

**Workshop on Machine Learning in Multimedia Signal Processing (MLMSP)**

September 27-29, 2019 MNIT Jaipur, India,  
<http://cvip2019.mnit.ac.in/>

Machine learning techniques and deep learning algorithms have claimed very good performances on a wide range of tasks in even on Big Multimedia data. The expansion of online multimedia and other social media appearing on mobile, wearable and other devices has become extremely accelerated in recent years. The Machine Learning in Multimedia Signal Processing (MLMSP) workshop is based on emerging interdisciplinary multimedia research and systems using Machine-learning techniques on conventional and big multimedia data. The primary goal of the MLMSP workshop in CVIP 2019 is to present state-of-the-art research results on emerging machine learning techniques in multimedia signal processing as well as their applications and services for retrieval, classification, semantics, detection and recognition of multimedia information including various signals, images, video and 3D/VR/AR/MR. The workshop also welcomes new topics that can help to establish semantical and contextual relations among users based on the information of their interest. We hope this goal will encourage academic and industrial interaction and to promote collaborative research activities on the field Machine Learning in Multimedia Signal Processing.

The topics of interest of the workshop include, but are not limited to:

**Deep and Machine Learning Models and Techniques**

Novel machine and deep learning  
Active learning  
Incremental learning and online learning  
Agent-based learning  
Manifold learning  
Multi-task learning / parallel and distributed learning  
Bayesian networks and applications  
Case-based reasoning methods  
Statistical models and learning  
Computational learning  
Evolutionary algorithms and learning  
Evolutionary neural networks  
Fuzzy logic-based learning  
Genetic optimization  
Clustering, classification and regression  
Neural network models and learning  
Reinforcement learning  
Supervised, semi-supervised and unsupervised learning

**Multimedia Analysis and Processing**

Novel multimedia signal processing and analysis  
Content-based analysis for big multimedia data  
Feature extraction for big multimedia data representation  
Human activity recognition, action detection, motion tracking, and video surveillance  
Multimedia search and retrieval  
Semantics and emotion analysis  
Computation linguistics analysis  
Multimedia data modeling and visualization  
Filtering, Time-Sensitive and Real-time Search  
Personalized Search  
Images and video data mining

Multimedia knowledge discovery in large datasets  
Indexing, classification, clustering, and association  
Segmentation, grouping and shape representation  
Multimedia knowledge acquisition and learning  
Multimedia knowledge representation and reasoning  
Mining spatial and temporal multimedia datasets  
**Machine Learning Multimedia Applications**  
Retrieval and annotation of big multimedia data  
Object and/or context based multimedia information retrieval  
Multimedia networking, communication, and IoT  
Emotion and semantics in content-based retrieval systems  
Multi-modal multimedia systems, document processing  
Multimedia image/video scene understanding  
Semantic-based multimedia retrieval and annotation  
Mobile Multimedia Systems and Applications  
Cloud-assisted multimedia systems  
Human computer interaction based on multimedia  
Entertainment, gaming and e-learning  
3D / AR / VR / MR, Animation  
Intelligent traffic and transportation  
Multimedia security, rights management and forensics  
Multimedia systems for digital library and SNS  
Multimedia for smart homes  
Multimedia for wearable technologies and applications  
Bioinformatics, biomedical informatics, and face recognition  
Medical, healthcare, medicine and clinical decision support  
Computer vision  
Natural language processing  
Recommendation systems

**Submission and publication**

CVIP 2019 invites submission of high quality and original papers on the topics listed above. All submitted papers will be peer-reviewed by at least three reviewers for technical merit, originality, significance and relevance to track topics. Papers must be up to 12 pages and follow Springer Lecture Notes publication format. Accepted papers will be included in the conference proceedings and submitted for inclusion to IAPR and major indexes. Content will be submitted to the indexing companies for possible indexing.

**Important dates** [Indian Standard Time]

\* Submission Deadline 11:59 p.m., May 15, 2019  
\* Supplementary Material Deadline 11:59 p.m., May 20, 2019  
\* Challenge Open 00:01 a.m., February 14, 2019  
\* Challenge Submission 11:59 p.m., June 25, 2019  
\* Final Decision To Author 11:59 p.m., July 25, 2019  
\* Camera Ready Paper 11:59 p.m., August 05, 2019

**Workshop Co-Chairs**

Andrea KUTICS, International Christian University, Japan  
Akihiko NAKAGAWA, International Christian University, Japan