

SIGMM FY'11 Annual Report

June 2010 – June 2011

Submitted by: Klara Nahrstedt, SIGMM Chair

1. Awards

Over the last year 2010-2011, we have given out two SIGMM-wide awards, the SIGMM Technical Achievement Award 2010, and the SIGMM Best PhD Thesis Award 2010.

SIGMM Technical Achievement Award 2010: At the ACM Multimedia 2010, held in Florence Italy, we have presented our 3rd SIGMM Award for Outstanding Technical Contributions to Multimedia Computing, Communications and Applications (shortly Technical Achievement Award) to Professor Ramesh Jain from University of California at Irvine for his technical achievements in the area of multimedia processing, retrieval and applications. The awardee for the SIGMM Technical Achievement Award 2010 was selected by the SIGMM awards committee Dr. Hong-Jiang Zhang (chair of the committee) from Microsoft Research, China, Prof. Rainer Lienhart (SIGMM officer) from University of Augsburg, Germany and Prof. Nicolas Georganas from University of Ottawa.

Note: After 2010, both Dr. Zhang and Prof. Georganas stepped down from the awards committee and for the 2011-2013 period, two new members were asked to serve as the members of the awards committee, Dr. Lawrence Rowe from FXPal, and Prof. Tat-Seng Chua from National University Singapore who graciously agreed to serve on this awards committee.

Prof. Ramesh Jain gave an interesting presentation “**Life = Experiences (Events) + Vision**” on Wednesday Morning October 27, 2010 and his presentation can be found at http://videlectures.net/acmmm2010_jain_taa/.

SIGMM Best PhD Thesis Award 2010: At ACM Multimedia 2010, Florence Italy, we have presented our first SIGMM PhD Thesis Award 2010 to Dr. Effrosyni Kokiopoulou, now a postdoctoral fellow at ETH Zurich. She did her PhD at the Signal Processing Laboratory of the Swiss Federal Institute of Technology, Lausanne, Switzerland, under the supervision of Prof. Pascal Frossard. Dr. Kokiopoulou received the SIGMM Best PhD Thesis Award for her outstanding PhD thesis “**Geometry-Aware Analysis of High-Dimensional Visual Information Sets**” and she gave an interesting presentation on Thursday Morning, October 28, 2010 to and her presentation can be found at http://videlectures.net/acmmm2010_kokiopoulou_gaa/.

The SIGMM Best PhD Thesis Awards committee consisted of Prof. Svetha Venkatesh (chair) from Curtin University of Technology, Australia, Prof. Dick Bulterman from CWI, Netherlands, and Prof. Abed El Saddik from University of Ottawa. All three awards committee members will serve also in the following year 2011-2012 (their final year since we have a three year appointment for this award's committee).

Besides SIGMM-wide awards, our flagship journal, ACM Transactions on Multimedia Computing, Communications and Applications (TOMCCAP) acknowledges the work of the associate editors and gives out the **best TOMCCAP associate editor** award to an editor who provides most excellent services to authors and the community. In 2010, Prof. Shervin Shirmohammadi from University of Ottawa was named the best associate editor of ACM TOMCCAP, second time in a row since he received this award also in 2009. The new editor-in-chief, Prof. Ralf Steinmetz from Technical University of Darmstadt, Germany, presented the award at the banquet of the ACM Multimedia 2010 conference in Florence, Italy.

The editor-in-chief (EiC) of TOMCCAP, Ralf Steinmetz, and the ACM SIGMM chair, Klara Nahrstedt, are currently in process of establishing the **ACM TOMCCAP Nicolas Georganas named award** for best paper published in the journal to honor the memory and outstanding work of Prof. Nicolas Georganas, the founder and first EiC of TOMCCAP, who passed away in July 2010.

