Welcome to VTS 2004, the twenty-second in a series of annual symposia that focus on innovation in the field of testing of integrated circuits and systems.

The core of VTS 2004, the three day technical program, responds to the many trends and challenges in the semiconductor design and manufacturing industries with papers covering the following topics among many others:

Wireless testing methodologies address the increasing difficulties involved in achieving accurate wired testing. Memory testing and built-in self-test methodologies address the increasing importance of memory testing and repair in nanometer technologies. Methodologies for test data compression and methodologies for using low-speed ATE address the ever-increasing ATE costs. Reliability solutions are explored to address decreasing hardware reliability in new technologies. Testing of special structures includes MEMs, FPGAs and quantum computing components.

In addition to the three-day technical program, VTS 2004 features a keynote address and an invited keynote, special sessions, and the Innovative Practices track. This track highlights cutting-edge challenges faced by test practitioners, and innovative solutions employed to address them. Full-day tutorials and workshops are also held in conjunction with VTS 2004. The tutorials are offered by the TTTC Tutorials & Education Group through the Test Technology Education Program (TTEP). The tutorials provide opportunities for design and test professionals to update their knowledge-base in test, and earn official IEEE TTTC accreditation. Two day-long TTTC workshops will be held in conjunction with VTS 2004. In addition, VTS 2004 will host a number of standardization Working Groups and IEEE Fringe Meetings. The VTS 2004 program thus addresses a wide range of interests, including basic and continuing education for test professionals, the latest research developments, new directions and hot topics in test, and expert perspectives on current issues.

In addition to the technical program, the social program at VTS provides an opportunity for informal technical discussions among participants. Napa Valley, California, provides a very attractive backdrop for all VTS 2004 activities.

VTS is the result of the work of many dedicated volunteers: the reviewers, the best paper/panel award judges, the Program Committee, the Organizing Committee, and the Steering Committee. We wholeheartedly thank them all. We also wish to thank all the authors who submitted their work to VTS 2004, and the program participants for their contribution at the symposium. Finally, we thank the IEEE Computer Society Test Technology Technical Council for their continued sponsorship and support.

We hope that you will find VTS 2004 enlightening, thought-provoking, rewarding, and enjoyable.

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