UIC APRA PROJECTS 2023. PROJECT IDEAS 2024

Irina Petrunina
APRA Project Officer

Projects 2023

TfNSW: Interoperability between ETCS trackside and other in-cab
systems

KRRI: Development of ballast track maintenance technology based on Big Data

SWJTU: Blockchain-based research for facilitating the customs clearance process of international freight business process

Projects 2023

CARS: Best Practices of Global Railway Big Data Applications and Research on General Data Architecture of Intelligent HSR.

KTZ: Big data for railway maintenance

KTZ. Perspectives and features of the implementation of the railway communication standard of the future in Asia-Pacific region. PCS

Projects 2024

1. KTZ. Research on the development of technical recommendations for the reconstruction and modernization of traction substations *(Infrastructure)*
2. KTZ. Research on the development of technical recommendations for the reconstruction and modernization of the overhead line *(Infrastructure)*
3. KTZ. Development of remote control of autonomous trains *(Infrastructure)*
4. Intelligent automated complex of transportation management systems *(Infrastructure)*
5. KTZ. Development of a mathematical method for modeling the bearing capacity of railway bridges *(Infrastructure)*
6. KTZ. Research and analysis of mobile robotic wagon diagnostic complexes with applications to railways in the Asia-Pacific region *(Infrastructure)*
7. KTZ. Comparative analysis of the implementation of the railway radio communication standard in the countries of the Asia-Pacific region and Europe *(Interoperability and Standards) Part 2 of PCR project 2023*
8. KTZ. Research of convergent solutions aimed at the development of railway radio communication systems *(Infrastructure)*

Projects 2023

9. KTZ. The impact of 5G and the Internet of Things on modern railway radio communication systems: opportunities and problems of adaptation in the countries of the Asia-Pacific region

10. KTZ. Research and analysis of the introduction of bone conduction devices on railway transport in the Asia-Pacific countries *(Infrastructure)*

11. GR. Digital Solutions for Interoperability of radio systems *(Infrastructure)*

12. GR Implementation of train security systems *(Security)*

13. KORAIL. IRaTCA Training sessions for UIC AP members *(Training)*

14. KORAIL. A Study on Application of Automation System for Railway Logistics Transhipment *(Freight)*

15. KORAIL. Study on Unmanned Automatic Inspection System for Railway Infrastructure Based on Drone and 3D Modeling *(Infrastructure)*

16. JR East Safety Training Session *(Training)*

17. SWJTU. Optimal Design of a Combined Railway-Highway Alignment: A Cost-Benefit Analysis *(Strategy)*

18. SWJTU. Studies on Key Technologies of High Temperature Superconducting Maglev for Regional Seamless Connection Rail Transit *(Infrastructure)*

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