At our SIGMM-sponsored conferences, we have given out various conference-specific awards as follows:

- a. **ACM International Conference on Multimedia (ACM Multimedia) 2010:** This is the SIGMM flagship conference, and it was held in Florence, Italy October 25-29, 2010.
 - a. **Best Paper Award:** We had four papers that competed for the Best Paper award. This award was given out to Richang Hong, Meng Wang, Mengdi Xu, Shuicheng Yan, Tat-Seng Chua, “Dynamic Captioning: Video Accessibility Enhancement for Hearing Impairment” , a team from School of Computing, National University of Singapore. The presentations of all for papers can be found at <http://www.acmmm10.org/>.
 - b. **Best Student Paper Award:** We have awarded Best student paper award: Nikhil Rasiwasia, Jose Costa Pereira, Emanuele Coviello, Gabe Doyle, Gert Lanckriet, Roger Levy, Nuno Vasconcelos, *A New Approach To Cross-Modal Multimedia Retrieval*
 - c. **Best Demo Award:** Yang Cao, Hai Wang, Changhu Wang, Zhiwei Li, Liqing Zhang, Lei Zhang, *MindFinder: Interactive Sketch-based Image Search on Millions of Images* and Sabine Susstrunk, Clent Fredembach, Daniel Tamburrino, *Automatic Skin Enhancement with Visible and Near-Infrared Image Fusion*
 - d. **Open Source Software Competition 2010:** We are very proud to announce the winners of the ACM Open Source Software Competition 2010:
 - i. Andrea Vedaldi, Brian Fulkerson, *VLFeat – An open and portable library of computer vision algorithms – VLFeat*
 - ii. Rob Hess, *An Open-Source SIFT Library – Open-Source SIFT*
 - iii. Florian Eyben, Martin Woellmer, Bjoern Schuller, *openSMILE – The Munich Versatile and Fast Open-Source Audio Feature Extractor – openSMILE*
 - e. **Multimedia Grand Challenge 2010:** We had a very interesting and inspiring competition for the multimedia grand challenge. The winners of this grand challenge were

- i. **Jana Machajdik**, Allan Hanbury, Julian Stöttinger: *Understanding Affect in Images*.
 - ii. Wei Song, **Dian Tjondronegoro**, Ivan Himawan: *ROI-based Content Adaptation for Mobile Device Usage of Video Conferencing*.
 - iii. **Julien Law-To**, Gregory Grefenstette, Jean-Luc Gauvain, Guillaume Gravier, Lori Lamel, Julien Despres: *Introducing topic segmentation and segmented-based browsing tools into a content based video retrieval system*.
- b. **2011 ACM International Conference on Multimedia Retrieval (ICMR 2011)**: This is the first time this conference was held under this name in April 17-20, 2011 in Trento, Italy. This conference emerged from ACM CIVR and ACM MIR conferences, both SIGMM sponsored events, The organizers of these two venues came together and merged the two venues into one excellent and highly visible SIGMM-sponsored venue. This conference awarded best paper and best demonstration awards at their social event.

2. Significant papers

There were several papers on new areas published in SIGMM-sponsored proceedings:

- a. **ACM Multimedia 2010** (<http://www.acmmm10.org/conference/general-info/>):
 - a. We had papers/presentations in the brave new topics session that showed topics such as (1) a strong connection between contextual information such as locations, time-stamps, movement and multimedia; (2) technologies for enriching social situational awareness in remote interactions; (3) social media, (4) video genetics and others.
 - b. We had short and long research papers in interactive art, including cultural heritage papers. These papers were connected with a very interesting multimedia art exhibition in Galleria Palazzo Medici Riccardi, Florence, Italy.
 - c. We had four major tracks (interfaces, applications, content and systems) and in each track there were interesting sessions/papers.
 - i. In content track, major advances have been notices in bringing contextual information into multimedia for classification purposes, annotations, searching, coding, etc.
 - ii. In systems track coding on smart phones, 3D streaming and introduction to control new media such as scent, and other topics have been discussed.
 - iii. In human-centered track, interesting papers included video accessibility interfaces for hearing impaired users, multimedia interfaces in cars, viewing of photo systems, using immersion for browsing and visualizing surveillance video and others.
 - iv. In applications track visual aesthetics played a role for photo-quality assessment, multimedia applications for travel routes planning, using multimedia to inform people about their carbon footprint and others.

