A NEW CLASS OF INFINITELY DIVISIBLE DISTRIBUTIONS AND SUBORDINATORS

Sendov et Shen [1] studied the class of Bernstein functions whose Lévy measures admit a harmonic convex density. We give several equivalent definitions and show that this class produces refined properties for the finite-dimensional distributions of the associated subordinators. We also propose a generalization of the class of Sendov and Chen and an answer to the open problem, strongly connected with stable subordinators, raised by them in [1].

[1] Sendov, H., Shan, S.: New Representation Theorems for Completely Monotone and Bernstein Functions with Convexity Properties on Their Measures. J Theor Probab, Volume 28, Issue 4, pp 1689–1725, 2015.