

**ΕΡΓΑΣΙΕΣ ΣΕ ΔΙΕΘΝΗ ΠΕΡΙΟΔΙΚΑ ΜΕΤΑ ΑΠΟ ΚΡΙΣΗ ΚΑΙ
ΕΡΕΥΝΗΤΙΚΕΣ ΜΟΝΟΓΡΑΦΙΕΣ
(2010-2021)**

1. N. V. Sarlis, E. S. Skordas, and P. A. Varotsos, "Nonextensivity and natural time: The case of seismicity", **Physical Review E**, Vol. 82(2010), 021110(9)
2. E.S. Skordas, "Comments on the electrical conductivity in solid solutions of the silver halide-cadmium halide systems" **Solid State Ionics**, Vol. 181 (2010) 1394-1397.
3. E.S. Skordas, "On a universal relation for defect data in solids", **Physica B**, Vol. 405 (2010) 4320-4322.
4. Eftaxias, K., G. Balasis, Y, Contoyiannis, C. Papadimitriou, M. Kalimeri, J. Kopanas, G. Antonopoulos, and C. Nomicos, Unfolding the procedure of characterizing recorded ultra low frequency, kHZ and MHz electromagnetic anomalies prior to the L'Aquila earthquake as pre-seismic ones. Part II., **Nat. Hazards Earth Syst. Sci.**, Vol. 10, 275-294, 2010.
5. Contoyiannis, Y., C. Nomicos, J. Kopanas, G. Antonopoulos, L. Contoyianni, and K. Eftaxias, Critical features in electromagnetic anomalies detected prior to the L'Aquila earthquake, **Physica A**, Vol. 389, 499-508, 2010.
6. V. Katsika-Tsigourakou, E.S. Skordas, " Heterodiffusion coefficients in α -iron ", **Physica B**, Vol. 405 (2010) 1915-1917.
7. V. Katsika-Tsigourakou, E.S. Skordas, " Defect entropies and enthalpies in BaF₂", **Cent. Eur. J. Phys.**, Vol. 8 (2010), 900-904.
8. E. S. Skordas, N. V. Sarlis and P. A. Varotsos, "Effect of significant data loss on identifying electric signals that precede rupture estimated by detrended fluctuation analysis in natural time", **Chaos**, Vol. 20(2010), 033111(6)
9. N. V. Sarlis, E. S. Skordas, and P. A. Varotsos, "Order parameter fluctuations of seismicity in natural time before and after mainshocks", **EPL**, Vol. 91(2010), 59001(6)
10. Katsika-Tsigourakou, V., Zardas, G.E.The relation between relaxed enthalpy and volume during physical aging 2010 **Journal of Non-Crystalline Solids** 356(3), 179-180
11. P.A. Varotsos, N. V. Sarlis, E. S. Skordas, S. Uyeda and M. Kamogawa, "Natural-time analysis of critical phenomena: The case of seismicity", **EPL**, Vol. 92(2010), 29002(6)

12. P.A. Varotsos, N. V. Sarlis and E. S. Skordas, "Identifying long-range correlated signals upon significant periodic data loss", **Tectonophysics**, Vol. 503 (2011), 189-194.
13. P.A. Varotsos, N. V. Sarlis, E. S. Skordas, Seiya Uyeda and Masashi Kamogawa, "Natural time analysis of critical phenomena", **Proceedings of the National Academy of Sciences of the United States of America**, Vol.108 (2011), 11361-11364.
14. Potirakis, S., G. Minadakis, C. Nomicos, and K. Eftaxias., A multidisciplinary justification for traces of the last state of earthquake generation in preseismic electromagnetic emissions", **Nat. Hazards Earth Syst. Sci.**, Vol.11, 2859–2879, 2011.
15. Balasis, G., I. A. Daglis, A. Anastasiadis, C. Papadimitriou, M. Mandea, and K. Eftaxias, Universality in solar flare, magnetic storm and earthquake dynamics using Tsallis statistical mechanics **Physica A**, Vol.390, 341–346, doi: 10.1016/j.physa.2010.09.029, 2011.
16. Balasis, G., C. Papadimitriou, I. A. Daglis, A. Anastasiadis, L. Athanasopoulou, and K. Eftaxias, Signatures of discrete scale invariance in Dst time series, **Geophysical Research Letters**, Vol. 38, L13103, doi:10.1029/2011GL048019, 2011, (AGU Editor's Choice: Space Weather - http://www.agu.org/pubs/journals/virtual/editors_choice/si.shtml)
17. Balasis, G., C. Papadimitriou, I. A. Daglis, A. Anastasiadis, I. Sandberg and K. Eftaxias, Similarities between extreme events in the solar-terrestrial system by means of nonextensivity, **Nonlinear Processes in Geophysics**, Vol.18, 563–572, 2011.
18. Balasis, G., I. A. Daglis, C. Papadimitriou, A. Anastasiadis, I. Sandberg and K. Eftaxias, Quantifying Dynamical Complexity of Magnetic Storms and Solar Flares via Nonextensive Tsallis Entropy, **Entropy**, Vol.13, 1865–1881, doi:10.3390/e13101865, 2011.
19. N. V. Sarlis, "Magnitude correlations in global seismicity", **Physical Review E**, Vol. 84(2011), 022101(4).
20. N. V. Sarlis, E. S. Skordas, and P. A. Varotsos, "Similarity of fluctuations in systems exhibiting Self-Organized Criticality" , **EPL**, Vol. 96(2011), 28006(6)
21. N. V. Sarlis, E. S. Skordas, and P. A. Varotsos, "The change of the entropy in natural time under time-reversal in the Olami–Feder–Christensen earthquake model", **Tectonophysics**, Vol. 513(2011), 49-53.

