Second Workshop on "Robust Subspace Learning and Applications in Computer Vision"

Robust subspace learning/tracking/clustering by decomposition into low-rank/sparse plus additive matrices/tensors provides a suitable framework for many computer vision applications such as video coding, key frame extraction, hyper-spectral video processing, dynamic MRI, motion saliency detection, background initialization and background/foreground separation. In this context, the first workshop RSL-CV hosted at ICCV 2015 aimed to propose novel robust subspace clustering/learning/tracking approaches, and adaptive and incremental algorithms in the continuity of the fundamental publication of Candes et al., which induced more than 500 papers in the field.

Even if progress were made, there are still main challenges which concern the fundamental design of efficient relaxed models and solvers which have to be with iterations as few as possible, and as efficient as possible. Furthermore, even if many efforts have been made to develop methods that perform well visually with reduced computational cost, no algorithm has emerged that is able to simultaneously address all of the key challenges that accompany real-world videos taken by static or moving cameras like illumination changes, dynamic backgrounds, bootstrapping that generate corrupted and missing data.

The goals of RSL-CV 2017 (http://rsl-cv.univ-lr.fr/2017/) are three-fold: 1) proposing robust subspace clustering/learning/tracking for computer vision applications, 2) proposing new adaptive and incremental algorithms for robust subspace clustering/learning/tracking to reach the requirements of real-time applications such as motion saliency, video coding and background/foreground separation, and 3) proposing robust algorithms to tackle key challenges in computer vision applications such as dynamic backgrounds and illumination changes for background/foreground separation.

Papers are solicited to address robust subspace clustering/learning/tracking based on matrix/tensor decomposition, to be applied in computer vision, including but not limited to the followings:

Robust Subspace Learning: RPCA, RMF, RMC	Structured Sparsity, Dynamic Group Sparsity
Robust Low Rank Factorization /Approximation/Recovery	Solvers (ALM, ADM, etc…),
	Closed form solutions
Robust Subspace Tracking	Efficient SVD algorithms
Robust Subspace Clustering	Multilevel RPCA
Decomposition in low-rank/sparse plus additive matrices/tensors	Incremental RPCA
Bayesian RPCA, Fuzzy RPCA	Real time implementation on GPU
Compressive Sensing	Embedded implementation
Dictionary Learning	Deep Learning

We encourage authors to evaluate their approach on at least one of the reference datasets for each application (Please see at http://rsl-cv.univ-lr.fr/2017/program/)

IMPORTANT DATES

Full Paper Submission Deadline: June 30, 2017 (for papers not submitted at ICCV)

July 25, 2017 (for papers that are awaiting for ICCV decisions)

Decisions to Authors: July 31, 2017

Camera-ready Deadline: August 25, 2017

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PUBLICATIONS

Accepted papers will be published in the ICCV 2017 Workshop Proceedings. Selected papers, after extensions and further revisions, will be published in a special issue in an international journal.

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