SLING Efficient algorithms for sustainable machine learning

Mon, February 28th, 2022, 3:00 p.m., DIBRIS - Room 508, via Dodecaneso 35, Genova.

Machine Learning and Vision

Structural Pattern Recognition meets Computer Vision: historical overview and new trends

Abstract.

Computer Vision Problems, such as object detection, object tracking, action recognition and so on, have been usually addressed through Statistical Pattern Recognition techniques. SVM, Regression or Neural Networks, are some examples of classical statistical techniques that have been used, quite effectively, in many application contexts of computer vision. Nevertheless, some attempts have been proposed using more complex data structures (notably graphs) for solving Computer Vision Tasks. First part of this talk will present some of these proposals, in the context of background subtraction problem, object tracking, people re-identification and action recognition. Recently, graphs have gained a lot of attention in the Computer Vision community thanks to the use of this kind of data within deep learning techniques. Graph Neural Networks have demonstrated their effectiveness in solving Computer Vision problems, and in some cases recent proposals have bridged the gap between statistical and structural pattern recognition. Second part of the talk will be devoted to illustrate some these examples.

Speaker

Donatello Conte

Université de Tours

Host: Nicoletta Noceti

contact: malga.unige@gmail.com

European Commission

European Research Council

SLING Efficient algorithms for sustainable machine learning

Mon, February 28th, 2022, 3:00 p.m., DIBRIS - Room 508, via Dodecaneso 35, Genova.

Donatello Conte received his Ph.D. degree in 2006 by a joint supervision between LIRIS laboratory of the INSA of Lyon (France) and MIVIA laboratory of the University of Salerno (Italy). He has been an Assistant Professor from 2006 to 2013, in Italy at the University of Salerno. From 2013 to date, he is Associate Professor at the Computer Science Laboratory of the University of Tours.

He is currently head of the Computer Science Department at Polytech Tours School of Engineering. Currently he is co-head of the RFAI team at the Computer Science Laboratory and he participates, as member and sometimes as local coordinator, to several regional projects on image and video analysis.

His main research fields are: structural pattern recognition (graph matching, graph kernels, combinatorial maps), video analysis (objects detection and tracking, trajectories analysis, behavioral analysis, etc.), and affective computing (emotion recognition, multimodality analysis for affective analysis, physiological measures by video analysis, etc.).

He is the author of more than 70 publications and reviewers in the main journals in his research field (PAMI, PR, CVIU, TIP, etc.). He is member of the Editorial Board of the Elsevier Journal Internet of Things, MDPI Journal of Imaging and he is Guest Editor for the Pattern Recognition Letters journal.
He has been co-chair of the International Workshop on Graph-basd Representation in Pattern Recognition (GbR2019) that was held in France in June 2019. He has been co-chair of the Video Processing for Human Behavioral Analysis (VP-HBA) Track at the 35th ACM Symposium on Applied Computing (SAC 2020).

Since 2016 he is member of the Governing Board of the French Association for Research in Technical Aids for the Disability (IFRATH). Since 2016 he is member of the Governing Board of the French Association for Pattern Recognition (AFRIF) and he has been association secretary since 2018. He is a member of the International IAPR Technical Committee 15 (dedicated to the promotion of graphs in the Pattern Recognition), for which he has just been appointed (February 2021) as chairman.

Host: Nicoletta Noceti

contact: malga.unige@gmail.com