22. P. A. Varotsos, N. V. Sarlis, and E. S. Skordas, "Scale-specific order parameter fluctuations of seismicity in natural time before mainshocks", **EPL**, Vol. 96(2011), 59002(6)
23. Katsika-Tsigourakou, V. A simple model for calculating the bulk modulus of the mixed ionic crystal: NH₄Cl_{1-x}Br_x 2011 Pramana - Journal of Physics 77(4), pp. 689-695
24. Katsika-Tsigourakou, V. A simple model for calculating the compressibility of the transition-metal carbides and nitrides alloys ZrxNb_{1-x}C and ZrxNb_{1-x}N 2011 Central European Journal of Physics 9(5), pp. 1309-1314
25. N. V. Sarlis and S.-R. G. Christopoulos, "Natural time analysis of the Centennial Earthquake Catalog", **Chaos**, Vol. 22(2012), 023123(7)
26. N. V. Sarlis and S.-R. G. Christopoulos, "Predictability of the coherent-noise model and its applications", **Physical Review E**, Vol. 85(2012), 051136(8).
27. Potirakis, S., G. Minadakis, and K. Eftaxias, Relation between seismicity and pre-earthquake electromagnetic emissions in terms of energy, information and entropy content, **Nat. Hazards Earth Syst. Sci.** Vol. 12, 1179-1183, 2012.
28. Potirakis, S., G. Minadakis , and K. Eftaxias, Sudden drop of fractal dimension of electromagnetic emissions recorded prior to significant earthquake, **Nat. Hazards**, Vol. 64, 641–650 (2012).
29. Potirakis, G. Minadakis, and K. Eftaxias, Analysis of electromagnetic pre-seismic emissions using Fisher Information and Tsallis entropy”, **Physica A**, Vol. 391, 300–306, 2012.
30. Minadakis, G., S. M. Potirakis, C. Nomicos and K. Eftaxias, Linking electromagnetic precursors with earthquake dynamics: an approach based on nonextensive fragment and self asperity models, **Physica A**, Vol. 391, 2232–2244, 2012.
31. Katsika-Tsigourakou, V.A remark on the negative activation volume for defects in solids **Journal of Non-Crystalline Solids**, 2012, Vol. 358(22), pp. 2988–2989
32. Katsika-Tsigourakou, V. Comment on the: Five-parameter equation of solids considering thermal effect which correctly incorporates cohesive energy, by Zhang Da, Sun Jiuxun, Zhao Yinmei, **Physica B** 406 (2011) 1276-1282. **Physica B: Condensed Matter**, 2012, 407(17), pp. 3686–3687
33. Katsika-Tsigourakou, V. Comment on the Ground Water Chemistry Changes before Major Earthquakes and Possible Effects on Animals, by R. A. Grant, T.

- Halliday, W. P. Balderer, F. Leuenberger, M. Newcomer, G. Cyr and F. T. Freund. Int. J. Environ. Res. Public Health, 2011, 8, 1936-1956 International Journal of Environmental Research and Public Health, 2012, 9(7), pp. 2339–2342
34. Minadakis , G, S. Potirakis , J. Stonham, C. Nomicosc, K. Eftaxias, The role of propagating stress waves on a geophysical scale: Evidence in terms of nonextensivity, **Physica A**, Vol.391, 5648-5657, 2012.
35. E. S. Skordas, “Comments on the elastic properties in solid solutions of silver halides” **Modern Physics Letters B**, Vol. 26 (2012), 1250066.
36. E. S. Skordas, “Comment on “Dependence of volume changes during solid solution formation and of volume size factor on solute volume, group number and crystalline structure by O. Coreño-Alonso, J. Coreño-Alonso, Intermetallics 2012; 22:142” **Intermetallics**, Vol. 25 (2012), 139.
37. P. A. Varotsos, N. V. Sarlis, and E. S. Skordas, "Scale-specific order parameter fluctuations of seismicity before mainshocks: Natural time and Detrended Fluctuation Analysis", **EPL**, Vol. 99(2012), 59001(6)
38. P. A. Varotsos, N. V. Sarlis, and E. S. Skordas, "Remarkable changes in the distribution of the order parameter of seismicity before mainshocks", **EPL**, Vol. 100(2012), 39002(6)
39. P. A. Varotsos, N. V. Sarlis, and E. S. Skordas, "Order parameter fluctuations in natural time and b-value variation before large earthquakes", **Natural Hazards and Earth System Sciences**, Vol. 12 (2012), 3473–3481
40. P. A. Varotsos, N. V. Sarlis, E. S. Skordas, and M. S. Lazaridou, "Seismic Electric Signals: An additional fact showing their physical interconnection with seismicity", **Tectonophysics**, Vol. 589(2013), 116-125.
41. Eftaxias, K., G. Minadakis, S. Potirakis, and G. Balasis, Dynamical analogy between epileptic seizures and seismogenic electromagnetic emissions by means of nonextensive statistical mechanics, **Physica A**, 392, 497–509, 2013.
42. Contoyiannis, Y. F., S. M. Potirakis, and K. Eftaxias, The Earth as a living planet: human-type diseases in the earthquake preparation process, **Nat. Hazards Earth Syst. Sci.**, 13, 125–139, 2013.
43. Eftaxias, K., S. M. Potirakis, and T. Chelidze, On the puzzling feature of the silence of precursory electromagnetic emissions, **Nat. Hazards Earth Syst. Sci.**, 13, 2381–2397, 2013.

