Footprints of q-statistics at the 'Edge of Chaos'

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In this talk I will summarize some of the works published during my twenty years of collaboration with Constantino Tsallis, with applications of q-statistics to long-range dynamical systems, synchronization and coupled maps at the edge of chaos [1-4].

[1] G.MIRITELLO, A.PLUCHINO, A.RAPISARDA, Phase Transitions and Chaos in Long-Range Models of Coupled Oscillators. EUROPHYSICS LETTERS. vol. 85, pp. 10007 (2009)

[2] G.MIRITELLO, A.PLUCHINO, A.RAPISARDA, Central Limit Behavior in the Kuramoto model at the 'Edge of Chaos'. PHYSICA A 388, 4818-4826 (2009)

[3] A.PLUCHINO, A.RAPISARDA, C.TSALLIS, Noise, synchrony, and correlations at the edge of chaos. PHYSICAL REVIEW E, STATISTICAL, NONLINEAR, AND SOFT MATTER PHYSICS, vol. 87 (2): 022910 (2013)

[4] A.RODRIGUEZ, A.PLUCHINO, U.TIRNAKLI, A.RAPISARDA AND C.TSALLIS, Non-extensive footprints in dissipative and conservative dynamical systems. SYMMETRY 15(2), 444 (2023).