With the rapid development of scientific technology, vision-assisted algorithms such as image recognition and object detection, have been increasingly applied in numerous emerging applications, achieving impressive performance. Quality perception strongly affects the performance of vision-assisted algorithms. For example, deep-based face recognition networks that were trained on clear images/videos are very likely to fail in compressed images/videos. As one of the main components, subjective methods of vision-assisted quality perception can provide an ultimate indicator that can rank different algorithms of image enhancement or compression through databases which have been established by widely gathering ground truth human scores. Relatively, objective methods can search the best model parameters of image/video processing approaches as an optimization criterion, which also have the merits of low cost and fast implementation over subjective methods. Quality perception can be used in some vision-assisted technologies in numerous emerging applications such as atmospheric quality, river quality, ocean quality, soil quality and food quality, which can aid the subsequent quality improvement based on policy adjustment. Vision-assisted quality perception has led to momentous changes to many emerging applications.

This Special Issue solicits novel and high-quality papers to present reliable solutions and technologies about subjective and objective quality perception of vision-assisted technologies and their applications.

Topics of interest include but are not limited to:

- Influence of quality perception on vision-assisted algorithms
- Compressed video classification
- Noised image recognition
- Object detection under JPEG or other compression
- Visual tracking with jitter noise
- Subjective quality perception criteria
- Absolute evaluation scale
- Relative evaluation scale
- Single/double stimulus scale
- Quality perception database
- Objective quality perception methods
- Naturalness statistic modeling
- Quality perception and machine learning
- Underwater imaging
- Virtual reality
- Augmented reality
- Video monitoring
- Atmospheric, river and soil quality
- Food quality

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