44. Eftaxias, K., and S. Potirakis, Current challenges for pre-earthquake electromagnetic emissions: shedding light from micro-scale plastic flow, granular packings, phase transitions and self-affinity notion of fracture process, *Nonlin. Processes Geophysics*, 20, 771–792, 2013.
45. Balasis, G., R. V. Donner, S. M. Potirakis, J. Runge, C. Papadimitriou, I. A. Daglis, K. Eftaxias, and J. Kurths, Statistical Mechanics and Information-Theoretic Perspectives on Complexity in the Earth System, *Entropy*, 15, 4844-4888, 2013 (Review Article).
46. Potirakis, S. M., A. Karadimitrakis, and K. Eftaxias, Natural time analysis of critical phenomena: The case of pre-fracture electromagnetic emissions, *Chaos*, 23, 023117/1-14, 2013.
47. Potirakis, S. M., P. Zitis, and K. Eftaxias, Dynamical analogy between economical crisis and earthquake dynamics within the nonextensive statistical mechanics framework, *Physica A*, 392, 2940-2954, 2013.
48. V. Katsika-Tsigourakou, E.S. Skordas, "A tentative model for estimating the compressibility of rock-salt AgCl_xBr_{1-x} alloys" **Pramana Journal of Physics**, Vol. 80 (2013) 307-313.
49. N. V. Sarlis, E. S. Skordas, P. A. Varotsosa, T. Nagao, M. Kamogawa, H. Tanaka, and S. Uyeda, "Minimum of the order parameter fluctuations of seismicity before major earthquakes in Japan", **Proceedings of the National Academy of Sciences of the United States of America**, Vol.110 (2013), 13734–13738.
50. N. V. Sarlis, "On the recent seismic activity in North-Eastern Aegean Sea including the M_w5.8 earthquake on 8 January 2013 ", **Proceedings of the Japan Academy, Ser. B**, Vol. 89 (2013), 438-445.
51. Katsika-Tsigourakou, V. Study of the composition dependence of the ionic conductivity of LiH xD1-x alloys **Physica B: Condensed Matter**, 2013, 428, pp. 94–96
52. E. S. Skordas and N. V. Sarlis, "On the anomalous changes of seismicity and geomagnetic field prior to the 2011 M_w 9.0 Tohoku earthquake", **Journal of Asian Earth Sciences**, Vol. 80(2014), 161–164.
53. E. S. Skordas. Comment on "LiH as a Li⁺ and H⁻ ion provider by Khang Hoang,Chris G. Van deWalle, Solid State Ionics 253 (2013) 53" **Solid State Ionics**, Vol. 261 (2014) 26-27.

