



Special Track: **Autonomous Anomaly Detection in Images**

18th International Symposium on Visual Computing

Lake Tahoe, NV, USA

October 16-18, 2023

<http://www.isvc.net>

Scope

Detecting image anomalies is even more difficult than detecting anomalies in structured datasets or from time series data. It is partly because visual features are more difficult to capture than numerical features in structured datasets. That is where Deep Learning (DL) techniques come in, as deep learning models can perform auto-feature extraction for unstructured data like images. The track will focus on the application of anomaly detection algorithms to identify and classify anomalous images.

This special track invites research contributions on innovative advances in anomaly detection algorithms, including deep learning-based approaches and other methods. Particular interests are challenges associated with applying anomaly detection in the field of image processing, such as the need for manual annotation and the difficulty of dealing with large datasets, along with exploring the application of anomaly detection in various contexts. This will include applications such as automated vehicle systems, medical image analysis, facial recognition, and automated surveillance.

The authors of all accepted papers in the special track will be invited to submit an extended version of their work for review and possible publication in a Special Issue of the **Mathematical Biosciences and Engineering** journal (published by the American Institute of Mathematical Sciences) with an expected submission deadline in the second quarter of 2024.

Topics

The topics of interest include, but are not limited to:

- Video Surveillance Anomaly Detection
- Traffic Monitoring and Pattern Analysis
- Autonomous or Semi-Autonomous Vehicles – Automatic Unwanted Object Detection
- Visual Driving Assistance Systems
- Image Preprocessing for Anomaly Detection
- Feature Extraction and Representation for Anomaly Detection
- Supervised and Unsupervised Anomaly Detection in Images
- Vehicle Detection, Classification, and Tracking, Authorized License Plate Recognition
- Pedestrian Detection and Tracking
- Urban Driving Assistance Systems, Road Sign Detection and Speed Assist
- Intersection Safety Monitoring and Analysis
- Vision Based Localization for Autonomous Vehicles
- Deep Learning Techniques for Anomaly Detection in Images
- Anomaly Detection in Video Streams
- Anomaly Detection in Medical Images
- Anomaly Detection Using Generative Adversarial Networks
- Evaluation Metrics for Anomaly Detection in Images
- Applications of Anomaly Detection in Images

Organizers (incomplete list)

Aishwarya Alesh, Adobe, San Jose, CA, USA

Meenal Dugar, Pennsylvania State University, University Park, PA, USA

Important Dates

Same as ISVC deadlines. Please visit: <http://www.isvc.net/>

Paper Submission Instructions

Same as ISVC paper submission instructions, see <http://www.isvc.net/index.php/paper-submission/>

