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Advances in Multimedia Modeling

13th International Multimedia Modeling Conference, MMM 2007
Singapore, January 2007
Proceedings, Part I

1 Part I

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13th International Multimedia Modeling Conference, MMM 2007
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Preface

The 13th International Multimedia Modeling Conference (MMM) was held in Singapore on January 9–12, 2007, organized by the School of Computer Engineering, Nanyang Technological University (NTU). The conference venue was the Nanyang Executive Centre, located within NTU's 200 hectare Jurong campus in the west of Singapore, and it also served as the main conference accommodation.

The main technical sessions were held on January 10–12, 2007, comprising 2 keynote talks, 18 oral presentation sessions in 2 parallel tracks, and 2 poster sessions. A wide range of topics was covered in the conference, including multimedia content analysis (retrieval, annotation, learning semantic concepts), computer vision/graphics (tracking, registration, shape modeling), multimedia networking (coding, peer-to-peer systems, adaptation), multimedia access (databases, security) and human-computer interaction (user interfaces, augmented reality).

This year a bumper crop of 392 paper submissions were received for publication in the main conference. In order to achieve our goal of instantiating a high-quality review process for the conference, a large and motivated Technical Program Committee had to be formed. Thankfully, we were able to rely on the help of many committed senior researchers and eventually a review structure was created comprising 18 Area Chairs, 152 Program Committee members and 36 additional reviewers. The review process was rigorous and double blind, with each paper assigned to three to four reviewers, and further managed by an Area Chair who provided additional input and recommendations to the Program Chairs. In addition, there was collaboration with other conferences with overlapping review periods to avoid accepting papers which were submitted simultaneously to different conferences. Through the conscientious efforts of the reviewers, all submissions received at least two reviews, while over 97% of submissions received at least three to four reviews. Subsequently, all papers were considered carefully, with significant deliberation over borderline papers. Eventually, only 72 papers were accepted for oral presentation and 51 papers accepted for poster presentation, resulting in a competitive acceptance rate of 31.4%. The only distinguishing difference between the oral and poster papers was the mode of presentation – all accepted papers were considered full papers and allocated the same number of pages. Additionally, there were two paper awards given out at this conference: the Best Paper Award, and the Best Student Paper Award.

Outside of the main technical sessions, there were also four special sessions on Networked Graphics Applications (NGA), Services and the Assurance in Multimedia Mobile Information Systems (SAMM), Networked Multimedia Systems and Applications Focusing on Reliable and Flexible Delivery for Integrated Multimedia (NMS) and Ubiquitous Multimedia Service (UMS). The paper review for these special sessions was handled separately by different organizers and Program Committees, and accepted papers were presented on January 9, 2007.

There was also a conference banquet on January 11, 2007, which featured a dinner boat cruise along Singapore's harbor front on the Imperial Cheng Ho.

We are heavily indebted to many individuals for their significant contribution. In particular, Linda Ang was very helpful in maintaining the Web-based review management system and solving technical crises almost instantly. Su-Ming Koh was crucial in creating, maintaining and handling all registration-related matters effectively and efficiently. Poo-Hua Chua promptly handled all matters related to the main conference Web site. Hwee-May Oh consistently kept the Organizing Committee in tow by checking and monitoring the action plans before and after every meeting. We thank the MMM Steering Committee for their invaluable input and guidance in crucial decisions. We would like to express our deepest gratitude to the rest of the Organizing Committee: Industrial Track Chair Chang-Sheng Xu, Local Arrangements Chairs Wooi Boon Goh and Kin-Choong Yow, Publicity and Sponsorship Chairs Sabu Emmanuel and Kap-Luk Chan, and Workshop Chairs Chiew Tong Lau and Fang Li. We are also most sincerely appreciative of the hard work put in by the Area Chairs and members of the Technical Program Committee, whose detailed reviews under time pressure were instrumental in making this a high-quality conference.

We would like to thank the Lee Foundation and PREMIA for their generous sponsorship, as well as help from the School of Computing, National University of Singapore, ACM SIGMM, and the Singapore Tourism Board. Finally, this conference would not have been possible without strong and unwavering support from NTU's Centre for Multimedia & Network Technology (CeMNet).

January 2007

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Keynote Speakers

Keynote Speaker I

Multimedia and Web 2.0: Challenge and Synergy

Professor Edward Chang received his MS in Computer Science and PhD in Electrical Engineering at Stanford University in 1994 and 1999, respectively. He joined the department of Electrical and Computer Engineering at University of California, Santa Barbara, in September 1999. He received his tenure in March 2003, and was promoted to full professor of Electrical Engineering in 2006. His recent research activities are in the areas of machine learning, data mining, high-dimensional data indexing, and their applications to image databases, video surveillance, and Web mining. Recent research contributions of his group include methods for learning image/video query concepts via active learning with kernel methods, formulating distance functions via dynamic associations and kernel alignment, managing and fusing distributed video-sensor data, categorizing and indexing high-dimensional image/video information, and speeding up support vector machines via parallel matrix factorization and indexing. Professor Chang has served on several ACM, IEEE, and SIAM conference program committees. He co-founded the annual ACM Video Sensor Network Workshop and has co-chaired it since 2003. In 2006, he co-chaired three international conferences: Multimedia Modeling (Beijing), SPIE/IS&T Multimedia Information Retrieval (San Jose), and ACM Multimedia (Santa Barbara). He serves as an Associate Editor for *IEEE Transactions on Knowledge and Data Engineering* and *ACM Multimedia Systems Journal*. Professor Chang is a recipient of the IBM Faculty Partnership Award and the NSF Career Award. He is currently on leave from UC, heading R&D effort at Google/China.

Keynote Speaker II

Dr. Dick Bulterman is a senior researcher at CWI in Amsterdam, where he heads Distributed Multimedia Languages and Interfaces since 2004. From 1988 to 1994 (and briefly in 2002), he led CWI's Department of Computer Systems and Telematics and from 1994 to 1998, he was head of Multimedia and Human Computer. In 1999, he and two other brave souls started Oratrix Development BV, a CWI spin-off company that transferred the group's SMIL-based GRiNS software to many parts of the developed world. In 2002, after handing the responsibilities of CEO over to Mario Wildvanck, he returned to CWI and started up a new research activity at CWI on distributed multimedia systems. Prior to joining CWI in 1988, he was on the faculty of the Division of Engineering at Brown, where he was part of the Laboratory for Engineering Man/Machine Systems. Other academic appointments include visiting professorships in computer

science at Brown (1993-94) and in the information theory group at TU Delft (1985) and a part-time appointment in computer science at the University of Utrecht (1989-1991). Dr. Bulterman received a PhD in Computer Science from Brown University (USA) in 1982. He also holds an M.Sc. in Computer Science from Brown (1977) and a BA in Economics from Hope College (1973). He started his academic journey at Tottenville High School on Staten Island, NY, where he learned (among other things) to play trombone and string bass. He was born in Amstelveen (The Netherlands) in 1951; after 35 years in the USA, he now resides with his family in Amsterdam. His hobbies (in as much as one can speak of hobbies with two children under the age of 12 ...) include flying airplanes (he holds an FAA private ASEL license with instrument rating and a Dutch commercial pilot's license with IR), singing in the Cantorij of the Oude Kerk in Amsterdam and trying to learn piano and cello (which is a much lighter instrument than a string bass). He is on the editorial board of *ACM Trans. on Multimedia Communications, Computing and Applications (TOMCCAP)*, *ACM/Springer Multimedia Systems Journal* and *Multimedia Tools and Applications*. He is a member of Sigma Xi, the ACM and the IEEE.

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