54. K. A. Papadopoulou and E. S. Skordas. "Application of the Huang-Hilbert transform and natural time to the analysis of seismic electric signal activities" **CHAOS**, Vol. 24 (2014), 043102(6).
55. E. S. Skordas. "On the increase of the "non-uniform" scaling of the magnetic field variations before the Mw 9.0 earthquake in Japan in 2011" **CHAOS**, Vol. 24 (2014), 023131(6). D70.pdf
56. N. V. Sarlis and S.-R. G. Christopoulos, "Visualization of the significance of Receiver Operating Characteristics based on confidence ellipses", **Computer Physics Communications**, Vol. 185 (2014), 1172–1176.
57. S.-R. G. Christopoulos and N. V. Sarlis, "q-exponential relaxation of the expected avalanche size in the coherent noise model", **Physica A**, Vol. 407 (2014) 216–225; Vol. 438 (2015) 667.
58. Potirakis, S.M., Y. Contoyiannis, K. Eftaxias, G. Koulouras, and C. Nomicos, Recent Field Observations Indicating an Earth System in Critical Condition before the Occurrence of a Significant Earthquake, **IEEE GEOSCIENCE AND REMOTE SENSING LETTERS**, 12, 631-635, 2015.
59. Contoyiannis, Y., S. M. Potirakis, K. Eftaxias, and L. Contoyianni, Tricritical crossover in earthquake preparation by analyzing preseismic electromagnetic emissions, **Journal of Geodynamics**, 84, 40-54, 2015.
60. Potirakis, S.M., K. Eftaxias, G. Balasis, J. Kopanas, G. Antonopoulos, and A. Kalimeris, Signatures of the self-affinity of fracture and faulting in pre-seismic electromagnetic emissions, **Nat. Hazards Earth Syst. Sci. Discuss.**, 2, 1–33, 2014, doi: 10.5194/nhessd-2-1-2015.
61. M. Hayakawa, A. Schekotov, S. M. Potirakis, and K. Eftaxias, Criticality features in ULF magnetic fields prior to the 2011 Tohoku earthquake **Proc. Jpn. Acad., Series B**, 91, 25-30, 2015.
62. D. Reik, S. M. Potirakis, G. Balasis, K. Eftaxias, and J. Kurths, Temporal correlation patterns in pre-seismic electromagnetic emission reveal distinct complexity profiles prior to major earthquakes, **Physics and Chemistry of the Earth**, Vol. 85–86, 2015, 44-55.
63. Masashi Hayakawa, Alexander Schekotov, Stelios M. Potirakis, Konstantinos Eftaxias, Qi Li, Tomokazu Asano, An Integrated Study of ULF Magnetic Field Variations in Association with the 2008 Sichuan Earthquake, on the Basis of Statistical and Critical Analyses, **Open Journal of Earthquake Research** 04(03), 85-93, 2015. DOI:10.4236/ojer.2015.43008, 2015.

64. N. V. Sarlis, E. S. Skordas, S.-R. G. Christopoulos and P. Varotsos, "Statistical Significance of Minimum of the Order Parameter Fluctuations of Seismicity Before Major Earthquakes in Japan", **Pure and Applied Geophysics**, Online: DOI 10.1007/s00024-014-0930-8 (2014), In print: **Pure Appl. Geophys.** **173** (2016), 165–172.
65. P. A. Varotsos, N. V. Sarlis, and E. S. Skordas, "Study of the temporal correlations in the magnitude time series before major earthquakes in Japan", **Journal of Geophysical Research Space Physics**, Vol. 119 (2014), 9192–9206, doi:10.1002/2014JA020580.
66. N. V. Sarlis, S.-R. G. Christopoulos, and M. M. Bemplidaki, "Change ΔS of the entropy in natural time under time reversal: Complexity measures upon change of scale", **EPL**, Vol. 109(2015), 18002(6).
67. N. V. Sarlis, E. S. Skordas, P. A. Varotsos, T. Nagao, M. Kamogawa, and S. Uyeda, "Spatiotemporal variations of seismicity before major earthquakes in the Japanese area and their relation with the epicentral locations", **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 112 (2015), 986–989.
68. N. V. Sarlis, S.-R. G. Christopoulos, and E.S. Skordas, "Minima of the fluctuations of the order parameter of global seismicity", **Chaos**, Vol. 25(2015), 063110(9).
69. Mastrogianis, D., Antsygina, T.N., Chishko, K.A., Mavromatou, C., Hadjicontis, V. Relationship between electromagnetic and acoustic emissions in deformed piezoelectric media: Microcracking signals **International Journal of Solids and Structures**, 2015, Vol. 56, 118–125
70. P.A. Varotsos, N. V. Sarlis, E. S. Skordas, S.-R. G. Christopoulos, and M.S. Lazaridou-Varotsos, "Identifying the occurrence time of an impending mainshock:a very recent case", **Earthquake Science**, Vol. 28 (2015), 215-222, DOI 10.1007/s11589-015-0122-3.
71. C.A. Varotsos, S. Lovejoy, N. V. Sarlis, C. G. Tzanis, and M.N. Efstathiou, "On the scaling of the solar incident flux", **Atmospheric Chemistry and Physics**, Vol. 15 (2015), 7301-7306, DOI 10.5194/acp-15-7301-2015.
72. C.A. Varotsos, C. G. Tzanis, and N. V. Sarlis, "On the progress of the 2015–2016 El Niño event", **Atmospheric Chemistry and Physics**, Vol. 16 (2016), 2007-2011, DOI 10.5194/acp-16-2007-2016.