- b. **ACM NOSSDAV 2010** (<http://www.cs.columbia.edu/~hgs/nossdav/2010/>): This workshop/working conference is under SIGMM sponsorship and it was held June 2-4, 2010 in Amsterdam, Netherlands.
 - a. Significant papers continued to come out in the areas of 3D Immersive Interactive Systems, Understanding and Improving User Experiences by the multimedia systems and networking designers, i.e., finding efficient quality assessment methods. Another interesting trend we see in multimedia systems and networks is to understand traffic patterns of social networks, e.g., video/photo sharing, and utilize the understanding in better resource management.
- c. **ACM Multimedia Systems 2011** (<http://www.mmsys.org/?q=node/41>):
 - a. This year, the organizers invited two categories of papers, the traditional multimedia systems/networking papers, and data set papers. In the category of traditional multimedia systems papers, mobile multimedia and large scale storage and transport for multimedia dominated. The dataset track presented various traces such as network traces of virtual worlds, real-time traffic to residential users, mobile visual search datasets, world of warcraft avatar history dataset and corpus of data for actor level emotion magnitude detection. This was a very nice extension to the program..
- d. **ACM ICMR 2011** (<http://www.icmr2011.org/>):
 - a. The topics in papers that dominated the discussion were in automatic tagging, geo-tagging in video, interaction aspects and social media retrieval.
- e. **ACM MM&Sec 2010** (<http://www.mmsec10.com/>):
 - a. In this SIGMM-sponsored workshop, held in Rome, Italy, September 9-10, the researchers discussed aspects of biometrics in travel documents, forensics approaches, watermarking and biometric smart card devices, and privacy-preserving approaches.

3. Significant programs

Throughout the SIGMM-sponsored conferences we had several significant programs that provided a springboard for future technical efforts:

a. **ACM Multimedia 2010:**

- a. Highlight of this conference was again the *Multimedia Grand Challenge program* organized for the second time as a part of the conference program. Multimedia Grand Challenge is a set of problems and issues from a number of industry leaders geared to engage the multimedia research community in solving relevant, interesting and challenging questions about the industry's 2-5 year horizon for multimedia. Researchers were encouraged to submit working systems in response to the challenge. A large number of submissions were received for this first edition of the competition. We will be continuing with this challenge in ACM Multimedia 2011.

- b. The *two keynote talks* by Mubarak Shah from University of Central Florida “Visual Crowd Surveillance is Like Hydrodynamics” and Duncan Watts from Yahoo! Research “Using the Web to do Social Science” were very well received.
 - c. The *multimedia art exhibition* in the Medici Palace was outstanding and very well attended.
- b. ACM MMSys 2011:**
- a. There were *two important keynote talks* talking about next generation challenges for future multimedia systems and network: (a) Alain Fiocco from Cisco and (b) Mark Watson from Netflix that drove a lot of the discussion at the conference and beyond.
 - b. A new feature was the *dataset track* which was very well received by the attendees.
 - c. Since this event was held in Cisco company, the attendees saw the *telepresence system demonstration as well as the IPTV laboratory* in Cisco.
- c. ACM ICMR 2011:**
- a. The conference introduced “*Practitioner Day*” bringing in industry researchers and discussing problems faced by the practitioners.

4. Innovative programs

Several SIGMM-sponsored conferences had innovative programs which provided service to technical community:

- a. ACM Multimedia 2010:**
- a. Open Source Competition brings major service to technical community since software is then released to the community with corresponding agreements in place.
 - b. SIGMM and Simula sponsored “*Women Research Lunch*” event which was a *lunch for female multimedia researchers* to encourage networking of female students with senior female researchers. This lunch also served to give feedback to SIGMM officers what can be done to increase participation of female researchers in multimedia area. We plan a more organized event at ACM Multimedia 2011 for female researchers.
 - c. *Discussion room* was set aside and it was an experiment for making ACM Multimedia 2010 conference even more interactive and stimulate free interactivity beyond the traditional Speaker-Attendees scheme.
- b. ACM MMSys 2011:**
- a. There was a *special session on modern media transport* “Dynamic Adaptive Steaming over HTTP (DASH)”. This session presented novel contributions and breaking results on all aspects of DASH and Modern Media Transport.
 - b. Cisco-held conference allowed the MMSys organizers to offer *remote participation in the conference via WebEx* which was very much used by the community and increased the visibility of the conference.
- c. ACM ICMR 2011:**

