

## **[Keynote Talk]: Existence of Random Fixed Point Theorem for Contractive Mappings**

**Authors :** D. S. Palimkar

**Abstract :** Random fixed point theory has received much attention in recent years, and it is needed for the study of various classes of random equations. The study of random fixed point theorems was initiated by the Prague school of probabilistic in the 1950s. The existence and uniqueness of fixed points for the self-maps of a metric space by altering distances between the points with the use of a control function is an interesting aspect in the classical fixed point theory. In a new category of fixed point problems for a single self-map with the help of a control function that alters the distance between two points in a metric space which they called an altering distance function. In this paper, we prove the results of existence of random common fixed point and its uniqueness for a pair of random mappings under weakly contractive condition for generalizing alter distance function in polish spaces using Random Common Fixed Point Theorem for Generalized Weakly Contractions.

**Keywords :** Polish space, random common fixed point theorem, weakly contractive mapping, altering function

**Conference Title :** ICAM 2017 : International Conference on Applied Mathematics

**Conference Location :** Bangkok, Thailand

**Conference Dates :** November 29-30, 2017