Optimization Methods in Multimedia Systems: Algorithms, Approaches and Applications

Aim & Scope

Indisputably communication is becoming multidimensional, adaptive, ambient, and reliable. With the onset of 5G connectivity, not only men but also machines get integrated to visualize and realize next-generation context-aware and people-centric services. And the more, the number of dimensions involved in a communication setup, the richer it is, and the more decisive and deeper impacts, it brings in. With ultra-low latency and high network capacity, besides obsessed with multimedia and multimodal systems, we are all set to experience virtual, augmented and mixed reality (VR/AR/MR) applications. We increasingly leverage sound, color, action, gesture, tone, texture, and a wider variety of emotions in understanding what others express, and how our everyday environment is communicating to us, and how we interact with others in the vicinity. Even when confined to media that places severe limits to the number of dimensions available, we tend to innovate, by adding virtual dimensions. Dealing with data from different modalities, is the common case in today's systems. With the continuous development in network technologies, input/output (I/O) systems, and greater computational power, creating and sharing multimedia data is becoming easier for all people around the world. For an example, in Facebook, there are objective views, comments, well-intended opinions, cryptic posts, static images, voice messages, and video clips, etc. Storing, searching in, analyzing, and utilizing multimedia data is highly challenging. Massive amount of multi-structured data is being generated, stocked and subjected to a variety of investigations. To be able to deal with this poly-structured data from diversified sources in order to extract useful information and insights in time, we need knowledge discovery and dissemination technologies.

That is why this issue gives the opportunity for researchers and practitioners to present their efforts in addressing the challenges of dealing with multimodal and multimedia data. This issue will provide the research students, scholars and scientists with opportunities to discuss and explore areas related to the multimedia engineering, science, analytics, and management.

List of Probable Paper Titles

- Intelligent Image / Video Analytics
- Digital Image and Video Processing
- Image Rendering and Quality

- Imaging Sensors and Acquisition Systems
- Content Based Image/Video Retrieval
- Vision for Graphics
- Human Behavior Understanding
- Deep Artificial Intelligence
- Motion and Tracking Algorithms and Applications
- Watermarking Methods and Protection
- Image Data Structures and Databases
- Color Reproduction
- Image Compression, Coding, and Encryption
- Statistical and Structural Pattern Recognition
- Performance Analysis and Evaluation
- Novel Image Processing Applications
- Machine Learning Technologies for Vision
- Multimedia in Bioinformatics
- Virtual Reality and Simulations
- Augmented Reality Image Processing
- Computational and Architectural Aspects of Human Vision
- Innovative Multimedia Systems or Devices
- Internet / Mobile Multimedia Sharing
- Intelligent e-Health based on Multimedia Analysis
- Games and Gamification
- Vision and Languages
- Edge Computing
- Edge AI Systems

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