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**Basit Ali\*** ([basit.ali@umt.edu.pk](mailto:basit.ali@umt.edu.pk)), Department of Mathematics, School of Science, University of Management and Technology, Lahore, 54770, Pakistan. *Completeness characterizations of some distance spaces via fixed point theorems with applications.*

Banach contraction principle (BCP) and its so called generalizations guarantee the existence of fixed point of mappings of complete metric spaces. But converse of BCP, "if every Banach contraction has a fixed point in a metric space X; then X is complete" does not hold true. In this talk, we consider the problem of completeness of underlying distance spaces via fixed point theorems.

The "completeness problem" (CP) of underlying space is related to the "end problem" (EP) in behavioral sciences, that is, "to know when and where a human dynamics, which starts from an initial point, and followed by transitions, defined as a successive approximations ends somewhere". Further, it appears that behaviors particularly related to fears can lead to the propagation of viral diseases like Ebola. In this talk, we consider an application in connection with behavioral sciences. (Received July 05, 2018)