Overview:
An accurate reconstruction algorithm plays a vital role in modern imaging techniques. Reconstructing image is a central problem in many key applications includes; super-resolution imaging, x-ray tomography, ultrasound imaging, and magnetic resonance imaging. The process of image reconstruction typically requires solving the inverse problem that is ill-posed and large-scale and thus challenging to solve. The main challenge of this method is its sensitivity to measure noise in the input data, which will result in large artifacts in the reconstructed image with a higher cost in computational time. Thus, it is very important to develop a robust method which can improve reconstruction accuracy while maintaining real-time speed.

Real or near real-time processing capabilities are important in image reconstruction techniques for real world applications. The research field of real time image reconstruction is very active in image processing and computer vision, since it proposes the ability of overcoming some of the inherent resolution limitations of low-cost imaging sensors and generates better applications of the emergent capability of high-resolution displays.

Deep learning for image reconstruction and processing is a new area. Image reconstruction based deep learning can be efficiently performed by using neural networks, in which, weights are based on training data. This Special Issue opens to innovative ideas, the latest research and development of deep learning for real-time image processing. Papers on the design of new computational tools and methods for real-time image reconstruction and processing are welcome.

Hence, the target of this special issue is to provide a forum for researchers to focus on computational methods for real-time image reconstruction and processing. To do this, we invite papers (including a survey papers) in modeling, algorithm, software optimization, and application of deep learning-based real-time image processing to establish the latest efforts of relevant researchers.

The list of possible topics, but are not limited to:

- Real-time image and video reconstruction algorithms
- Real-time face reconstruction from depth images
- New deep learning models for real-time image reconstruction and processing
- New objective functions of deep learning for real-time image reconstruction
- Real-time MRI and X-ray image processing
- Real-time 3D image reconstruction, processing or segmentation
- Deep learning and Hybrid models for real-time computational methods
• Real-Time deep learning applications for image processing
• Survey/review of deep learning in real-time image reconstruction

Submission Guideline

Submitted papers should present original, unpublished work, relevant to one of the topics of the Special Issue. All submitted papers will be evaluated on the basis of relevance, significance of contribution, technical quality, and quality of presentation, by at least three independent reviewers (the papers will be reviewed following standard peer-review procedures of the Journal). Manuscripts are requested according to the Guide for Authors available from the online submission page of the Journal of Real-Time Image Processing (JRTIP) at https://www.editorialmanager.com/rtip/default.aspx. We invite the prospective authors to submit their manuscript, via the online submission system in the main journal page. Please make sure you mention in your cover letter that you are submitting to this special issue (ADLIR).

Important Dates:

• Paper submission due: April 30, 2019
• First notification: June 30, 2019
• Revision submission due: August 15, 2019
• Final decision: October 30, 2019
• Publication date: December 2019 (Tentative)

Note: accepted papers are made available online as Online First Articles soon after acceptance.

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