

# DOUNIA HAMMOU

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St Edmund's College  
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## 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**. IEEE International Conference on Quality of Multimedia Experience (QoMEX). 2024. [Project Webpage]
- 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**. 2023. DOI: 10.48550/arXiv.2304.13625.
- 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.

## 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.

- Final year project: Federated learning for image/video quality assessment.

## 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 Rafal K. Mantiuk  
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 Personal website