

REV2010 – the 7th International Conference on Remote Engineering and Virtual Instrumentation

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The 7th International Conference on Remote Engineering and Virtual instrumentation Conference – REV 2010 was held at the Royal Institute of Technology, Stockholm, Sweden June 30 – July 2, 2010; in addition to that a social excursion boat trip was arranged on June 29. The conference brought together engineering researchers, educators, and professionals to discuss and demonstrate the fundamentals, future, and application of remote engineering of importance in research and education in industry, universities and in education in general. Nearly 100 participants delivered papers, presented demonstrations, research posters, and shared experiences in the themes of the conference. Most of the participants were from Europe, but many came from Asia, North and Latin America, the Middle East and as many as 10 were from Australia; also Uganda and Saudi Arabia were represented. More than 60 papers were presented on topics ranging from Collaborative Work to Virtual and Remote Labs. Workshops and Tutorials drew widespread interest and exhibitors displayed their products for integrating remote engineering into education and research.

The general objective of REV 2010 was to discuss and demonstrate fundamentals, applications and experiences in the field of remote engineering and virtual instrumentation. Another objective of the symposium was to discuss guidelines for education in university level courses for these topics. With the globalization of education the interest in and need of teleworking, remote services and collaborative working environments increase rapidly. The conference presentations and papers addressed several emerging trends in online engineering, remote laboratories, virtual instrumentation and educational applications of remote engineering.

The fields of interest and the presented papers in the conference addressed, among others, topics within the following areas:

- Virtual and remote laboratories
- Remote process visualization and virtual Instrumentation
- Remote control and measurement technologies
- Online engineering
- Networking and grid technologies
- Mixed Reality environments for education and training
- Demands in education and training, e-learning, b-learning, m-learning and ODL
- Open educational resources (OER)
- Teleservice and telediagnosis
- Telerobotics and telepresence
- Support of collaborative work in virtual engineering environments
- Teleworking environments
- Telecommunities and their social impacts
- Present and future trends, including social and educational aspects
- Human computer interfaces, usability, reusability, accessibility
- Applications and experiences

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- Standards and standardization proposals
- Innovative organizational and educational concepts for remote engineering
- Products

This special issue of the International Journal of Online Engineering includes selected papers from the REV 2009 conference (<http://www.rev-conference.org/REV2010>). The topics addressed in the papers spanned a variety of theoretical and applied research endeavors within the area of the conference: Remote Engineering and Virtual Instrumentation.

We hope that you enjoyed this special issue and we look forward to your participation in future issues of REV (www.rev-conference.org).