



**2010 - 27th International Symposium on Automation and Robotics in Construction (ISARC), Bratislava, Slovakia
June 25-27, 2010
Hotel Crowne Plaza in Bratislava**

Sponsors



International Association of Automation and Robotics in Construction (IAARC)



Quality Management Centre in Construction (CEMAKS)
Faculty of Civil Engineering
Slovak University of Technology in Bratislava



Faculty of Civil Engineering
Slovak University of Technology in Bratislava



International Council for Research and Innovation in Building and Construction

Call for papers

Introduction

The International Symposium on Automation and Robotics in Construction (ISARC 2010) will be the 27th symposium. The 27th ISARC (ISARC 2010) will be held in Bratislava, the capital of Slovakia, from June 25th to 27th of 2010. The first symposium was held in June 1984 at Carnegie Mellon University in Pittsburgh, Pennsylvania, USA. Later symposia from this series were organized and held in France, Israel, Japan (multiple times), USA (multiple times), United Kingdom (multiple times), Germany (multiple times), Poland (multiple times), Spain, Taiwan, The Netherlands, South Korea, Italy, India and Lithuania. The annual ISARC symposia are sponsored by the [*International Association of Automation and Robotics in Construction \(IAARC\)*](#). The symposium is a prestigious gathering of researchers, academics and industry practitioners in all specialty areas related to the construction industry, including civil and building engineering design and project execution, advanced construction machinery and robotics applications in construction, information technologies for planning, design, logistics, computer-aided project management, environmental protection issues, building systems monitoring and control, safety and recovery operations, and temporary/rapid construction technologies.

Conference Themes and Topics

The 27th *International Symposium on Automation and Robotics in Construction 2010* will cover five broadly defined areas, including (not exclusively):

1. **Automation & Robotics Applications:** Papers in this area cover concepts, prototypes and implementation of automation in planning, construction or maintenance of facilities such as highways, buildings, tunnels, marine works, industrial plants and other infrastructure projects, including disaster management.
2. **Robot Technology:** Papers in this area should cover technology components of construction robots such as sensors, end-effectors, mechanisms, human-interface, control systems, power systems, cooperative robotics, nanobots, planning & control algorithms, etc.
3. **Automated Data Acquisition & Monitoring:** Papers in this area cover concepts, prototypes and implementation of automated data acquisition and monitoring systems for planning, procurement, control, construction or maintenance using technologies such as GPS, RFID, Computer-Aided Imaging, LIDAR, MEMS, wireless sensing, communications and systems for ubiquitous & pervasive computing.
4. **Information & Computational Technology:** Papers in this area should cover the use of information & computational technologies in Architecture, Design, Planning and Management of construction projects. Example topics include, but are not limited to, Databases, Integrated Data Models, nD-CAD, Decision Support Systems, Expert Systems, Virtual Reality, Web Technologies, Intelligent Tutoring Systems, Knowledge Management, Intelligent Agent-based Subcontracting Systems, Optimisation, Artificial Intelligence, Soft Computing, Parallel Programming, Simulation, Mobile Computing, GIS, etc.
5. **Management & Social Issues:** Papers in this area cover managerial & social issues which have to be considered in implementing construction automation and robotics. The problem areas covered can be related to economics, organizational issues, legal matters, intellectual property, web-based project management, e-business, manpower utilization, globalization, competitiveness, productivity, contracts, trade unions, quality, safety, sustainability, culture, etc.

Local Organizing Committee:

Slovak University of Technology in Bratislava (SK)
Faculty of Civil Engineering
Department of Building Technology
Quality Management Centre in Construction (CEMAKS)

Organizing Head Manager: Jozef Gašparík

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Committee Members

International Advisory/Scientific Committee

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Key Dates

Abstract Submission:	November 30, 2009
Abstract Acceptance:	January 15, 2009
Paper Submission:	February 15, 2010
Paper Acceptance:	April 15, 2010 (Notification of paper acceptance has been sent to authors.)
Early Registration:	April 30, 2010
Final Paper Submission :	May 15, 2010
Conference Dates:	June 25-27, 2010

Symposium Registration

Registration fee in EURO	Till April 30,2010	After April 30,2010
Presenter	350 €	450 €
Co-authors	350 €	450 €
IAARC Member	300 €	400 €
CIB Member	300 €	400 €
Non member	400 €	500 €
Student rate	150 €	200 €
Partner of participant	150 €	200 €

International Conference Centre:

Hotel: Crowne Plaza Bratislava

Hodžovo námestie 2

816 25 Bratislava

Slovakia (SK)

WEB site: www.crowne-plaza.sk

Direct in the centre of Bratislava

5 minutes from Bratislava airport

50 minutes from Wien airport



Conference Venue:

For more information about Slovakia and Bratislava - visit: www.slovakiatravels.com

Slovakia: situated in central Europe. The mid and the North of the country is mountainous (Carpathian curve), lowlands (important agricultural areas) are typical of the South and the East. The most important Slovak river the Danube connects the capital city of the SR Bratislava with two capital cities of the neighbour countries - Vienna and Budapest.

