



International Conference on Image Processing Theory, Tools & Applications



<http://www.ipta-conference.com/ipta22/>

Special Session Chairs:

Odemir Bruno, University of São Paulo, Scientific Computing Group, Brazil

bruno@ifsc.usp.br

João Batista Florindo, UNICAMP, Brazil

jbflorindo@me.unicamp.br

Lucas Ribas, University of São Paulo, Brazil

lucasribas@usp.br

Special session title:

Network Science in Computer Vision

Aims & Scope

Network science is an academic field which studies complex networks (structures based on the graph theory that present complex or non-linear behavior). Networks sciences have successful applications in many areas of knowledge that cover practically all fields of Science. The main reason behind the growing interest in Network Sciences lies in the fact that it shows a different perspective of traditional data analysis. During centuries, the scientific research paradigm was ruled by the reductionist approach. Scientific and technological advances increased the amount of data and also encouraged the development of powerful computers, which are capable of processing and storing this huge amount of data. In computer vision and image processing, the use of Network sciences demonstrated bringing advantages to the development of new methodologies that can improve the fields. This session is dedicated to the application of Network Sciences in computer vision and image processing. There are welcome works that use network science applied in computer vision and image processing. These works could be proposed as hand-craft computer vision methods based on complex networks or in the combination with neural networks for representation learning.

Topics of Interest

In this session, papers on the following research topics involving network sciences are welcome (but not limited to):

- *Image feature extraction*
- *Texture and Shape Analysis*
- *Interpreting and understanding neural networks*
- *Network modeling*
- *Image segmentation*
- *Image registration*
- *Pattern Recognition*