

## Traffic Modelling for Moving-Block Train Control System

TANG Tao and LI Ke-Ping

State Key Laboratory of Rail Traffic Control and Safety, Beijing Jiaotong University, Beijing 100044, China

(Received: 2006-4-11; Revised: )

**Abstract:** This paper presents a new cellular automaton (CA) model for train control system simulation. In the proposed CA model, the driver reactions to train movements are captured by some updated rules. The space-time diagram of traffic flow and the trajectory of train movement is used to obtain insight into the characteristic behavior of railway traffic flow. A number of simulation results demonstrate that the proposed CA model can be successfully used for the simulations of railway traffic. Not only the characteristic behavior of railway traffic flow can be reproduced, but also the simulation values of the minimum time headway are close to the theoretical values.

PACS: 02.70.-c, 89.75.Da

**Key words:** cellular automaton, traffic flow, moving-block system

[\[Full text: PDF\]](#)

Close