

# Emerging Technologies Group

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VQEG Meeting, July 1-7, 2024



# General Information

- The main focus is devoted to exploring new areas and research domains that impact the current ongoing efforts at VQEG.
- Webpage: <https://vqeg.org/projects/emerging-technologies-group-etg/>
- We typically invite researchers from different domain to know about the VQEG and also to give a talk VQEG.
- Main areas we want to explored:
  - ML based compression, quality assessment and enhancement.
  - Greening of streaming.

# Previous Presentations

Since Last VQEG Meeting (Dec 2023):

**“Robust Perceptual Similarity Metrics for Images and Videos”**, by Abhijay Ghildyal on 26<sup>th</sup> of Feb 2024.

## Older Presentations:

- On the work by MPEG Systems Smart Contracts for Media Subgroup
- Introduction to NTIRE Workshop on Quality Assessment for Video Enhancement
- Perception: The Next Milestone in Learned Image Compression
- Compression with Neural Fields
- Sustainable/Green Video Streaming
- VQEG Spring Meeting June 2023
  - Presentations:
    - Towards Real-Time 4K Image Super-Resolution (Marcos Conde, University of Würzburg)
    - Learned-based image/video compression (David Minnen, Google)
    - **Panel Discussion**
      - Zhi Li (Netflix), Ioannis Katsavounidis (Meta), Richard Zhang (Adobe), Mathias Wien (RWTH Aachen).

# Scheduled Presentations

## Tuesday, 15:05-17:00 BST

- Presentation **116: Assessing Quality of AI Generated Images and Videos**, Abhijay, Portland State University
- Presentation **126: Augmented Reality Head-Up displays and digital rear view mirrors in cars**, Kjell Brunnström, RISE
- Presentation **137: Energy-aware Spatial and Temporal Resolution Selection for Video Streaming**, Mohammad Ghasempour, University of Klagenfurt

## Wed, 15:05-17:00 BST (Last Presentation)

- Presentation **142: Updates on testing activities in MPEG VQA** by Mathias Wien, RWTH Aachen University

## AIM 2024 UHD-IQA Challenge: Pushing the Boundaries of Blind Photo Quality Assessment

**Objective:** Predict the subjective quality of high-resolution images, particularly those at the upper end of the quality scale.

**Dataset:** The full dataset consists of 6073 images, which are then divided into the following three splits: training (4269 images), and validation (904 images) and test (900 images).

The training data consists of 4K UHD images covering a wide range of content which are subjectively annotated. The mean opinion scores (MOS) are provided. The training data is already made available to the registered participants.

The test set will consist of 900 images and will not be released to the challenge participants but will be used by the challenge organizers to evaluate the submitted models for the selection of final winners.

**Prizes:** The competition winners and runner-ups will receive prizes from a pool of two brand-new PlayStation 5 and three Sony WH-1000XM5 headphones.

# Contact

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