

**XV INTERNATIONAL SCIENTIFIC-EXPERT  
CONFERENCE ON RAILWAY  
RAILCON '12**



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The XV International Scientific-Expert Conference on Railway RAILCON '12 was held on 4th and 5th of October 2012, at the Faculty of Mechanical Engineering, Niš, Serbia. The Conferences on railway have been traditionally organized every other year by the Faculty of Mechanical Engineering, University of Niš. Despite many problems, the RAILCONs have preserved and successfully upheld the tradition. In 2012 the RAILCON celebrated its fifteenth anniversary and, thus, it was marked by the jubilee spirit.

The first Conference on Railway was held in Niš in 1984 under the name "Meeting on Railway Engineering". The initiator and President of the Organizing committee of the first gathering of experts who dealt with railway vehicles was Professor Stojadin Stojičić. Table 1 provides a summary of information of all the fifteen conferences, starting from the first "Meeting on Railway Engineering" in 1984 until the fifteenth Conference entitled RAILCON '12.

**Table 1.** Basic information on all conferences from 1984 to 2012

No	Date of event	Title	Papers number	Authors number	Participating countries number	Participants number
1.	October, 02-03 1984	Meeting on Railway Engineering	29	30	1	150
2.	October, 02-03 1986	Yugoslav Meeting on Railway Engineering	34	39	1	
3.	September, 29-30 1988	Yugoslav Meeting on Railway Engineering	36	50	2	
4.	October, 04-05 1990	Scientific-expert Meeting on Railway Engineering	21	31	3	
5.	October, 01-02 1992	Scientific-expert Symposium on Railway Engineering	46	55	1	
6.	October, 05 1994	Scientific-expert Symposium Engineering on Railway Vehicles	38	48	1	
7.	October, 01-02 1996	Scientific-expert Symposium Engineering on Railway Vehicles	49	56	2	
8.	October, 29-30 1998	Scientific-expert Symposium Engineering on Railway Vehicles	47	82	2	
9.	October, 26-27 2000	Scientific-expert Symposium Engineering on Railway Vehicles	48	78	3	
10.	October, 24-25 2002	Conference on Railway Engineering	46	82	4	161
11.	October, 21-22 2004	Scientific-Expert Conference on Railway ŽELKON/RAILCON '04	67	117	8	220
12.	October, 19-20 2006	Scientific-Expert Conference on Railway ŽELKON/RAILCON '06	97	174	8	280
13.	October, 09-10 2008	Scientific-Expert Conference on Railway ŽELKON/RAILCON '08	88	162	10	190
14.	October, 07-08 2010	Scientific-Expert Conference on Railway ŽELKON/RAILCON '10	93	188	12	220
15.	October, 04-05 2012	International Scientific-Expert Conference on Railway RAILCON '12	88	178	13	250

For 28 years of existence the Conference has changed its name a few times. It has involved, in its work and organization, many experts and scientists. It has also passed through different phases before acquiring a modern concept and becoming an international RAILCON Conference as it is today. In addition, in the same period, many inventions and discoveries have taken place in various domains of science and technology; inevitably railway engineering is such an area in which many of these significant changes have also had an impact on. New scientific findings, the world market globalization and the rapid technological developments have brought about changes in industry, transport and education. The mission of the Conferences on Railway was to bring together scientists and experts from the region, to monitor ongoing changes in developed railways and to suggest directions for further development of the railway in Serbia and in the region. Because of their interdisciplinary nature, the Railway Conferences have always been attended by experts of different profiles: mechanical engineering, electrical engineering, civil engineering, transportation, electronics, information technology, metallurgy and others.

The XV Scientific-Expert Conference on Railway RAILCON '12 had, in a very real sense, the international character with the Program Committee consisting of eminent scientists and experts from 11 countries. In line with that, the official language of the Conference was English.

The patrons of the RAILCON' 12 Conference were Ministry of Education, Science and Technological Development of the Republic of Serbia, JSC SERBIAN RAILWAYS, Directorate for Railways of the Republic of Serbia and MIN Lokomotiva a.d. DB International, ALTPRO d.o.o, OFFICINE MECCANICHE BMM S.p.A, IntPro d.o.o, TIGAR - TECHNICAL RUBBER, Railway Transport of Montenegro, STRABAG, MIN VAGONKA a.d, ŽELVOZ, SIEMENS, ALSTOM, OPEN TRACK and INGEL were sponsors.

