Sentient computing has been a term mainly used for location-aware computing and mobile sensor networks. However, “sentient” literally means “aware” or more specifically “responsive to or conscious of sense impressions”, or “finely sensitive in perception or feeling”. Sentient computing not only needs to be location-aware as it is mainly used now, but also identity-aware and context-aware. Here, "multimodal sentient computing" indicates that a computing system perceives the world and relates to it in much the same way as people do using multimodal perceptions (seeing, hearing, touching, etc).

Surveillance and security are probably the best applications for sentient computing because a surveillance or security system needs to be “finely sensitive in perception or feeling” for locations, identities and environments. With this in mind, we have organized the first IEEE Workshop on Multimodal Sentient Computing: Sensors, Algorithms and Systems (WMSC07), in conjunction with CVPR 2007. This workshop discusses issues on the emerging new area of sentient computing using multimodal sensing units, including visual, audio, thermal, vibration, and various kinds of other sensing approaches, particularly for surveillance and security applications in both civilian and military scenarios. The workshop consists of oral presentations in the following four sessions: multimodal sensors, multimodal biometrics, multimodal sentient computing and multimodal surveillance applications.

In paper selection and the publication of the Proceedings, we are trying something new for this workshop. Instead of using the common practice of "call for papers", and then publishing (selected) papers in an edited book, the papers corresponding to the oral presentations of this workshop are all invited and will be published as a book in advance. The title of the book is "Multimodal Surveillance: Sensors, Algorithms and Systems" (Editors: Zhigang Zhu and Thomas S. Huang), and is going to be published by Artech House Publisher in July 2007. For a Table of Contents, please check

http://www-cs.engr.ccny.cuny.edu/~zhu/MultimodalSurveillanceBook.html

This edited book is a collection of sample works contributed by leading experts in the emerging field of multimodal surveillance. The chapters are based on recent research projects funded by both government and industry, including AFSOR, AFRL, ARL, ARO, DARPA, MURI, NIJ, NSF, ONR in the US, Natural Science Foundation in China (NSFC), BSIN (Dutch) and Royal Commission (UK) in Europe, and some leading research laboratories and companies in the field. For the convenience of the CVPR’07 audience, we have also asked the authors to write a two-page extended summary for each of the 16 main chapters to be included in the CVPR’07 DVD-ROM Proceedings. Furthermore, the award committee of the workshop will select one best paper, one best student paper and one best system paper, based on the voting by the WMSC’07 audience. There will be a $500 award for each, provided by IBM Research and IEEE TC-PAMI.

In addition to the oral presentations given by the chapter authors, we will also have a lunch panel, a keynote speech and two capstone talks to discuss various issues on multimodal surveillance, biometrics and sentient computing. The keynote speaker during the evening reception is Dr. Rakesh “Teddy” Kumar, Senior Technical Director of the Vision and Robotics...
Laboratory at Sarnoff Corporation. The first capstone talk will be given in the morning by Dr. Jonathon Phillips at National Institute of Standards and Technology (NIST), program manager for the Face Recognition Grand Challenge and Iris Challenge Evaluation (ICE), and test director for the Face Recognition Vendor Test (FRVT) 2006. The second capstone talk is going to be given in the afternoon by Dr. Mubarak Shah at the University of Central Florida, Agere Chair Professor of Computer Science and Director of Computer Vision Laboratory. The panelists include experts from academia, government and industry. They are: Terry Boult (University of Colorado at Colorado Spring), Paul Brewer (ObjectVideo), Gopal Pingali (IBM T.J. Watson Research Center), Stan Z. Li (Chinese Academy of Sciences) and Jeff Houser (Army Research Lab). The readers may find more information at the workshop website (currently at http://vis.uky.edu/wmsc2007/).

Finally, we would like to give special thanks to those institutions who sponsor and financially support the workshop. We appreciate very much the support from the Grove School of Engineering at the City College of New York, who sponsors the evening reception that enables the keynote speech, demos, causal discussions, and award presentations. We wish to thank ObjectVideo, Inc, for sponsoring the lunch panel that surely will be a highlight of the one-day workshop. Thanks also go to IBM Research for providing funds for best presentation awards, and Artech House for providing special discounts off the list price of the book to the workshop attendees. We thank the IEEE CVPR’07 workshop committee and PAMI-TC for granting us the opportunity to make the book “live” through organizing the one-day workshop with oral presentations, capstone/keynote speeches, panel discussions and live demos, in conjunction with one of the most prominent conferences in computer vision and pattern recognition. Last but not the least, we would like to thank all the authors and WMSC’07 program committee members; they are the ones who have done the real work and make this workshop possible.

We look forward to seeing you at CVPR’07 and WMSC’07!

Zhigang Zhu, City College, City University of New York
Thomas S. Huang, University of Illinois at Urbana-Champaign
Ying-li Tian, IBM T.J. Watson Research Center

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