

2022 14th International Conference on Quality of Multimedia Experience (QoMEX 2022)

**Lippstadt, Germany
5-7 September 2022**



**IEEE Catalog Number: CFP22QOM-POD
ISBN: 978-1-6654-8795-5**

**Copyright © 2022 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP22QOM-POD
ISBN (Print-On-Demand):	978-1-6654-8795-5
ISBN (Online):	978-1-6654-8794-8
ISSN:	2372-7179

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

The Impact of Network Impairments on the QoE of WebRTC applications: A Subjective study	1
<i>Gulnaziye Bingol, Luigi Serreli, Simone Porcu, Alessandro Floris, Luigi Atzori</i>	
Subjective QoE Evaluation of User-Centered Adaptive Streaming of Dynamic Point Clouds	7
<i>Shishir Subramanyam, Irene Viola, Jack Jansen, Evangelos Alexiou, Alan Hanjalic, Pablo Cesar</i>	
A Vital Improvement? Relating Google's Core Web Vitals to Actual Web QoE	13
<i>Nikolas Wehner, Monisha Amir, Michael Seufert, Raimund Schatz, Tobias Hofffeld</i>	
Designing Real-time, Continuous QoE Score Acquisition Techniques for HMD-based 360° VR Video Watching	19
<i>Tong Xue, Abdallah El Ali, Irene Viola, Gangyi Ding, Pablo Cesar</i>	
Investigation of Personal Space perception in Augmented Reality	25
<i>Maurizio Vergari, Robert Spang, Tanja Kojić, Britta Hesse, Sebastian Möller, Jan-Niklas Voigt-Antons</i>	
Multisensory Immersive Experiences: A Pilot Study on Subjective and Instrumental Human Influential Factors Assessment	31
<i>Reza Amini Gougeh, Tiago H. Falk</i>	
Enrichment of Product Presentation Video: Methods and Impacts on User Experience	37
<i>Weiyue Gao, Wei Xiang, Xuanhui Liu, Yingying Huang, Lingyun Sun</i>	
Impacts of Presenting Extra Information in Short Videos via Text and Voice on User Experience	43
<i>Weiyue Gao, Wei Xiang, Xuanhui Liu, Xueyou Wang, Lingyun Sun</i>	
Waiting along the Path: How Browsing Delays Impact the QoE of Music Streaming Applications	49
<i>Anika Seufert, Ralf Schweifler, Fabian Poignée, Michael Seufert, Tobias Hofffeld</i>	
Modeling of Energy Consumption and Streaming Video QoE using a Crowdsourcing Dataset	55
<i>Christian Herglotz, Werner Robitza, Matthias Kränzler, Andre Kaup, Alexander Raake</i>	
An Interactive Annotation Tool for Perceptual Video Compression	61
<i>Evgenya Pergament, Pulkit Tandon, Kedar Tatwawadi, Oren Rippel, Lubomir Bourdev, Bruno Olshausen, Tsachy Weissman, Sachin Katti, Alexander G. Anderson</i>	
On the Impact of Spatial Rendering on Point Cloud Subjective Visual Quality Assessment	67
<i>Davi Lazzarotto, Michela Testolina, Touradj Ebrahimi</i>	
Comparison of Crowdsourced and Remote Subjective User Studies: A Case Study of Investigative Child Interviews	73
<i>Saeed Shaftee Sabet, Cise Midoglu, Syed Zohaib Hassan, Pegah Salehi, Gunn Astrid Baugerud, Carsten Griwodz, Miriam Johnson, Michael Alexander Riegler, Pål Halvorsen</i>	
Evaluating the Robustness of Speech Evaluation Standards for the Crowd	79
<i>Edwin Gamboa, Babak Naderi, Matthias Hirth, Sebastian Möller</i>	
QoE of Frame Stalls in Remote 6-DOF VR	85
<i>Viktor Kelkkanen, David Lindero, Markus Fiedler, Hans Jürgen Zepernick, Thi My Chinh Chu</i>	

