

**A Study on Accuracy Improvement of the Estimation Method of the Number of Passengers on Trains
using Automatic Ticket Gate Data**

Kosuke NAKABASAMI Taketoshi KUNIMATSU
Daisuke TATSUI Tomoharu TAKIMOTO

We can collect detailed passengers' entry-exit data from the automatic ticket gates. In this study, in order to precisely estimate train congestion, we have developed an estimation method of passengers' train paths based on the detailed data. Using the estimated passengers' train paths and periodic OD data, an estimation method of the number of passengers on trains is also developed. We applied our method to an actual commuter line, and compared the result of our method and an existing method, and we find that our method can precisely estimate the number of passengers on trains, at which the passengers' train paths are uniquely specified.