DOUNIA HAMMOU

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Personal webpage LinkedIn Github ORCID Google scholar

PUBLICATIONS

- Dounia Hammou, Lukáš Krasula, Christos G. Bampis, Zhi Li, Rafał K. Mantiuk. **The effect of viewing distance and display peak luminance – HDR AV1 video streaming quality dataset**. Under review. 2024.

- Dounia Hammou, Lukáš Krasula, Christos G. Bampis, Zhi Li, Rafał K. Mantiuk. **Image quality assessment across viewing distances: A comparison study of CSF-based and rescaling-based metrics**. Human Vision and Electronic Imaging Conference, IS&T International Symposium on Electronic Imaging (EI). 2024.

- Maliha Ashraf, Alejandro Sztrajman, Dounia Hammou, Rafał K. Mantiuk. **Color calibration methods for OLED displays**. Color Imaging XXIX Conference, IS&T International Symposium on Electronic Imaging (EI). 2024.

- Dounia Hammou, Lukáš Krasula, Christos G. Bampis, Zhi Li, Rafał K. Mantiuk. **Comparison of metrics for predicting image and video quality at varying viewing distances**. IEEE international workshop on multimedia signal processing (MMSP). 2023. DOI: 10.1109/MMSP59012.2023.10337748

- Rafał K. Mantiuk, Dounia Hammou, Param Hanji. **HDR-VDP-3: A multi-metric for predicting image differences, quality and contrast distortions in high dynamic range and regular content**. arXiv preprint arXiv:2304.13625. 2023.

- Dounia Hammou, Sid Ahmed Fezza, Wassim Hamidouche. **EGB: Image Quality Assessment Based on Ensemble of Gradient Boosting**. Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Workshops, 2021, pp. 541-549. DOI: 10.1109/CVPRW53098.2021.00066

EDUCATION

PhD in Computer Science

University of Cambridge

Oct 2022 – Sep 2026 Cambridge, United Kingdom

- Second-year PhD student under the supervision of Rafał K. Mantiuk.
- PhD title: Video quality assessment for efficient streaming of high dynamic range content across display and viewing conditions.

Telecommunication and Digital Technologies Engineer

National Institute of Telecommunication and ICT

Sep 2017 – Jul 2022 Oran, Algeria

- Valedictorian for all five years.
- Final year project: Federated learning for image/video quality assessment.

SKILLS

Imaging:

- Image and video processing, perceptual image and video quality assessment, human visual perception, contrast sensitivity functions, high dynamic range (HDR)

Data Science:

- Statistics and probabilities, machine learning, deep learning, federated learning, optimisation, data analysis, data visualisation

Data Science Frameworks:

- Pytorch, Tensorflow, Keras, Tensorflow Federated

Programming Languages:

- Python, Matlab, Java

Computer Graphics Basics:

- Ray Tracing, rasterisation, OpenGL

Web Development Basics:

- HTML/CSS, Bootstrap, JavaScript, PHP, ExpressJS, Rest API

Database Management System:

- MySQL, MongoDB

Telecommunication & Networking Basics:

- Cisco routing & switching, Linux, cyber Security, virtualisation, cloud Computing, signal processing

AWARDS

WACV 2023 Challenge

- First place at “The HDR Video Quality Measurement Grand Challenge”.

ICIP 2020 Challenge

- Second place at “The Real-time distortion classification in laparoscopic videos Challenge”.

CVPR 2021 Challenge

- Eleventh place at “The NTIRE Perceptual Image Quality Assessment Challenge”.

MICCAI 2021

- Selected in the MICCAI Student participation Awards to attend the MICCAI conference.

WORK EXPERIENCE

Research Intern

INSA VAADER /IETR laboratory

Mar – Jul 2022 | Rennes, France (Remote)

- Research internship for graduation project under the supervision of Dr. Wassim Hamidouche & Dr. Sid Ahmed Fezza.
- Project title : Federated learning for image/video quality assessment.

Machine Learning Intern

Eurl Kitabquiz

11 Jul – 31 Jul 2021 | Chlef, Algeria

- Conception of children book recommendation for the Quizzito application.
- Deployment and implementation of the recommended system using users similarity.

LANGUAGES

Arabic – Native ●●●●●

English – IELTS : C1 ●●●●○

French – TCF SO : C1 ●●●●○

REFEREES

Professor Rafał K. Mantiuk

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Personal website