staircases in symplectic embeddings*
by Anthony J. Creaco and Nikolaos Kalogeropoulos, Physica A **513**, 497-509 (2019).
12. *Emblemic aspects of black hole entropy*
by Nikolaos Kalogeropoulos, Int. J. Geom. Methods Mod. Phys. **15**, 1850175 (2018).
13. *Power-law entropies for continuous systems and generalized operations*
by Anthony J. Creaco and Nikolaos Kalogeropoulos, Mod. Phys. Lett. B **32**, 1850338 (2018).
14. *The τ_q -Fourier transform: covariance and uniqueness*
by Nikolaos Kalogeropoulos, Mod. Phys. Lett. B **32**(14), 1850149 (2018).
15. *Time irreversibility from symplectic non-squeezing*
by Nikolaos Kalogeropoulos, Physica A **495**, 202-210 (2018).
16. *An entropy for groups of intermediate growth*
by Nikolaos Kalogeropoulos, Adv. Math. Phys. **2017**, 2863614 (2017).
17. *The Legendre Transform in Non-additive Thermodynamics and Complexity*
by Nikolaos Kalogeropoulos, Entropy **19**, 298 (2017).

18. *Convexity and the Euclidean Metric of Space-Time*
by Nikos Kalogeropoulos, Universe **3**, 8 (2017).
19. *Moduli of curve families and (quasi-)conformality of power-law entropies*
by Nikos Kalogeropoulos, Int. J. Geom. Meth. Mod. Phys. **13**, 1650063 (2016).
20. *Non-Additive Entropies in ... Gravity?*
by Nikos Kalogeropoulos, in “Everything about Gravity”, Proceedings of the Second LeCosPA International Symposium, National Taiwan University, Taipei, Taiwan, 14-18 December 2015, P. Chen, (Ed.), pp. 213-218, World Scientific Publ., Singapore (2017).
21. *Entropies from coarse-graining: convex polytopes vs. ellipsoids*
by Nikos Kalogeropoulos, Entropy **17**, 6329-6378, (2015).
22. *Ricci curvature, isoperimetry and a non-additive entropy*
by Nikos Kalogeropoulos, Entropy **17**, 1278-1308, (2015).
23. *Groups, non-additive entropy and phase transitions*
by Nikos Kalogeropoulos, Int. J. Mod. Phys. B **28**, 1450162 (2014).
24. *Extensive limit of a non-extensive entanglement entropy*
by Nikos Kalogeropoulos, Eur. Phys. Jour. B **87**:138 (2014).
25. *Long-range interactions, doubling measures and Tsallis entropy*
by Nikos Kalogeropoulos, Eur. Phys. Jour. B. **87**: 56 (2014).
26. *Almost additive entropy*
by Nikos Kalogeropoulos, Int. J. Geom. Meth. Mod. Phys. **11**, 1450040 (2014).
27. *Tsallis entropy and hyperbolicity*
by Nikos Kalogeropoulos, in Symposium 52: “Theoretical and Numerical Modelling of systems with long range interactions”, in the “Proceedings of the International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2013)”, T. Simos, G. Psihoyios, C. Tsitouras (Eds.), pp. 1784-1786, AIP Proceedings, Vol. 1558, Part 2, Melville, NY, USA, (2013).
28. *Asymptotic cones and quantum gravity*
by Nikos Kalogeropoulos, J. Phys. Conf. Ser. **490** 012223 (2014).
29. *Nilpotence and the generalised uncertainty principle(s)*
by Nikos Kalogeropoulos, Amer. J. Space Sci. **1**, (2013) 99-111.
30. *Vanishing largest Lyapunov exponent and Tsallis entropy*
by Nikos Kalogeropoulos, QScience Connect 2013:26 (Open Access)
31. *Tsallis entropy composition and the Heisenberg group*
by Nikos Kalogeropoulos, Int. J. Geom. Meth. Mod. Phys. **10**, 1350032 (2013)
32. *Nilpotence in Physics: the case of Tsallis entropy*
by Antony J. Creaco and Nikos Kalogeropoulos, J. Phys. Conf. Ser. **410**, 012148 (2013)
33. *Generalized diffusion and asymptotics induced by Tsallis entropy*
by Nikos Kalogeropoulos, November 2012, arXiv:1211.3516
34. *Escort distributions and Tsallis entropy*
by Nikos Kalogeropoulos, June 2012, arXiv:1206.5127

