

Editorial:

On Building a Stronger Multimedia Community

BY THE TIME you are reading this message, we will have already embraced the New Year of 2016. I would like to take this opportunity to wish everyone, especially those who have contributed to the growth of the IEEE TRANSACTIONS ON MULTIMEDIA (T-MM) in the past year, a very happy and prosperous new year in 2016!

This issue of T-MM marks the beginning of my third year as your Editor-in-Chief. The first two years of my tenure as the Editor-in-Chief for T-MM have been a wonderful, very rewarding experience. In 2015 when we started printing monthly issues, T-MM has witnessed significant growth in two key performance areas: 1) number of submissions and 2) impact factor. By the end of October, we have received 644 submissions which represent 50 more submissions than the entire year of 2014. I expect the total submission for 2015 to see about a 25% increase over 2014. For 2015, T-MM's impact factor reached 2.3, which represents substantial increase over 2014's number at 1.67. I would like to thank all the authors, reviewers, Associate Editors (AEs), publication office staff members, and the Steering Committee (SC) members for their strong support throughout 2015! These successes of T-MM are the consequence of the efforts from everyone in this wonderful multimedia community.

Yet we still have much work to do to build an even stronger multimedia community. As its flagship publication, I believe T-MM will be the best platform for this community to pursue its grand mission by exemplifying the extremely high quality research carried out by its talented members via this archival publication. During the past two years of working in the capacity of Editor-in-Chief for T-MM, I have invested significant time in scanning every paper submitted to T-MM before assigning it to an AE. As a result, many authors have received my message requesting additional revision before formal review begins in order to make their papers more relevant to both T-MM and the multimedia community. I have gathered sufficient firsthand information on these submissions and have identified several community-wide problems that appear to be limiting the growth of the multimedia research community against other related fields, especially the well-recognized computer vision and pattern recognition (CVPR) research community. It is based on these experiences that I would like to share with every member of the multimedia community my own perspectives on how to build a stronger multimedia community through your publications, for not only just your papers submitted to T-MM, but also your papers submitted to all multimedia conferences, including the IEEE International Conference on Multimedia and Expo and the ACM International Conference on Multimedia, as well as several other multimedia-related conferences

hosted by T-MM sponsoring technical committees from four IEEE societies.

Over the years, I have served in a number of advising obligations and have had the privilege to interact with many outstanding leaders from other scientific communities. Through these activities, I have also witnessed the conversations among the colleagues of other communities. What impressed me most are that many of their colleagues know each other's research so well and can comment on their recent research and publications. What I learned from them is the surprising fact that many members of these communities were trained during the early stage of their research career that they not only need to fully understand their own specific topic area, but they also need to grasp all of the most recent research activities in related research fields, even though some of these fields are only remotely related. However, it is a different situation in the multimedia community. Very often, when I chat with young researchers who claim to work in multimedia research, they are unaware of closely related research and many of them are not aware of who I am after I tell them my name and affiliation.

I have also subscribed to the *Science* journal and scan over their publications regularly. As an outsider, I am not in a position to comment on their scientific merits. However, I am very much impressed by the rigorous presentation of their papers, especially when formulating their problems and arguing for the needs to carry out the proposed research. Almost all the statements are supported by conclusions from prior research and appropriate citations are used to support their statements. By checking their reference list, I also see a significant difference between the number of papers cited in *Science* papers and the number of papers cited in most multimedia related papers. Most of their papers has several dozen references while most papers from multimedia community have only about one dozen, or even less, references.

This lack of sufficient understanding of related research and the recognition of fellow researchers in the related areas in multimedia has been reflected accordingly not only just in the papers submitted T-MM, but also in the submissions to all the multimedia conferences. From my experience, many T-MM submissions have one or more of the problems listed below:

- it lacks an overall view of one's work against major research trends;
- there is insufficient citation of related works to support the claim of need for the proposed research;
- there is a lack of relevant study for the venues of submission and their scopes; or
- the most recent related publications are not checked and cited before submitting

All these problems can be considered limiting factors for the impact of an individual publication, as well as the impact of

an individual researcher. Although I have heard too often the concerns from fellow multimedia researchers about the impact factor of T-MM as compared with top IEEE transactions such as the IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE, many of us continue to practice the old fashion of ignorance without sufficient acknowledgement (citation) of our fellow researchers' related work.

