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Fluctuation-Dissipation Theorem and the Dynamic Response of a Fractional Relaxor-Oscillator B.N. NARAHARI ACHAR, JOHN W. HANNEKEN, University of Memphis — The so called fractional relaxor-oscillator system exhibits a rich variety of relaxation and damping characteristics. While the ‘free’ relaxation/oscillations of the system are characterized by the so called ‘intrinsic’ relaxation/ damping parameter, when driven by a sinusoidal driving force, the system exhibits frequency dependent relaxation/oscillation characteristics. This dynamic response of the fractional relaxor/oscillator is examined in the light of the fluctuation-dissipation theorem.

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