

## **Forecasting Method of Railway Passengers' Demand Fluctuations for Long-Distance Rail Service Planning**

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For efficiently planning long-distance rail services, the appropriate forecasting of passengers' demand fluctuation based on the historical ridership record is necessary. However, its forecast is difficult because it is a mixture of passengers' demand variations. An effective approach to an appropriate forecast should be to decompose it into several independent demand variation components and to forecast each of them. This study applies the independent component analysis to decompose the fluctuation into several additive variation components. Then, a forecasting method of the passengers' demand fluctuation is developed with the actual ridership data and the calendar structure.