Welcome Message

We welcome you to beautiful Miami to celebrate the first IEEE Conference on Advanced Video and Signal Based Surveillance (AVSS). The conference is an outgrowth of a series of workshops organized in Europe the past few years by Prof. Carlo Regazzoni and Dr. Graeme Jones. The conference comes to fill a gap that exists in the current IEEE offerings. Traditionally, surveillance sessions were hosted in the computer vision conferences, primarily the IEEE CVPR and IEEE ICCV. In the 1990s, the growth experienced in the surveillance field both at the theoretical and application levels has been phenomenal. Object tracking, which is intimately related to video surveillance, is probably the most well researched and developed area of computer vision. The migration of this technology to the market and its large-scale implementation in practice brought to the fore issues related to massive archiving, video communication, and hardware quality versus cost. Computer vision cannot anymore address video surveillance issues by itself but only in a broader technological context. At the same time, the emerging bio-chem threat pushed to the frontlines problems associated with signal surveillance. Therefore, surveillance research is expanding beyond its traditional video boundaries to the signal and data fusion domains. The conference’s sponsorship by the IEEE Computer Society as well as the technical co-sponsorship by the IEEE Signal Processing Society and the International Society of Information Fusion is a clear sign of this emerging trend.

The avalanche of theoretical, application, and market advancements are currently propelled by the real and present danger of terrorism. In the present techno-political climate, surveillance is bound to explode in the immediate future. We expect astonishing progress in areas like biometrics at a distance, massive coordinated surveillance, and bio-surveillance. A sampling of some efforts in these up and coming research areas you will see in this conference.

We have received 90 papers for the conference and accepted 50. The paper submission system was fully computerized. We had two and in some cases three reviewers assigned to each submission. We did not accept papers that the reviewers considered substandard. Therefore, paper acceptance was guided totally by quality criteria and not by the numbers. For a few marginal papers we took the extraordinary step to condition acceptance based on revisions. Because of the compressed timelines this is a rare practice in conferences and demonstrates both our commitment to quality and our effort to promote the work of our colleagues.

We would like to thank Prof. Pramod Varshney, Dr. Nikos Paragios, and Dr. Visvanathan Ramesh for their help in managing the Technical Program of the conference. We would like to thank all of our Committee Members for doing an excellent review job under extreme pressure. We would also like to thank all authors for their contributions and their cooperation throughout the process.

We are grateful to the IEEE Computer Society staff in helping us in both the fiscal matters and in compiling and printing the proceedings. In particular, we are thankful to Thomas Baldwin, Stephanie Kawada, and Nikki Nasabzadeh. We are also thankful to Jonathan Dowdall and Paul Ellis from the University of Houston for doing a super Web management job.

We hope that you would find the conference intellectually stimulating and at the same time enjoy your time in Miami. We wish you a memorable AVSS!

Ioannis Pavlidis and Carlo Regazzoni
General Chairs