I would like to appeal to the multimedia community to institute a campaign of "Appreciation and Acknowledgement" towards establishing a new community tradition in the "spirit of appreciation" to the fellow multimedia researchers who have previously explored technical frontiers related to one's research. By doing this, I expect to see a healthier multimedia community and a much expanded impact of multimedia research on the overall scientific community. There will be no better way to appreciate the contributions of fellow multimedia researchers by acknowledging their prior publications when reporting one's research in a paper submitted to various multimedia related venues, including T-MM and all multimedia related conferences. In particular, I have the following suggestions for different constituents of the multimedia community.

To first authors and primary authors: First authors and primary authors are usually those young and energetic researchers who have made key contributions in a particular research topic and are ready to write a paper to be submitted for publication. They should also be the key practitioners of the "Appreciation and Acknowledgement" campaign. My particular suggestions to them include the following.

- *Preparation before writing a paper:* Before one starts writing a paper, it is recommended to have all related papers ready at hand. One may have read many papers while carrying out the proposed research and may have applied principles and conclusions that have been reported by fellow researchers in their publications. Appreciation and discussion of those existing works shall enhance the presentation of one's paper by proper comparison against or contrast with prior research in various different sections, including review of existing works, formulation of problems, development of proposed approach, and presentation of analytical and experimental results. It is therefore critically important to have all relevant papers ready for reference before one starts writing.
- *Review of existing works:* Almost all new research is based on some prior works that have been reported in related publications. The review of existing works is extremely important in the establishment of one's research relative to the state-of-the-art. The primary authors are required to have complete pictures of what has been done and reported in all related research and to objectively review and appreciate existing works related to the proposed research.
- *Presentation of problem formulation:* Presentation of problem formulation is crucial for fellow researchers to understand why the proposed research is an important new technical problem worthy of pursuing its solution. A problem formulation is well presented if it makes proper references to some well-known existing works with respect to the potential new insights that one's research is able to uncover. Appreciation of existing works and

acknowledgement of the needs to go beyond existing works should be clearly presented in the formulation of the problems.

- *Supporting for the proposed approach:* The proposed approach is usually where an author can demonstrate the key innovations of one's research. However, this is also where one needs to acknowledge the scientific foundations established by prior research. This is true for most research because we rarely have the opportunity to develop a completely new approach that is not dependent on existing works. Very often, a new approach is actually dependent upon more than one piece of prior research, and proper acknowledgement of these works will definitely help fellow researchers to appreciate your innovations beyond what has been done already.
- *Presentation of analytical and experimental results:* This portion of a paper is crucial for the authors to show the performance of the proposed research. A rigorous theoretical and/or a seamless experimental design will be a necessary condition for successful research. Validity of the proposed research is usually carried out by comparing the proposed research against one or more existing approaches to solve a similar or related problem. The spirit of appreciation and acknowledgement is expected to be fully exhibited throughout the presentation of the analysis and comparison of the results.

To senior researchers and senior authors: Senior authors have often worked in the multimedia research field for many years and have accumulated rich experiences. They are the ones who guide graduate students and junior researchers in their research. They may not be the ones who contribute major writings; however, they are the ones who have better vision of research directions and are more familiar with broader research scopes in multimedia. They are definitely the gate keepers who can significantly reshape the overall presentation of the papers written by the junior researchers. For them, I have the following suggestions.

- *Major research trends:* A review of major research trends is essential to place the proposed research in proper context to demonstrate its new contributions and potential impact. The senior authors are expected to guide the primary authors in their presentation of this aspect based on their rich experiences and broader knowledge in the related research areas. For a given research topic, the research trend is usually defined by several seminal papers. The spirit of appreciation can be fully exercised by positioning the proposed research against the major research trends defined by these papers. It is the duty of the senior authors to make sure that the proposed research is indeed correctly positioned with proper references.
- *Significance, advantages, and weaknesses of the proposed scheme:* It is the rich experiences of the senior authors that enable them to see more clearly the significance of the proposed research as well as the advantages and weaknesses of the approaches. It is therefore the duty of the senior researchers to make sure that the attributes of significance, advantages, and weaknesses be properly identified in contrast to the existing works. Appropriate acknowledgement

of related research for comparison is necessary for fellow researchers to appreciate the significance of one's research presented in the paper.

