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# Embedded Software and Systems

First International Conference, ICESS 2004 Hangzhou, China, December 9-10, 2004 Revised Selected Papers



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#### **Preface**

Welcome to the post proceedings of the First International Conference on Embedded Software and Systems (ICESS 2004), which was held in Hangzhou, P. R. China, 9–10 December 2004.

Embedded Software and Systems technology is of increasing importance for a wide range of industrial areas, such as aerospace, automotive, telecommunication, and manufacturing automation. Embedded technology is playing an increasingly dominant role in modern society. This is a natural outcome of amazingly fast developments in the embedded field.

The ICESS 2004 conference brought together researchers and developers from academia, industry, and government to advance the science, engineering, and technology in embedded software and systems development, and provided them with a forum to present and exchange their ideas, results, work in progress, and experience in all areas of embedded systems research and development.

The ICESS 2004 conference attracted much more interest than expected. The total number of paper submissions to the main conference and its three workshops, namely, Pervasive Computing, Automobile Electronics and Tele-communication, was almost 400, from nearly 20 countries and regions. All submissions were reviewed by at least three Program or Technical Committee members or external reviewers. It was extremely difficult to make the final decision on paper acceptance because there were so many excellent, foreseeing, and interesting submissions with brilliant ideas. As a result of balancing between accepting as many papers as possible and assuring the high quality of the conference, we finally decided to select 80 papers for the post-proceeding. We firmly believe that these papers not only present great ideas, inspiring results, and state-of-the-art technologies in recent research activities, but will also propel future developments in the Embedded Software and Systems research field.

The magnificent program for this conference was the result of the hard and excellent work of many people. We would like to express our sincere gratitude to all authors for their valuable contributions and to our Program/Technical Committee members and external reviewers for their great inputs and hard work. We are particularly grateful to our workshop chairs: Xiangqun Chen, Zhanglong Chen, Yue Gao, Xiaoge Wang, Xingshe Zhou and Mingyuan Zhu for their invaluable work in organizing wonderful workshops. We would also like to express our thanks to Jiajun Bu, Tianzhou Chen, Kougen Zheng, Minde Zhao, Hui Zhu, Shuying Tian, Fengxian Li and Cheng Jin for putting everything together to create this magnificent scientific event.

June 2005

Chun Chen, Xiangke Liao Zhaohui Wu, Ranfun Chiu

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ICESS 2004 was organized by Zhejiang University, Important Software Committee of the National 863 Program, the China Computer Federation, and the Hangzhou Association for Science and Technology.

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