

**Research and Development
on Railway Signalling and Telecommunications Technologies**

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This paper outlines a communication based train control system for local lines, an advanced ATP system compatible with existing systems, and RAMS evaluation based method for constructing railway signalling systems. It also describes a study on mechanical analysis model for switch-and-lock system, a study of lightning protection measures for signalling devices, and a shunting problem of track circuits. In addition, it introduces a risk analysis for signalling systems, EMC, and some applications of image processing to railway.