Call for Papers

Themed Series of APSIPA Trans. on Signal and Information Processing on

"**Three-dimensional Point Cloud Data Modeling, Processing, and Analysis**"

Introduction

The rapid development of three-dimensional (3D) sensing technologies has led to an exponential growth in the availability of 3D point cloud data, consisting of a set of 3D coordinates indicating the spatial locations of points to explicitly represent the geometric structures of objects/scenes, associated with additional attribute information, e.g., color and normal. 3D point clouds are widely used in various fields, such as immersive telepresence, virtual/augmented reality, geographic mapping, and autonomous driving. Efficient and accurate modeling, processing, and analysis of 3D point cloud data are essential for extracting meaningful information and advancing applications in these domains. Unfortunately, unlike 2D images/videos defined on the regular Euclidean structure, 3D point clouds are sets of irregular and unordered spatial points with the underlying structure in a non-Euclidean space, posing significant challenges in developing algorithms. This themed series aims to bring together researchers and practitioners to showcase the latest advancements, methodologies, and applications related to 3D point cloud data modeling, processing, and analysis.

Topics of Interest

We invite researchers to submit original research articles and reviews that address the following topics (but are not limited to):

- Surface reconstruction and mesh generation from point clouds
- Deep learning approaches for point cloud data
- Quality assessment and evaluation of 3D point cloud data
- Compression of 3D point cloud data
- Point cloud restoration, e.g., completion, upsampling, denoising, etc.
- Point cloud analysis for object detection, classification, and scene segmentation
- Point cloud acquisition, registration, and fusion with other sensing modalities
- Theories and techniques for irregularly sampled signals
- Applications of 3D point clouds in robotics, autonomous systems, and virtual reality

Each paper submitted to this series will be reviewed using the first-come-first-serve principle. The target of the first round of decision-making is 5 weeks, and the period of the first round of revision is 2 weeks. The paper will be accepted between 8-12 weeks (depending on 1 or 2 revisions).

Once the submission window has closed, accepted papers ready for publication will be published online. The series will be accompanied by an editorial written by the guest editorial team. If a paper cannot be accepted within the publication window, it will be considered as a regular paper.

If you are interested in paper submission, please refer to:
https://nowpublishers.com/Journal/AuthorInstructions/SIP

If you have any further questions, please contact jh.hou@cityu.edu.hk

Important Dates

Submission Window: May 1, 2024 to September 30, 2024

Publication Window: September 30, 2024 to November 30, 2024

Guest Editorial Team

- Junhui Hou, City University of Hong Kong, Hong Kong SAR, China, jh.hou@cityu.edu.hk
- Hui Yuan, Shandong University, China, huiyuan@sdu.edu.cn
- Zhan Ma, Nanjing University, China, mazhan@nju.edu.cn
- Shan Liu, Tencent Media Lab, USA, shanl@global.tencent.com