

The Rail Traffic Management with Usage of C-OTDR Monitoring Systems

Authors : Andrey V. Timofeev, Dmitry V. Egorov

Abstract : This paper presents development results of usage of C-OTDR monitoring systems for rail traffic management. The C-OTDR method is based on vibrosensitive properties of optical fibers. Analysis of Rayleigh backscattering radiation parameters changes which take place due to microscopic seismoacoustic impacts on the optical fiber allows to determine seismoacoustic emission source positions and to identify their types. This approach proved successful for rail traffic management (moving block system, weigh- in-motion system etc).

Keywords : C-OTDR systems, moving block-sections, rail traffic management, Rayleigh backscattering, weigh-in-motion

Conference Title : ICCAR 2015 : International Conference on Control, Automation and Robotics

Conference Location : Zurich, Switzerland

Conference Dates : July 29-30, 2015