

Random Coincidence Point Theorem in Fréchet Spaces with Applications

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ABSTRACT

We proved a random coincidence point theorem for a pair of commuting random operators in the setup of Fréchet spaces. As applications, we obtained random fixed point and best approximation results for $*$ -nonexpansive multivalued maps. Our results are generalizations or stochastic versions of the corresponding results of Shahzad and Latif [Shahzad, N.; Latif, A. A random coincidence point theorem. *J. Math. Anal. Appl.* **2000**, *245*, 633–638], Khan and Hussain [Khan, A.R.; Hussain, N. Best approximation and fixed point results. *Indian J. Pure Appl. Math.* **2000**, *31* (8), 983–987], Tan and Yaun [Tan, K.K.; Yaun, X.Z. Random fixed point theorems and approximation. *Stoch. Anal. Appl.* **1997**, *15* (1), 103–123] and

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