- a. The organizers invited attendees to an interesting special session for innovative and frontier topic in the field of multimedia retrieval: “Automatic Tagging and Geo-Tagging in Video Collections and Communities”,
- b. Multiple *user/industrial sessions* happened during the “Practitioner Day” which included industrial talks such as “Attribute-based Object Retrievals” from IBM Research Center, “Combining Analysis with Innovative User Interfaces” from FXPal, “Multimedia Mining for Real-World Applications” from CEA LIST, “Recent Research Activities in KDDI R&D Labs”, and “Videntifier Forensic – Automatic Video Identification for Police Authorities” from Videntifier company.

5. Brief summary for the key issues that the memberships of SIGMM will have to deal with in the next 2 years

The key issues are:

- a. Prepare special events to celebrate 20th anniversary of ACM Multimedia conference in 2012 in Nara, Japan.
 - a. Discussions with the organizing committee of ACM Multimedia 2012 are ongoing.
- b. Come up with a sustainable funding model for the multimedia art community within the SIGMM community and their participation at our premier ACM Multimedia conference.
- c. Expand SIGMM presence in various social networks.
 - a. At ACM Multimedia 2010, we had used Twitter to collect opinions, Facebook, the SIGMM website, and other social networks (see website) to increase presence of the conference and other SIGMM events, but more needs to be done.
- d. Increase industry participation in SIGMM activities to strengthen ties and increase impact between industry and academia.
 - a. ACM ICMR 2011 did a very good job with the “Practitioner Day”.
 - b. ACM MMSys 2011 brought two keynote speakers from Cisco and NetFlix that provided very strong industrial relevance to the multimedia systems research
- e. Automate process for talks content, web, other SIGMM material preservation at SIGMM venues.
 - a. ACM Multimedia 2010 did a very nice job preserving the various talks of the conference and putting them on the ACM Multimedia 2010 website.
 - b. ACM MMSys 2011 did a very good job collecting all slides of presenters and shared the slides on the conference website.
- f. Increase SIGMM participation of female researchers.
 - a. We have started this task with a lunch at ACM Multimedia 2010.
- g. Build up the next generation of SIGMM volunteers to serve as SIGMM officers, chairs, leaders of various SIGMM sponsored activities and venues.
 - a. We have a very active group of volunteers that drive very diverse activities of ACM SIGMM, but we need to bring new members in.
- h. Consider additional SIGMM-wide award(s) to recognize wider multimedia community achievements such as service, education, mid-level research achievements, etc. This will be a discussion point at the next SIGMM business meeting, held at ACM Multimedia 2011, Scottsdale, Arizona.

