

Abstract Submitted
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Mathematical Methods for Fast Track Recognition YURIY YAT-SUNENKO, FNAL — Integral mathematical model of track pattern based on logical OR in likelihood function provides recognition with number of operations proportional total number of hits in power one. This likelihood function comprises (observes simultaneously) all the measured hits and is a multi-extreme function of trajectory parameters. The recognition is based on the recent progress in mathematical analysis of multi-extreme functions. A demo version of 2D helix arcs reconstruction is presented. This method can be used for tracking and triggering.

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