Guest Editorial
Special Section on Socio-Mobile Media Analysis and Retrieval

O VER the past few years, individual consumers (who were mostly inactive until recently) have transformed into an active and connected prosumer base, who creates, shares, and comments on massive amounts of media artifacts, all over the Web. Online social platforms have emerged as indispensable platforms for end-users who want to engage in these collective activities and to companies and researchers who aim to make sense of these massive amounts of media content generated in the process. Meanwhile, mobile devices are becoming increasingly ubiquitous and are playing vital roles in people's daily life as individuals are using their mobile devices as a personal concierge exploring and managing their social contents and activities while on the move.

Therefore, social and mobile (or in short "socio-mobile") are the two very characterizing trends of the Internet nowadays. While the term "mobile" emphasizes the physical context and personal interests, the term "social" regards individuals as part of groups, therefore emphasizing similarity, interactions, and sharing among individuals. Consequently, an emerging area of investigation is how these complementary aspects of media can be exploited for mutual benefit. In particular, how mobile technologies can leverage social information, and how social tools and platforms, can benefit from rich mobile context and personalization. In short, the marriage between social and mobile promises the multimedia community big opportunities, but also introduces critical challenges.

This special section reports the latest research outcomes that connect the social and mobile contexts to media sense-making. Through an open call for papers, we received eleven submissions. After two rounds of rigorous expert reviews, four papers were accepted based on the originality of the problem statement, the technical contribution, and the relevance to this special section's topic. In the following paragraphs, we briefly summarize each of the papers appearing in this special section.

In "*Personalized Geo-Specific Tag Recommendation for Photos on Social Websites*", Liu *et al.* design an algorithm to integrate rich social context for image tagging. They focus on the generation of user-specific and geo-location related tags. This is useful in the socio-mobile context where many photos shared on social media platforms have geo-location information. The results on over three million Flickr images indicate that the approach proposed in this paper can improve the quality of system-recommended tags on image-sharing websites.

The second paper, "*Towards Codebook-Free: Scalable Cascaded Hashing for Mobile Image Search*", shifts the focus from tagging to search. In this paper, Zhou *et al.* propose a cascade hashing for large-scale visual search suitable for mobile platforms. The authors show that the proposed approach is a good alternative for traditional codebook-based solutions and has an added memory consumption advantage, while still offering competitive search accuracy. This is very appealing in many real-world applications, where the capability of processing big data is necessary.

In "*Discriminative Soft Bag-of-Visual Phrase for Mobile Landmark Recognition*", Chen *et al.* investigate landmark recognition, an important mobile application. The authors propose the discriminative soft bag-of-visual-phrases, which extend the traditional bag-of-words by considering the co-occurrence relationships between visual words. Instead of constructing a general set of visual phrases, they generate phrases for each category separately. The recognition of landmarks is a useful function on mobile devices to help tourists obtain rich information of famous spots.

The last paper, "*Mobile Landmark Search with 3D Models*", by Min *et al.* also considers the problem of landmark search. The authors propose 3D models for mobile landmark search, which are generated offline by image-based reconstruction. Furthermore, the authors propose to send compressed images to a server to save mobile network bandwidth. More than half a million images covering 217 landmarks are used in the experiments showing the advantages of the proposed approach to landmark search.

Taken together, the papers in this special section cover several hot and emerging topics in socio-mobile media analysis and retrieval. We consider these as valuable references and a starting point for future research in this emergent area.

We would like to thank all the authors for their significant contributions to this special section. We also deeply appreciate all the expert reviewers, who have provided timely and thorough reviews that have not only helped us select the most suitable submissions to appear in this special section, but also helped improve the quality of the papers you will read. We also would like to thank Ms. Adrienne Fisher for her help throughout the production of this special section. Finally, we thank the former editor-in-chief Prof. Mihaela van der Schaar for her encourage-

ment and support. We hope the readers will enjoy the papers as much as we do.

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