Present-day Slovakia was settled by Slavic Slovaks about the 6th century. They were politically united in the Moravian empire in the 9th century. In 907, the Germans and the Magyars conquered the Moravian state, and the Slovaks fell under Hungarian control from the 10th century up until 1918. When the Habsburg-ruled empire collapsed in 1918 following World War I, the Slovaks joined the Czech lands of Bohemia, Moravia, and part of Silesia to form the new joint state of Czechoslovakia. By the end of 1991, discussions between Slovak

and Czech political leaders turned to whether the Czech and Slovak republics should continue to coexist within the federal structure or be divided into two independent states.

Official name: Slovak Republic (SR)

Membership in international organisations: EU, NATO, UN, UNESCO, OECD, OBSE, CERN, WHO, INTERPOL, etc.

Population: 5 389 180 people, *Capital city:* Bratislava (population 428 672 people)

Bratislava, the capital of the Slovak Republic, lies at the heart of Central Europe. It spans both banks of the River Danube, and lies at the foot of the Little Carpathian range. Bratislava sits at the border with three countries, Hungary to the south, and Austria and the Czech Republic to the west. Covering almost 368 square kilometres, it is officially home to more than 450 000 population.

Even though Bratislava is one of the youngest capital cities in Europe, it is the site of more than two thousand years of history. With its rich tradition it can easily be compared to any major European city.

The location of the city right at the heart of Europe on the banks of the River Danube predestined Bratislava to become a crossroads and destination of various trade routes and a mixing pot of various cultures.



Bratislava castle: The national cultural monument of Bratislava castle is both the symbol and the dominant feature of the city. The first traces of settlement originate from the end of the late stone age, and there are relics here from the ages of the Roman to the Great Moravian empire.

The most fundamental alterations were made during the reign of Marie Theresa (1740 – 1780). On 28 May 1811 a great fire broke out in the castle, and for 150 years the castle existed as a ruin. Reconstructions had to wait until after World War II. Today part of the premises serve the needs of the state administration. The castle complex also houses exhibitions of the Slovak National Museum.



St. Martin Cathedral: Three-nave gothic church built on the site of the original Romanesque church (length 69.37 m, width 22.85 m, height 16.02 m). Between 1563 and 1830 this was the coronation church for Hungarian kings and their wives, documented to this day by a copy of the Hungarian royal crown (300 kg) at the peak of the 85-metre neo-gothic tower, placed on a gilded cushion measuring 2 x 2 m. At the beginning of September each year the pomp and glory of the coronation returns to Bratislava. A faithful reconstruction of the ceremony is performed in the church in honour of the first coronation of the Habsburg king Maximilian II (8.9.1563).

Castle DEVÍN (A trip by boat) : The national cultural monument of Devín castle is located at the foot of a cliff above a confluence of the Danube and Morava rivers. The area has been settled in since the late Stone Age. This strategically important site has been populated by several nations, from the Celts, Romans, Goths, Lombards and many more. The oldest traces of Slavs are from the 8th century. In the 9th century an exceptionally important Great Moravian fortress stood here, connected with the name of prince Rastislav. The first written mention of Devín is from the year 1223. From the 15th century the castle belonged to renowned aristocratic families. In 1809 it was blown up by the Napoleonic armies. In the 19th century it became an important site for the awakening movement of the Slovak National Revival.



Red Stone castle (extra trip): National cultural monument. It ranks amongst the most visited monuments in Slovakia. From the mid 13th century a stone castle stood in the vicinity of Modra above the settlement of Častá in the eastern part of the Small Carpathians, which served as part of a system of border castles stretching from Bratislava to Žilina. This original castle was demolished when its owners, the Fugger merchants from Augsburg, built a new fortress in its place in 1535 – 1537.



The later owners, the Pálffy family, completed the fort, converting it into an ornate chateau and the home of a valuable collection of works of art, which are today exhibits of a museum.



Cultural performance:

Folk ensemble TECHNIK of Slovak University of Technology in Bratislava