73. N. V. Sarlis and E.S. Skordas, "Estimating the Compressibility of Osmium from Recent Measurements of Ir–Os Alloys under High Pressure", **The Journal of Physical Chemistry A**, Vol. 120 (2016), 1601–1604, DOI: 10.1021/acs.jpca.6b00846.
74. Kalimeris, A., S. Potirakis, K. Eftaxias, G., Antonopoulos, and J. Kopanas, Multi-spectral detection of statistically significant components in pre-seismic electromagnetic emissions related with Athens 1999, M=5.9 earthquake, **Journal of Applied Geophysics** 128, 41–57, 2016.
75. Contoyiannis, Y. , S . M. Potirakis, K. Eftaxias, M. Hayakawa, A. Schekotov, Intermittent criticality revealed in ULF magnetic fields prior to the 11 March 2011 Tohoku earthquake (MW=9), **Physica A**, 452, 19-28, 2016.
76. Potirakis, S, K. Eftaxias, A. Schekotov, H. Yamaguchi, M. Hayakawa, Criticality features in ULF magnetic fields prior to the 2013 Kobe earthquake **Annals of Geophysics**, 59, 3, S0317, 1-15, 2016.
77. Hayakawa, M., H. Yamauchi, N. Ohtani, M. Ohta, S. Tosa, T. Asano, A. Schekotov, J. Izutsu, S. Potirakis, Konstantinos Eftaxias, On the precursory abnormal animal behavior and electromagnetic effects for the Kobe earthquake (M~6) on April 12, 2013, **Open Journal of Earthquake Research**, doi.org/10.4236/ojer, 2016.
78. Potirakis, S.M., Contoyiannis, Y ,Nikolaos S. Melis, John Kopanas, George Antonopoulos, Balasis, Charalampos Kontoes , Constantinos Nomicos, KonstantinosEftaxias, Recent seismic activity at Cephalonia (Greece): a study through candidate electromagnetic precursors in terms of non-linear dynamics **Nonlin. Processes Geophys.**, 23, 223–240, 2016.
79. E. S. Skordas " Bulk moduli of PbS_xSe_{1-x} , PbS_xTe_{1-x} and $PbSe_xTe_{1-x}$ from a thermodynamical model compared to generalized gradient approximation approach", **Materials Science in Semiconductor Processing** Vol. 43(2016), 65–68.
80. E. S. Skordas " Interconnection of defect entropies and enthalpies in BaF₂ revisited", **Modern Physics Letters B** Vol. 30 (2016), Accepted for publication.
81. N. V. Sarlis and E.S. Skordas, "Pressure and temperature dependence of the oxygen self-diffusion activation volume in UO₂ by a thermodynamical model", **Solid State Ionics**, Vol. 290 (2016), 121–123, DOI: 10.1016/j.ssi.2016.04.016.

82. P.A. Varotsos, N. V. Sarlis and E.S. Skordas, "On the Motivation and Foundation of Natural Time Analysis: Useful Remarks ", **Acta Geophysica**, Vol. 64 (2016), 841-852, DOI 10.1515/acgeo-2016-0031.
83. K. A. Papadopoulou, E. S. Skordas, and N. V. Sarlis, "A tentative model for the explanation of Båth law using the order parameter of seismicity in natural time", **Earthquake Science**, Vol. 29 (2016), 311-319, DOI 10.1007/s11589-016-0171-2.
84. N. V. Sarlis and E. S. Skordas, "Bulk moduli of $\text{PbS}_x\text{Se}_{1-x}$, $\text{PbS}_x\text{Te}_{1-x}$ and $\text{PbSe}_x\text{Te}_{1-x}$ from the combination of the cBΩ model with the modified Born theory compared to generalized gradient approximation", **Modern Physics Letters B**, 1650409 (7 pages) (2016), DOI 10.1142/S0217984916504091.
85. S.-R. G. Christopoulos and N. V. Sarlis, "An application of the coherent noise model for the prediction of aftershock magnitude time series", **Complexity**, Vol. 2017, Article ID 6853892 (27 pages) (2017), DOI 10.1155/2017/6853892.
86. *N.V. Sarlis, "Entropy in Natural Time and the Associated Complexity Measures", **Entropy**, Vol. 19 (2017), 177 (20 pages), DOI 10.3390/e19040177.
87. P.A. Varotsos, N. V. Sarlis, and E. S. Skordas, "Identifying the occurrence time of an impending major earthquake: a review", **Earthquake Science**, Vol. 30 (2017), 209–218, DOI 10.1007/s11589-017-0182-7.
88. P.A. Varotsos, N. V. Sarlis, E. S. Skordas, and M. S. Lazaridou-Varotsos, " M_w 9 Tohoku earthquake in 2011 in Japan: Precursors uncovered by natural time analysis", **Earthquake Science**, Vol. 30 (2017), 183–191, DOI 10.1007/s11589-017-0189-0.
89. C. A. Varotsos, N. Sarlis, and M. Efstatthiou, "On the association between the recent episode of the Quasi-Biennial Oscillation and the strong El Niño event", **Theoretical and Applied Climatology**, Vol. 133 (2018), 569–577, DOI 10.1007/s00704-017-2191-9.
90. N.V. Sarlis, P.A. Varotsos, E. S. Skordas, S. Uyeda, J. Zlotnicki, T. Nagao, A. Rybin, M.S. Lazaridou-Varotsos, and K.A. Papadopoulou, "Seismic Electric Signals in seismic prone areas", **Earthquake Science**, Vol. 31 (2018), 44-51, DOI 10.29382/eqs-2018-0005-5.

