1145-62-2536   **Izzet Sozucok*** (`izzet.sozucok_35@mavs.uta.edu`), 2001 Grapevine Lane, Arlington, TX 76014. *Prediction of remaining lifetime distribution from functional trajectories under censoring data.*

The goal in functional studies on failure time or on death time of the objects is to find a relationship between age-at-death (failure time) and current values of a functional predictors. In this study, a novel technique is applied to predict the failure time of devices in the systems such as bearings and to predict age-at-death distributions under censoring data for situations where observed all covariant trajectories until current time t. The predictors observed up to current time can shown by time-varying principal component scores which is continuously updated as time progresses. We establish the estimation of modified survival function for longitudinal trajectories by inspiring Kaplan-Meire method in order to predict mean residual life distribution.Projecting the behavior of covariant trajectories on single index we reduce the dimensions of them to get predictions for each individual object . The proposed method is validated as the leave-one-out method and the approach is illustrated as well. (Received September 25, 2018)