



---

**MONITORING SYSTEMS FOR CONTROL OF TECHNICAL STATE  
AND LOAD OF ROLLING STOCK, MANAGEMENT AND  
SYNCHRONIZATION OF ACCESS TO INFRASTRUCTURE**

**Vasil Vasilev, Emil Dimitrov, Nencho Nenov**

[mr.vasilev@abv.bg](mailto:mr.vasilev@abv.bg), [edim@tu-sofia.bg](mailto:edim@tu-sofia.bg), [nnenov@vtu.bg](mailto:nnenov@vtu.bg)

*Todor Kableshkov University of Transport, Department of Transport Equipment,  
Geo Milev str.158, Sofia 1574,  
BULGARIA*

***Key words:** Control of technical state and load of rolling stock, management and synchronization of access to infrastructure*

***Summary:** The paper presents a study on the experience of leading European railway administrations in the development, implementation and operation of monitoring systems for control of technical state and load of rolling stock, management and synchronization of access to railway infrastructure. A comparative analysis between systems "Gotcha" and "QuoVadis" (Netherlands), "Lasca & Mattild" (Germany) and "Checkpoints" (Austrian Railways) has been made. Basic parameters have been defined and a general principal model for the needs of the Bulgarian Railways has been developed.*

**REFERENCE:**

- [1] Dietrich Kuespert, Siegfried Pieper, Peter Hesser, MATTILD – Laserwaage fuer die Messung von Radlasten und Flachstellen am fahrenden Zug, Signal + Draht, 1+2(2003)
- [2] Innovatives System Bahn, Projekt-Abschlussbericht, Wien, Jänner 2009
- [3] Frank Muller-Boruttau, Norbert Breitsamter, Siegfried Pieper, Rad-Schiene-Kraft und Stutzpunkt-Kraft infolge Flachstelle, ETR, Marz 2009, S 103 – 109
- [4] Gerd LeDosquet, Frank Pawellek, Frank Müller-Boruttau, Lasca: Automatic monitoring of the running quality of railway vehicles, RTR 2 (2007), S 1-6
- [5] Knoll Bernhard, Schoebel, Suender, Maly, Entwicklung eines Checkpoint-Prototypen bei der ÖBB Infrastruktur Betrieb AG, Signal + Draht, 7+8(2006), S 10-14
- [6] Weise Thomas, Neuer Messgleisbogen im Pruf- und Validationcenter Wegberg-Wildenrath, Eisenbahningeneur, September 2009, S 54 -62
- [7] [www.argos-systems.eu](http://www.argos-systems.eu)
- [8] [www.lrrail.com](http://www.lrrail.com)