35. *Weak Chaos from Tsallis Entropy*
by Nikos Kalogeropoulos, QScience Connect **12**, (2012) (Open Access) .
36. *Tsallis entropy induced metrics and CAT(k) spaces*
by Nikos Kalogeropoulos, Physica A **391**, (2012) 3435-3445
37. *Distributivity and deformation of the reals from Tsallis entropy*
by Nikos Kalogeropoulos, Physica A **391**, (2012) 1120-1127
38. *Phase space measure concentration for an ideal gas*
by Anthony J. Creaco, Nikos Kalogeropoulos, Mod. Phys. Lett. B **23** (2009) 1013-1025
39. *The geodesic rule for higher codimensional global defects*
by Anthony J. Creaco, Nikos Kalogeropoulos, Mod. Phys. Lett A **23** (2008) 2053-2066
40. *Geometric variations of the Boltzmann entropy*
by Nikos Kalogeropoulos, Mod. Phys. Lett B **22** (2008) 1447-1454
41. *Rate of parity violation from measure concentration*
by Nikos Kalogeropoulos, Int. J. Mod. Phys. A **23** (2008) 509-517
42. *Non-occurrence of phase transitions from Ricci curvature bounds*
by Nikos Kalogeropoulos, May 2007 (Preprint).
43. *Lack of phase transitions from non-vanishing hyper-surface curvature*
by Nikos Kalogeropoulos, June 2006 (Preprint).
44. *The geodesic rule and the spectrum of the vacuum*
by Nikos Kalogeropoulos, Mod. Phys. Lett. A **21** (2006) 1727-1735
45. *A stochastic derivation of the geodesic rule*
by Nikos Kalogeropoulos, Int. J. Mod. Phys. A **21**, (2006) 1493-1502
46. *Algebra and calculus for Tsallis thermostatics*
by Nikos Kalogeropoulos, Physica A **356** (2005) 308-318
47. *Entropy and curvature variations from effective potentials*
by Nikos Kalogeropoulos, Int. J. Mod. Phys. A **20** (2005) 1623-1633
48. *The Dirac monopole and differential characters*
by Nikos Kalogeropoulos, Int. J. Geom. Meth. Mod. Phys. **1** (2004) 1-4
49. *Majorana Spinors on Unoriented Surfaces*
by Nikolaos Kalogeropoulos, Journal of Mathematical Physics **41** (2000) 3113-3124
50. *The String Euler Characteristic and Cyclic Homology*
by Nikolaos Kalogeropoulos, SU-HEP 4240-571, September 1995
51. *Geometry of the Frenkel-Kac-Segal cocycle*
by Nikolaos Kalogeropoulos, SU-HEP 4241-547, June 1994, arXiv:hep-th/9409062
52. *Comments on the Gribov Ambiguity*
by Nikolaos Kalogeropoulos, Journal of Mathematical Physics **35** (1994) 587-595

REFERENCES

- PROFESSOR ANDRE LECLAIR
Department of Physics, Physical Sciences Building, Room 465,
Cornell University, Ithaca, NY 14853-2501, USA.
E-mail: **andre.leclair@cornell.edu**
Telephone: +1 607 2555169
- PROFESSOR CONSTANTINO TSALLIS
Centro Brasileiro de Pesquisas Fisicas, and
National Institute of Science and Technology of Complex Systems,
Rua Dr. Xavier Sigaud 150, Urca, Rio de Janeiro, RJ 22290-180, Brazil.
E-mail: **tsallis@cbpf.br**
Telephone: +55 21 2141 7190
- PROFESSOR DR. MAURICE DE GOSSON
Faculty of Mathematics, University of Vienna, Nordbergstrasse 15, AT-1090, Wien, Austria.
E-mail: **maurice.de.gosson@univie.ac.at**, **maurice.de.gosson@gmail.com**
Telephone: +43 1 4277 50697
- EMERITUS PROFESSOR ANASTASIOS BOUNTIS
Department of Mathematics,
University of Patras, University Campus, Rio Patras 26504, Greece.
E-mail: **tassosbountis@gmail.com**
- PROFESSOR MADHAVAN VARADARAJAN
Raman Research Institute,
C.V. Raman Avenue,
Sadashivanagar, Bengaluru 560 080, India.
E-mail: **madhavan@rri.res.in**
Telephone: +91 9480836218
- PROFESSOR BARRY D. MCKERNAN (Teaching Reference)
Borough of Manhattan Community College & The Graduate Center,
BMCC- CUNY, Science Department, 199 Chambers Street, New York, NY 10007, USA.
E-mail: **dmckernan@bmcc.cuny.edu**, **bmckernan@amnh.org**
Telephone: +1 212 4963465
- PROFESSOR JAMES D. ROACH (Teaching Reference)
Associate Dean of Pre-Medical Education, Weill Cornell Medicine - Qatar,
Education City, PO Box 24144, Doha, Qatar.
E-mail: **jar2038@qatar-med.cornell.edu**
Telephone: +974 4492 8213