BigMM objectives :

The motivation for organizing the BigMM conference is the proliferation of multimedia data and ever-growing requests for multimedia applications—including video-on-demand, interactive video systems, surveillance, social media, medicine, and health-care—making multimedia the "biggest big data" and an important source of insights and information.

The success of BigMM 2015 is evidence that multimedia big data is becoming an active and inter-disciplinary research field in its own right. One major driving force is the amount of multi-media data, which has grown to the extent that the traditional multimedia processing and analysis systems cannot handle the data effectively. As a consequence, several new problems were presented in BigMM 2015 papers, including multimedia big data harvesting, analysis, and retrieval; rare actions/event detection in surveillance big data; cloud-based image enhancements; and mobile crowd sensing. Some novel methods and techniques were also proposed to address the multimedia big data challenges, such as semi-supervised multi-modal clustering, temporal multiple correspondence analysis, cascaded filtering retrieval, and geometric consistent tree partitioning MinHash (the min-wise independent permutations locality sensitive hashing scheme).

Réf Big data and learning

- ***Arnaldo2015*** : Bring Your Own Learner: {A} Cloud-Based, Data-Parallel Commons for Machine Learning
- ***Guzek2015*** : A Survey of Evolutionary Computation for Resource Management of Processing in Cloud Computing [Review Article]
- ***Jiang2015*** : Categorizing Big Video Data on the Web: Challenges and Opportunities
    - CNN are used both for feature extraction, and classification (in place of SVM).
- ***Wu2015*** : Multimedia Analysis with Deep Learning
    - état de l'art partiel sur l'utilisation du deep learning (y compris CNN) dans tous les processus du traitement multimedia : classification, segmentation, retrieval, …
    - *a preliminary survey of the deep learning methods in multimedia analysis has been done in detail.*
- ***Kumar2015 :*** High Performance Object Detection on Big Video Data Using GPUs
- ***Sainath2015*** : Deep Convolutional Neural Networks for Large-scale Speech Tasks
    - Use of CNN for large scale speech analysis
- ***Druzhkov2016*** : A survey of deep learning methods and software tools for image classification and object detection
- ***Jiang2016*** : A Novel GPU-Based Efficient Approach for Convolutional Neural Networks with Small Filters
    - Bonne définition du CNN

- CNN Parallelization through GPUs.

CNN for Multimedia

- ***Girshick2014*** : Rich feature hierarchies for accurate object detection and semantic segmentation > CNN is used for region detection, and feature extraction (the classification uses SVM).
- ***Tong2015*** : CNN-based shot boundary detection and video annotation > CNN are used for video shot boundary detection.