Determining Abnomal Behaviors in UAV Robots for Trajectory Control in Teleoperation

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Abstract : Change points are abrupt variations in a data sequence. Detection of change points is useful in modeling, analyzing, and predicting time series in application areas such as robotics and teleoperation. In this paper, a change point is defined to be a discontinuity in one of its derivatives. This paper presents a reliable method for detecting discontinuities within a three-dimensional trajectory data. The problem of determining one or more discontinuities is considered in regular and irregular trajectory data from teleoperation. We examine the geometric detection algorithm and illustrate the use of the method on real data examples.