91. K. A. Papadopoulou, E. S. Skordas, J. Zlotnicki, T. Nagao and A. Rybin, "Study of Geo-Electric Data Collected by the Joint EMSEV-Bishkek RS-RAS Cooperation: Possible Earthquake Precursors" **Entropy** Vol. 20 (2018), 614.
92. N.V. Sarlis, E.S. Skordas, P.A. Varotsos, A. Ramírez-Rojas, and E. L. Flores-Márquez, "Natural time analysis: On the deadly Mexico M8.2 earthquake on 7 September 2017", **Physica A**, Vol. 506 (2018), 625-634, DOI 10.1016/j.physa.2018.04.098.
93. N.V. Sarlis, E.S. Skordas, A. Mintzelas, and K.A. Papadopoulou, "Micro-scale, mid-scale, and macro-scale in global seismicity identified by empirical mode decomposition and their multifractal characteristics", **Scientific Reports**, Vol. 8 (2018), 9206, DOI 10.1038/s41598-018-27567-y.
94. A. Ramírez-Rojas, E.L. Flores-Márquez, N.V. Sarlis, and P.A. Varotsos, "The Complexity Measures Associated with the Fluctuations of the Entropy in Natural Time before the Deadly México M8.2 Earthquake on 7 September 2017", **Entropy**, Vol. 20 (2018), 477, DOI 10.3390/e20060477.
95. N.V. Sarlis, "Statistical Significance of Earth's Electric and Magnetic Field Variations Preceding Earthquakes in Greece and Japan Revisited", **Entropy**, Vol. 20 (2018), 561, DOI 10.3390/e20080561.
96. A. Mintzelas, N.V. Sarlis, and S.-R.G. Christopoulos, "Estimation of multifractality based on natural time analysis", **Physica A**, Vol. 512 (2018), 153-164, DOI 10.1016/j.physa.2018.08.015.
97. P.A. Varotsos, N.V. Sarlis, and E.S. Skordas, "Tsallis Entropy Index q and the Complexity Measure of Seismicity in Natural Time under Time Reversal before the M9 Tohoku Earthquake in 2011", **Entropy**, Vol. 20 (2018), 757, DOI 10.3390/e20100757.
98. N. V. Sarlis, E. S. Skordas, and P. A. Varotsos, "A remarkable change of the entropy of seismicity in natural time under time reversal before the super-giant M9 Tohoku earthquake on 11 March 2011", **EPL**, Vol. 124 (2018), 29001(7), DOI 10.1209/0295-5075/124/29001. ● *Included in the 2018 EPL Highlights*
99. N.V. Sarlis and E.S. Skordas, "Study in Natural Time of Geoelectric Field and Seismicity Changes Preceding the M_w6.8 Earthquake on 25 October 2018 in Greece", **Entropy**, Vol. 20 (2018), 882, DOI 10.3390/e20110882.

100. N.V. Sarlis, E.S. Skordas, P.A. Varotsos, A. Ramírez-Rojas, and E. L. Flores-Márquez, "Investigation of the temporal correlations between earthquake magnitudes before the Mexico M8.2 earthquake on 7 September 2017", **Physica A**, Vol. 517 (2019), 475-483, DOI 10.1016/j.physa.2018.11.041.
101. S. M. Potirakis, A. Schekotov, Y. Contoyiannis, G. Balasis, G. E. Koulouras, N. S. Melis, A. Z. Boutsi, M. Hayakawa, K. Eftaxias, C. Nomicos, On possible electromagnetic precursors to a significant earthquake (Mw=6.3) occurred in Lesvos (Greece) on 12 June 2017, **Entropy**, 2019, 21, 241, <https://doi.org/10.3390/e21030241>
102. S.M. Potirakis, Y.F. Contoyiannis, K. Eftaxias, Lévy and Gauss statistics in the preparation of an earthquake, **Physica A** 528 (2019) 121360, doi: <https://doi.org/10.1016/j.physa.2019.121360>.
103. N. V. Sarlis and E.S. Skordas, " Interconnection of a thermodynamical model for point defect parameters in solids with the dynamical theory of diffusion", **Solid State Ionics**, Vol. 335 (2019), 82–85, DOI: 10.1016/j.ssi.2019.02.002.
104. N.V. Sarlis, E.S. Skordas, P.A. Varotsos, A. Ramírez-Rojas, and E. L. Flores-Márquez, "Identifying the Occurrence Time of the Deadly Mexico M8.2 Earthquake on 7 September 2017", **Entropy**, Vol. 21 (2019), 301, DOI: 10.3390/e21030301.
105. P.A. Varotsos, N.V. Sarlis, and E.S. Skordas, "Phenomena preceding major earthquakes interconnected through a physical model", **Annales Geophysicae**, Vol. 37 (2019), 315–324, DOI: 10.5194/angeo-37-315-2019.
106. P.A. Varotsos, N.V. Sarlis, and E.S. Skordas, "Natural time analysis: Important changes of the order parameter of seismicity preceding the 2011 M9 Tohoku earthquake in Japan.", **EPL**, Vol. 125 (2019), 69001, DOI: 10.1209/0295-5075/125/69001. *● Included in the 2019 EPL*

Highlights.