The XV Conference on Railway included 250 participants from 13 different countries (Austria, Bosnia and Herzegovina, Bulgaria, Croatia, France, Germany, Macedonia, Montenegro, Romania, Slovakia, Switzerland United Kingdom and Serbia) representing 53 institutions (Ministries, Universities, Railways, Faculties, Institutes, Academies, Industrial enterprises, etc.). At the beginning of the Conference, Mr. Dejan Lasica - Deputy Minister of Transport of the Republic of Serbia, Prof. Dr Dragan Antić - rector of University of Niš, Mr. Slobodan Rosić - Director of Directorate for Railways of the Republic of Serbia and Prof. Dr Vlastimir Nikolić - dean of Faculty of Mechanical Engineering Niš, gave welcome speeches.

In two days of the Conference, 88 papers were presented by 178 national and foreign authors. Papers were presented within the Plenary Session and sections, grouped in the six thematic groups: **Rolling stocks, Traffic, Infrastructure, Vehicles and Infrastructure Maintenance, Strategy and Policy and Other Railway Aspects.**

Following the tradition founded in 2008, this Conference on Railways, included students in the work of the Conference through the section: The young and the future of Railway. Within this section, the successful students' master theses from universities in the region were presented.

At the Plenary Session, the following introductory papers were presented:

- FROM MEETING ON RAILWAY ENGINEERING 1984 TO RAILCON CONFERENCE 2012, Dušan STAMENKOVIĆ, Miloš MILOŠEVIĆ, Faculty of Mechanical Engineering, Niš, Serbia

- COMPETITIVENESS OF THE EUROPEAN RAILWAY INDUSTRY AND THE PARTNERSHIP INDUSTRY-ACADEMIA: A MUST, Daniel CADET, ALSTOM Transport, Saint-Ouen, France
- THE ROLE OF RAIL IN PROMOTING EU SUSTAINABLE TRANSPORT, Snežana PEJČIĆ TARLE, Nataša BOJKOVIĆ, Marijana PETROVIĆ, Faculty of Transport and Traffic Engineering, Belgrade, Serbia
- RECONSTRUCTION OF RAILWAY SECTOR IN SERBIA – HOW TO MEET REALITY, Slobodan ROSIĆ, Directorate for Railways, Belgrade, Serbia; Dragomir MANDIĆ, Faculty of Traffic and Transport Engineering, Belgrade, Serbia
- DEVELOPMENT OF THE FUTURE RAIL FREIGHT SYSTEM TO REDUCE THE OCCURRENCES AND IMPACT OF DERAILMENT, Gordana VASIĆ, Stephen INGLETON, Newcastle University, Newcastle upon Tyne, United Kingdom, Andreas SCHÖBEL, Institute for Transportation, Vienna, Austria, Björn PAULSSON, UIC/Trafikverket, Sweden, Mark ROBINSON, Newcastle University, Newcastle upon Tyne, United Kingdom.

In order to discuss certain current topics in more details, in the scope of the program of the Conference RAILCON' 12, a Round Table was organized with the cooperation of Faculty of Mechanical Engineering Niš and Directorate for Railways of the Republic of Serbia. The topics that were considered at the Round Table by the introductory speeches were:

- "Certification of entities in charge of maintenance of railway vehicles"
- "Rail passenger transport: Where are we and how to continue?"

Despite numerous problems in the last thirty years caused by unstable political conditions in the region of South Eastern Europe, the economic crisis and the decline in economic activity in recent years, and the slow transformation of the Serbian Railway, the Conference on Railway Engineering has remained and transformed into well known international Conference on Railway RAILCON which will in the future still be an event that will bring together scientists and experts in the field of railway, keeping the hope of the organizer that Railways in the region will be improved.

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This issue has been partially prepared in cooperation with Prof. Dr. Dušan Stamenković, full professor of the Faculty of Mechanical Engineering, University of Niš - Chair of the Department of Mechanical Constructions, Development, and Engineering, and President of the Programming Committee of the XV International Scientific-Expert Conference on Railway RAILCON '12.