6. Other Highlights in SIGMM activities

- a. Prof. Mohan Kankanhalli, the SIGMM Director of Conferences, put together a **review committee** to review the efficiency and organization of our premier ACM Multimedia conference. The chair of the committee was Prof. Tat-Seng Chua. The committee **reviewed two aspects of ACM Multimedia** and related conferences: (a) the conference organization and (b) the procedures for the management and review of papers for the SIGMM-sponsored conferences. The report is available on the SIGMM website. In January 2011, the review committee came back with a set of key recommendations that are being now implemented for the first time at ACM Multimedia 2011 conference, held in Scottsdale, Arizona.
- b. We have put together two SIGMM-sponsored retrieval conferences CIVR and MIR into one outstanding conference, the **International Conference on Multimedia Retrieval (ICMR)**, which was held for the first time in Trento Italy.
- c. We had the second SIGMM-sponsored **ACM Multimedia Systems conference (MMSys 2011)**, this year, held in February 2011, San Jose, California. It was held within Cisco company and it was a very successful event with over hundred participants local and remote.
- d. We have used our formalized and streamlined process for the ACM Multimedia conference location bidding. This year at ACM Multimedia 2010, we have decided that **ACM Multimedia 2012** will be in *Nara, Japan*, and **ACM Multimedia 2013** will be in *Barcelona, Spain*.
- e. Our SIGMM e-newsletter has **new articles on multimedia education** where various educational activities are featured.
- f. We have made significant progress in **SIGMM preservation efforts** via the preservation committee, led by Dr. Mohamed Hefeeda, who set up a website to preserve past SIGMM-sponsored venues as well as establish processes towards presentation of SIGMM-sponsored venues and their websites, proceedings, etc.
- g. The new Editor-in-Chief for ACM Transactions on Multimedia Computing, Communications and Applications, Dr. Ralf Steinmetz, works with ACM towards a new **ACM TOMCCAP Nicolas Georganas named award** for “Best Paper of the Year” published in ACM Transactions on Multimedia Computing, Communications, and Applications.
- h. The **SIGMM-specific educational committee** compiles and keeps up-to-date educational material in the area of multimedia computing, communications, and applications. This effort is led by Dr. Wei Tsang Ooi. This committee now has an editor on the SIGMM e-newsletter editorial board to bring articles on multimedia education to a broader community.
- i. The **SIGMM chapter in China** is flourishing. The chapter’s own conference, 2nd International Conference on Internet Multimedia Computing and Communication (ICIMCS 2010) had its second event December 30-31, 2010 in Harbin, China, and the 3rd ICIMCS 2011 will be August 5-7, 2011 in Chengdu, China.
- j. All SIGMM-sponsored events had a very strong **government and industry sponsorship** and/or industry participation via talks, papers, demonstrations, including

National Science Foundation, and companies such as Microsoft Research, FXPal, Simula, Yahoo!, Google, Cisco, HP Labs, MICC, Manning, O'Reilly, IBM Research, RICOH Innovations, Callas, 3D Life, Technicolor, CEWE, Deutsche Institute – Florence, British Columbia Arts Council, Provincia Di Firenze, Ente Cassa Di Risparmio Di Firenze, and others.

- k. SIGMM had a number of **conferences/workshops in-cooperation** such as the International Conference on Distributed Smart Cameras (ICDSC 2010), International Working Conference on Advanced Visual Interfaces (AVI) 2010, 9th Annual Workshop on Network and Systems Support for Games (NetGames) 2010, and others. Note that 21 workshops have been associated with ACM Multimedia 2010, i.e, co-sponsored and in-cooperation with SIGMM organization.
- l. We had the following attendance and paper acceptances for SIGMM-sponsored conferences:
 - a. **ACM MMSys 2011**: attendance was 68 external participants (it was 40 in 2010), 82 Cisco in-room participants, 150 WebEx participants and 184 Cisco TV participants; the acceptance rate for the main track was 37% with 41 papers submitted to main track and 15 papers accepted, for the special media transport track 45% with 20 papers submitted and 5 full papers accepted, and for the new dataset track 42% with 12 papers submitted and 5 accepted.
 - b. **ACM Multimedia 2010**: attendance was 635 participants for the main event, 847 (short and long) papers were submitted and 218 (short and long) papers accepted. We had 357 papers submitted as full papers and 61 papers accepted, which is 17.09% acceptance rate. We had 490 short papers accepted and 157 short papers accepted which is 32.04% acceptance rate. We had 58 papers submitted to interactive art program and the acceptance rate was 29.31% with 16 papers accepted. We had 10 video submissions, 67 technical demonstration submissions and 22 industrial exhibition submissions. The acceptance was 8 videos accepted, 43 technical demonstrations, and 19 industrial exhibits were accepted.
 - c. **ACM ICMR 2011**: acceptance rate for oral presentations (long papers) was 16.4%, acceptance rate for poster presentations (short papers) was 35%%.
 - d. **ACM NOSSDAV 2010**: attendance was 47 attendees, 51 papers submitted and 21 papers accepted, which is 41.4%.
 - e. **ACM MM&Sec 2010**: attendance was 52 attendees, 53 papers submitted and 32 accepted, which is 60.3%.