

ISARC 2005

11-14 September

Ferrara, Italy

Topics Extension, Special and Industry Sessions, Best Paper Award

This document is the extension of regular call for paper, that we weren't able to include in the brochure for space and time, in order to promote the knowledge exchange with kindred sectors of research, the co-operation between the academic and industry worlds, the constant improvement of papers quality and the participation of young researchers. From the large matrix of topics for the ISARC 2005, the organizing committee have selected some transverse topics to propose as special sessions:

Parallel Robots

Papers dealing with kinematics, dynamics and control of PMs, together with those dealing with manufacturing aspects and applications of PMs in civil constructions, are welcomed.

Automation in civil constructions has diffusely employed PMs: Stewart platforms were employed to manufacture precision cranes, whereas other parallel architectures were employed to manufacture earthquake simulators, mobile scaffoldings, machines for building maintenance etc.

The goal of the "Special Session on Parallel Machines (PMs)" is to provide a picture of the state of the art, the potentialities and the novelties in the PM world to all the people that operate in civil constructions.

Laser Scanning and 3D Reconstruction

Laser scanning is a transverse tool of the reverse engineering, suitable for many applications in architecture and civil engineering, like monument and building restoration, road rehabilitation and national road data bases, earthmoving and geotechnical works.

Papers, dealing with the applications, new technologies and data exchange of laser scanning and other 3D reconstruction methods for civil engineering, are welcomed.

Heavy Construction Equipments

Earthmoving, road and piling machinery, as so as concrete machinery, T-crane and crane in general have been research subjects in automation and robotics. The goal of this session is to meet all the aspects of the technology innovation and researches for the heavy construction equipments, as so as the industry proposals and the user requests on automation and robotics of these machines.

Papers dealing with control, hydraulic, electronic and positioning systems, sensors and data transfer for IT integration, kinematics and attachments, suitable for the automation and robotics of these machine, together their applications, are welcomed.

Prefabrication

Many processes of prefabrication for civil construction meet the factory automation requirements, but, at the same time, it has a strong impact on the automated processes in construction. The goal of this session is to provide the state of art in this field and the interaction with the applications for all the kinds of materials (concrete, steel, wood).

Papers dealing with automated processes of production, design and CAD-CAM, rebaring, concrete and all the kinds of robots, management and just in time delivery for prefabrication, together machines and automated methods for the assembly, are welcomed.

Industry Session and events

Since the 2003 the ISARC Symposia include an Industry Session, where the industry presents in technical form its edge products, like sensors, systems, software, etc., to promote and enlarge the interaction among the Industry, R&D Centers and Academic Institution; this session doesn't replace or prevents the submission of other more scientific papers for other regular or special sessions.

The presentations or papers submitted for the Industry Session will be reviewed to be in accordance with the topics and aims of Symposium, they'll be included in the proceedings of Symposium.

In order to have deeper contacts with the participants at the Symposium, a selected group of professional customers, special exhibit space could be available at request. For more information please contact the Organizing Committee, isarc05@imamoter.cnr.it.

Other event, like brainstorming, to discuss among the construction and equipments firms, information technology and robotics experts, industry and academic institutions about the future of “automation and robotics in construction” could be arranged. Detailed news about this possible event will published on the web site of symposium as soon as possible.

Best Paper Award

The ISARC Symposia award every year the “best paper”, selected among the regular submitted and presented papers at the Symposium. The choice of the best paper will be made in co-operation with the Board of Directors of IAARC, valuing the scientific/technical quality of papers and their presentation too.

Moreover, a selection of papers will be submitted to the Elsevier’s Journal “ Automation in Cnstruction” for the publication.

For more information, questions or requests, please visit the web site of Symposium,

www.imamoter.cnr.it/isarc05

or mail to isarc05@imamoter.cnr.it

The Organizing Committee of ISARC 2005, 22th Symposium on Automation and Robotics in Construction.