107. A. Mintzelas and N.V. Sarlis, "Minima of the fluctuations of the order parameter of seismicity and earthquake networks based on similar activity

- patterns”, **Physica A**, Vol. 527 (2019), 121293, DOI: 10.1016/j.physa.2019.121293.
108. Baldoumas, G.; Peschos, D.; Tatsis, G.; Chronopoulos, S.K.; Christofilakis, V.; Kostarakis, P.; Varotsos, P.; Sarlis, N.V.; Skordas, E.S.; Bechlioulis, A.; Michalis, L.K.; Naka, K.K. “A Prototype Photoplethysmography Electronic Device that Distinguishes Congestive Heart Failure from Healthy Individuals by Applying Natural Time Analysis.”, **Electronics**, Vol. 8 (2019), 1288. DOI: 10.3390/electronics8111288
109. Andronikos Loukidis, Ermioni Pasiou, Nicholas Sarlis, Dimos Triantis “Fracture analysis of typical construction materials in natural time”, **Physica A**, Vol., 123831, DOI: 10.1016/j.physa.2019.123831.
- 110.** E. S. Skordas, N. V. Sarlis and P. A. Varotsos, "Precursory variations of Tsallis non-extensive statistical mechanics entropic index associated with the M9 Tohoku earthquake in 2011", **European Physical Journal – Special Topics**, Vol. 229 (2020), 851-859. DOI: 10.1140/epjst/e2020-900218-x
111. E. S. Skordas, S.-R. G. Christopoulos and N. V. Sarlis, "Detrended fluctuation analysis of seismicity and order parameter fluctuations before the M7.1 Ridgecrest earthquake", **Natural Hazards**, Vol. 100 (2020), 697-711, doi:10.1007/s11069-019-03834-7
112. E. S. Skordas, N. V. Sarlis and P. A. Varotsos, "Identifying the occurrence time of an impending major earthquake by means of the fluctuations of the entropy change under time reversal", **EPL**, Vol. 128 (2019), 49001, DOI: 10.1209/0295-5075/128/49001
113. S.-R. G. Christopoulos, E. S. Skordas, N. V. Sarlis, "On the Statistical Significance of the Variability Minima of the Order Parameter of Seismicity by Means of Event Coincidence Analysis", **Applied Sciences**. Vol. 10 (2020), 662, DOI: 10.3390/app10020662
114. P.A. Varotsos, E.S. Skordas, and N.V. Sarlis, “Fluctuations of the entropy change under time reversal: further investigations on identifying the occurrence time of an impending major earthquake”, **EPL**, Vol. 130 (2020), 29001, DOI: 10.1209/0295-5075/130/29001 ● Included in the 2020 EPL Highlights.

115. N. V. Sarlis, E. S. Skordas, S.-R. G. Christopoulos and P.A. Varotsos, "Natural Time Analysis: The Area under the Receiver Operating Characteristic Curve of the Order Parameter Fluctuations Minima Preceding Major Earthquakes", **Entropy**, Vol. 22 (2020), 583, DOI: 10.3390/e22050583
116. E. S. Skordas, N. V. Sarlis and P. A. Varotsos, "Applying the cBΩ thermodynamical model to LiF using its equation of state obtained from high pressure diamond anvil cell measurements", **Solid State Ionics**, Vol. 354 (2020), 115404, DOI: 10.1016/j.ssi.2020.115404
117. E. Leticia Flores-Márquez, Alejandro Ramírez-Rojas, Jennifer Perez-Oregon, N. V. Sarlis, E. S. Skordas, S.-R. G. Christopoulos and P.A. Varotsos, "Natural Time Analysis of Seismicity within the Mexican Flat Slab before the M7.1 Earthquake on 19 September, 2017", **Entropy**, Vol. 22 (2020), 730, DOI: 10.3390/e22070730
118. Jennifer Perez-Oregon, Fernando Angulo-Brown, Nicholas Vassiliou Sarlis, "Nowcasting Avalanches as Earthquakes and the Predictability of Strong Avalanches in the Olami-Feder-Christensen Model", **Entropy**, Vol. 22 (2020), 1228, DOI: 10.3390/e22111228
119. Baldoumas, G.; Peschos, D.; Tatsis, G.; Christofilakis, V.; Chronopoulos, S.K.; Kostarakis, P.; Varotsos, P.; Sarlis, N.V.; Skordas, E.S.; Bechlioulis, A.; Michalis, L.K.; Naka, K.K. "Remote sensing natural time analysis of heartbeat data by means of a portable photoplethysmography device", **International Journal of Remote Sensing**, Vol. 46 (2021), 2292-2302, DOI: 10.1080/2150704X.2020.1847351
120. Marianna S. Potsidi, Navaratnarajah Kuganathan, Stavros-Richard G. Christopoulos, Alexander Chroneos, Theoharis Angeletos, Nicholas V. Sarlis and Charalampos A. Londos, "The Interstitial Carbon–Dioxygen Center in Irradiated Silicon", **Crystals**, Vol. 10 (2020), 1005, DOI: 10.3390/cryst10111005
121. P.A. Varotsos, N.V. Sarlis, and E.S. Skordas, "Perspective: Self-organized Criticality and Earthquake Predictability: A long standing question in the light of natural time analysis", **EPL**, Vol. 132 (2020), 29001, DOI: 10.1209/0295-5075/132/29001

● *Published as Perspective after EPL*

invitation.

