Title of the Invention: System and Method for Anomaly Detection in High-Resolution Radar

**Abstract**

Multipath is a challenging issue in advanced driver-assistance system (ADAS), vehicular automation, industrial off/on road and many other applications of radars that can impair the performance of radar-based environment perception and even lead to false decisions. To solve this problem, there are signal processing methods and machine learning and deep learning (DL) based methods. However, these methods lack adaptivity and implementability. In particular, current DL approaches require a large amount of labeled data and have a large model size and high computation complexity. However, extensive data labeling is time-consuming and expensive. Meanwhile, practical implementation requires a light yet powerful model with lower complexity. This patent presents the invention of a new method and system for multipath detection based on DL which addresses the problem of data labeling and model design.