

ACM SIGMM Steering Committee Report

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1. Introduction

The ACM MM steering committee (initial members listed above) was established in 2011 by the SIGMM review committee report [Chua 2011] and is meant to play a large role in guiding the SIGMM activities with emphasis on the annual meeting, the ACM International Conference on Multimedia (ACMMM).

Currently, ACMMM is the top multimedia research conference worldwide. In the well known conference ratings (eg. Australian ERA CS rating, Chinese CCF [CCF 2013]), ACMMM is at the highest tier. In this report, we identify key challenges and make recommendations regarding both the conference and the community which are meant to maintain the high quality of the ACM multimedia research community.

2. Future Research Directions

Multimedia is in a mature age. In the early years multimedia has mainly focussed on scientific and technological support for combination and integration of different media and the development of applications that benefit from such integration. Nowadays, the maturity of research and technology in computer vision and machine learning, data mining, electronic sensors and 3D, wireless data communication, IoT protocols, etc. is opening new opportunities of integration and foster innovative advanced applications that permit seamless interactivity with computerized contexts. We expect that multimedia will receive much of its future drive and motivation from such advanced applications which will ultimately change the way in which humans communicate and interact with the real world.

Future research directions in multimedia will address both basic and application research and it should be noted will frequently have overlap. On basic research, some prominent frontier directions are amongst the others:

Big data has a focus on using massive collections of multimedia information. It also implies having high scalability with respect to parallel and distributed computing clusters. How can we harness the world's computing and multimedia resources to solve important problems?

Mixed media analysis has an emphasis on how to integrate, fuse, and analyze diverse kinds of media. This research direction may exploit the additional information available on smart devices such as location or social tags or external knowledge sources such as Wikipedia, Yahoo! Services, WWW, etc. to improve multimedia understanding

Social and machine interactivity is meant to encompass the myriad ways in which humans interact with each other and with machines. This direction has an emphasis on social-oriented

information and naturally includes social multimedia computing, interactive search interfaces and paradigms, and in general, human-centered computing.

Rich and interactive media refers to developing methods to analyze, understand and search the next generation of media types including haptics, smell, 3D models and scientific imagery.

On application research, some important directions amongst the others:

Seamless computer-assisted interactivity is an important theme which covers both the human computer interface but also using a computer to improve interactions between humans. It includes but is not limited to natural interactivity, augmented human sensing, and disability recovery. There is still a world beyond audio and video, and few are exploring the media of interactive spaces, or even the potential interactions with existing media speech and gesture recognition, and Brain-wave/thought recognition will be most exciting novel interfacing areas; applications such as tele-immersion, games, edutainment should be considered as it might attract more industry and make SIGMM relevant to more real-world problem

Semantic automatic annotation and search is one of the holy grails of search of which one of the important themes is exploitation of the digitized wisdom of crowds for closing or narrowing the semantic gap.

Personalized services refers to understanding the user's interests and orientations from the analysis of the media managed in her/his activities. This understanding can lead directly or indirectly to significantly improved interactions with the user and aiding the user in daily life.

3. Conference Practices and Quality of Reviews

Quality of reviews is one of the critical indicators of the quality of a conference. We need to ensure that high quality reviews are received for both the long and short programs. In fact, one way to lose SIGMM members is for them to receive poor quality reviews. One approach worth considering is to have a separate review practices committee which would regularly monitor the quality of the reviews. Another approach [Chua 2011] which should be given additional consideration is to have black-listing of bad reviewers and rewards for good reviewers.

SIGMM reviewer guidelines should be established with specific suggestions in the context of the conference on what a good review should cover. An example used by IEEE PAMI was written by A.J. Smith [1990].

The author's advocate is someone who can be contacted by an author when there is strong disagreement with the reviewer comments. The advocate should be objective and be able to assess the quality of the reviews as per the SIGMM reviewer guidelines and determine whether the negative comments are supported. He can then discuss the case with the program chairs to determine a fair response or if additional reviews need to be gathered.

New topic areas should be given attention each year. We recommend that either the conference chairs could call for and decide on new areas to be included for each year just before the call-for-papers is published and/or that the future multimedia steering committees involves the community in shaping the future topic areas of the conferences.

Greater diversity in key positions in the conference. Try to have more new people serve as area and program chairs each year. This was also reflected in the review report [Chua 2011] as "The General Chairs (and Technical Program Co-Chairs) should preferably not be

involved again in same capacity with future ACM Multimedia conferences within the next four years. This is to allow for grooming of new leaders for the community."

Expand and encourage the Demo Sessions. They provide proof of concepts and stimulate new ideas and improvements. They also favor interactivity and exchanges between research and industry. Authors of the best ranked papers should be allowed to present their results also in the Demo Sessions.

Exhibition aspects should be expanded which involve participation from private industry and also demonstrations of new technologies such as the ones held at SIGGRAPH.

Use of Social Media should be further encouraged. In fact the last 3 conferences used social media in an effective way to stimulate discussions and maybe we should encourage having a SIGMM tweet channel.

More running interactivity between the MM Steering Committee and the conference organizers on conference results, quality and organization, so it is possible to benefit from previous experiences and know how. This part should be formalized to minimize miscommunication.

4. Community

The importance of community feedback is important not only in improving the quality of the conference but also and perhaps most importantly in ensuring that current and potential members see that their participation is being heard and that the SIGMM decision processes (especially regarding the conference) are fair and transparent.

Increase the possibilities for SIGMM community members to contribute. Establish an official SIGMM website holding open community resources, data, and source code.

Stay in contact with previous authors and attendees. Setup an email list server which has all authors and attendees and allows each user to select what kinds and how often to receive newsletters and community information.

Address real-world problems. Put more emphasis on the MM Grand challenge and try to make it a key part of the conference. Also advocate on the SIGMM website as well as on the CFP page of next version conference the already addressed problems, their solutions and applicability if any.

5. Major Challenges

Defining multimedia and the SIGMM is a major ongoing challenge because the state of the field is continually evolving. In particular, what is multimedia and what it is not? How do we place and differentiate ourselves from the other SIGs? *How to define the distinctive core of the community without compromising on the inclusiveness?*

Future SIGMM steering committees should be the focal points for gathering community ideas and opinions on the current status and the future of multimedia research and the conference. As mentioned earlier, there should be more running interactivity between the steering committee and the conference organizers. *There is an urgent need for precisely defining the scope, role and activity of the future SIGMM conference steering committees.*

Attract more Industry Participation. By addressing some real-world problems, looking at challenges in games and adapting novel interactions and media (smell, haptics, gesture, brain

signals, etc) in games. *How can we strengthen the connection between SIGMM and the real world?*

References

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