122. Andronikos Loukidis, Jennifer Perez-Oregon, Ermioni Pasiou, Nicholas Sarlis, and Dimos Triantis "Similarity of fluctuations in critical systems: Acoustic emissions observed before fracture", **Physica A**, Vol. 566 (2021), 125622, DOI: 10.1016/j.physa.2020.125622
123. Marianna S. Potsidi, Navaratnarajah Kuganathan, Alexander Chroneos, Stavros-Richard G. Christopoulos, Theoharis Angeletos, Nicholas V. Sarlis and Charalampos A. Londos, "Substitutional carbon-dioxygen center in irradiated silicon", **Materials Science in Semiconductor Processing**, Vol. 127 (2021), 105661, DOI: 10.1016/j.mssp.2021.105661
124. S. M. Potirakis, Y. Contoyiannis, A. Schekotov, K. Eftaxias, M. Hayakawa, Evidence of critical dynamics in various electromagnetic precursors, *Eur. Phys. J. Special Topics* 230, 151-177 (2021), doi: <https://doi.org/10.1140/epjst/e2020-000249-x>.
125. P.I. Zitis, S.M. Potirakis, G. Balasis, K Eftaxias, An Exploratory Study of Geospace Perturbations Using Financial Analysis Tools in the Context of Complex Systems. **Geosciences** 2021, 11, 239.
<https://doi.org/10.3390/geosciences11060239>
126. N.D. Tsigkri-DeSmedt, N.V. Sarlis, and A. Provata, "Shooting solitaries due to small-world connectivity in Leaky Integrate-and-Fire networks", **Chaos**, Vol. 31 (2021), 083129, DOI: 10.1063/5.0055163
127. P.A. Varotsos, N. V. Sarlis, E. S. Skordas, Toshiyasu Nagao and Masashi Kamogawa, "The unusual case of the ultra-deep 2015 Ogasawara earthquake (Mw7.9): Natural time analysis", **EPL** Vol. 135 (2021), 49002, DOI: 10.1209/0295-5075/135/49002
128. P.K. Varotsos, J. Perez-Oregon, E. S. Skordas, N. V. Sarlis, "Estimating the Epicenter of an Impending Strong Earthquake by Combining the Seismicity Order Parameter Variability Analysis with Earthquake Networks and Nowcasting: Application in the Eastern Mediterranean", **Applied Sciences**. Vol. 11 (2021), 10093, DOI:10.3390/app112110093.

CHAPTERS IN BOOKS

Nikolopoulos, S., P. Kapiris, K. Karamanos and K. Eftaxias A Unified Approach of Catastrophic Events In Models and Applications of Chaos Theory in Modern Sciences, 742 pages, Edited by Elhadj Zeraoulia, Science Publishers, 2011.

Balasis, G., I. A. Daglis, A. Anastasiadis, and K. Eftaxias, Detection of dynamical complexity changes in Dst time series using entropy concepts and rescaled range analysis, In The Dynamic Magnetosphere, Edited by W. Liu and M. Fujimoto, pp. 211-220, Springer Verlag, 2011

Eftaxias, K., Are There Pre-Seismic Electromagnetic Precursors? A Multidisciplinary Approach In Earthquake Research and Analysis - Statistical Studies, Observations and Planning 460 pages, InTech, March, 2012, ISBN 978-953-51-0134

Eftaxias, K., and S. M. Potirakis, Contribution of the electromagnetic pre-seismic emissions in the comprehension of the earthquake preparation process, in Thales, 171-190, 2013

K. Eftaxias, S. M. Potirakis, Y. Contoyiannis, Four-stage model of earthquake generation in terms of fracture-induced electromagnetic emissions: A review. In: T. Chelidze, L. Telesca, F. Vallianatos (Eds.) Complexity of seismic time series; Measurement and Applications, Elsevier, Oxford UK, 2018, eBook ISBN: 9780128131398, Paperback ISBN: 9780128131381, doi: <https://doi.org/10.1016/B978-0-12-813138-1.00013-4>, 2018.

N.V. Sarlis, E.S. Skordas, and P. A. Varotsos, “Chapter 7 - Natural Time Analysis of Seismic Time Series” in “*Complexity of Seismic Time Series*”, Edited by Tamaz Chelidze, Filippos Vallianatos, Luciano Telesca, pp. 199-235, Elsevier, Amsterdam, 2018, DOI 10.1016/B978-0-12-813138-1.00007-9.

ΕΠΕΥΝΗΤΙΚΕΣ ΜΟΝΟΓΡΑΦΙΕΣ

Varotsos P.A., Sarlis N.V. and Skordas E.S., *Natural Time Analysis: The new view of time. Precursory Seismic Electric Signals, Earthquakes and other Complex Time-Series* (Springer-Verlag, Berlin Heidelberg) 2011

Lazaridou-Varotsos, M.S., *Earthquake Prediction by Seismic Electric Signals. The success of the VAN method over thirty years.* (Springer-Verlag Berlin Heidelberg) 2013