- *Outlook beyond the current research:* The readers of a paper usually appreciate more if they are offered outlooks beyond the research reported in the paper. Such an outlook can help fellow researchers to not only grasp the importance of the proposed research, but also see the potential in breaking new grounds in the related research areas. Once again, this is the duty of the senior authors to present such an outlook based on their richer experiences and broader perspectives.

To T-MM reviewers and conference Technical Program Committee (TPC) Members: The reviewers for T-MM are the most precious assets of T-MM and I would like to take this opportunity to thank all T-MM reviewers for their invaluable contributions to the growth of T-MM to become one of the top IEEE transactions. In the case of multimedia-related conferences, the members of the TPC play key roles in the success of a conference. For the campaign of "Appreciation and Acknowledgement" to be successful so as to significantly expand the impact of multimedia research on the overall scientific community, I would like to ask the reviewers of T-MM and TPC Members of multimedia-related conferences to fully exercise your important duty as entrusted by the community to serve dual roles when reviewing multimedia research papers: 1) to identify any deficiencies that are not consistent with the spirit of appreciation and acknowledgement, and 2) to offer your expert opinion on how the authors can improve the quality of their papers. In particular, I would like to suggest the following:

- check whether or not the review of existing works is sufficient;
- check whether or not an adequate acknowledgement of related research is present in problem formulation, as well as the description of the proposed approach and the analytical, and experimental results;
- check the completeness of the reference list, especially for the inclusion of some newly published papers; and
- suggest the authors cite more existing works if any of the deficiencies was identified.

To T-MM AEs and Conference Chairs: I am happy to report that T-MM does have an outstanding team of AEs who have been responsible for the recent success of T-MM. They make final decisions on the submissions to T-MM. Likewise, the TPC Chairs of multimedia-related conference also make final decisions on their submissions. Both T-MM AEs and TPC Chairs are also expected to play important roles in this campaign of appreciation and acknowledgement. Since they have the privileges to see all reviews of a submission, I would like to suggest the following:

- identify the improvements needed for overall presentation and make recommendations on high-level enhancement of the paper based on the comprehensive summarization of all reviewers; and
- suggest a possible update of the reference list for recent publications, since AEs and TPC Chairs are the leaders of

the multimedia community and are expected to be better aware of most recent publications in multimedia research

To the leaders and members of T-MM sponsoring TCs: T-MM is fortunate to have been sponsored by the TCs from four different IEEE societies. This represents the characteristics of the multimedia research as well as the strength of T-MM with much broader support from different societies of IEEE. For the record, T-MM has also received good support from the ACM SIGMM community as the *SIGMM Digest* often helps broadcast news and call for papers from T-MM. Working towards to the grand goal of building a stronger multimedia community, I would like to suggest the following to the four T-MM sponsoring TCs.

- *Promotion of proper recognition of related research as an important TC agenda:* Make the promotion of this campaign among your members and across the TC boundaries an important agenda. Although each TC has its own unique mission and research agendas, the collaboration between the TCs and among the members of TCs will definitely create new opportunities. The campaign of appreciation and acknowledgement is expected to foster more collaboration as it endorses inclusiveness of all existing works completed by a broadly defined multimedia research community.
- *Tutorials in paper authoring and reviewing:* The four TCs are probably in a very good position to select leading researchers to help guide fellow TC members by providing tutorials on paper authoring and reviewing to be held in various multimedia related conferences. These tutorials are expected to include the spirit of appreciation and acknowledgement towards building a stronger multimedia community.
- *Inclusion of highlights in recent publications in the TC newsletters:* Several TCs are publishing regular newsletters for their members. I would like to suggest that these newsletters include a special section listing interesting recent publications in T-MM, ICME, and ACM MM so that their members can acknowledge recent publications in their own papers in a timely fashion.

These are all my personal perspectives and suggestions. The combined list of action items for various constituents appears to be quite long. However, when these suggested actions eventually become routine practice for the different role each of us is playing, we shall not see them as an additional burden imposed on us, but rather as a natural skill set to work in this exciting research field of multimedia. I look forward to witnessing a much stronger multimedia community in the near future through the collective efforts from every member of this multimedia community.

Happy New Year to all of you!

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