Audiovisual Database with 360° Video and Higher-Order Ambisonics Audio for Perception, Cognition, Behavior, and QoE Evaluation Research.....	91
<i>Thomas Robotham, Ashutosh Singla, Olli S. Rummukainen, Alexander Raake, Emanuël A. P. Habets</i>	
The Storytime Dataset: Simulated Videotelephony Clips for Quality Perception Research	97
<i>Robert P. Spang, Jan-Niklas Voigt-Antons, Sebastian Möller</i>	
Quality evaluation of the JPEG Pleno Holography Call for Proposals response.....	103
<i>João Prazeres, Antonin Gilles, Raees Kizhakkumkara Muhammad, Tobias Birnbaum, Peter Schelkens, Antonio M. G. Pinheiro</i>	
On the Performance of Temporal Pooling Methods for Quality Assessment of Dynamic Point Clouds.....	109
<i>Pedro Garcia Freitas, Mateus Gonçalves, Johann Homonnai, Rafael Diniz, Mylène C.Q. Farias</i>	
Deep Learning-Based Light Field Image Quality Assessment using Frequency Domain Inputs.....	115
<i>Sana Alamgeer, Mylène C.Q. Farias</i>	
The Effects of Network Latency on Counter-strike: Global Offensive Players	121
<i>Xiaokun Xu, Shengmei Liu, Mark Claypool</i>	
Generalized Westerink-Roufs Model for Predicting Quality of Scaled Video.....	127
<i>Nabajeet Barman, Rahul Vanam, Yuriy Reznik</i>	
Video Encoding Complexity Characterization.....	133
<i>Shahid Mahmood Satti, Matthias Obermann, Christian Schmidmer, Michael Keyhl</i>	
Perception of Audio Quality and Audio-on-Audio Interference in Sound Zones	137
<i>Line Hermansen, Søren Bech</i>	
Dialogue Enhancement and Listening Effort in Broadcast Audio: A Multimodal Evaluation.....	141
<i>Matteo Torcoli, Thomas Robotham, Emanuël A. P. Habets</i>	
On the Number of Subjects Needed for 360° Video Quality Experiments: An SOS Based Analysis.....	145
<i>Majed Elwardy, Hans-Jürgen Zepernick, Thi My Chinh Chu</i>	
Regularized Maximum Likelihood Estimation of the Subjective Quality from Noisy Individual Ratings.....	149
<i>Lohic Fotio Tiotsop, Antonio Servetti, Marcus Barkowsky, Enrico Masala</i>	
Better Experience, Better Performance? Results of a Study on VR Training Effectiveness in Healthcare.....	153
<i>Till Bieg, Raimund Schatz, Sebastian Egger-Lampl, Benjamin Roszipal, Klara Kinzer</i>	
Human Influential Factors Assessment During At-Home Gaming with an Instrumented VR Headset	157
<i>Marc-Antoine Moinnereau, Alcyr Oliveira, Tiago H. Falk</i>	
See hear now: is audio-visual QoE now just a fusion of audio and video metrics?.....	161
<i>Helard B. Martinez, Andrew Hines, Mylène C.Q. Farias</i>	
Between Two and Six? Towards Correct Estimation of JND Step Sizes for VMAF-based Bitrate Laddering	165
<i>Hadi Amirpour, Raimund Schatz, Christian Timmerer</i>	

Crowdsourced Quality Assessment of Enhanced Underwater Images - a Pilot Study	169
<i>Hanhe Lin, Hui Men, Yijun Yan, Jinchang Ren, Dietmar Saupe</i>	
Quality of Experience in the Metaverse: An Initial Analysis on Quality Dimensions and Assessment	173
<i>Simone Porcu, Alessandro Floris, Luigi Atzori</i>	
When Every Millisecond Counts: The Impact of Delay in VR Gaming	177
<i>Saeed Shafiee Sabet, Ragnhild Eg, Kjetil Raaen, Muhammad Oasim, Michael Riegler, Pål Halvorsen</i>	
VRstalls: A Dataset on the QoE of Frame Stalls in 6-DOF VR	181
<i>Viktor Kelkkanen, David Lindero, Hans-Jürgen Zepernick, Markus Fiedler, Thi My Chinh Chu</i>	
Performance of ITU-T P.1204.4 on Video Encoded with AV1, AVS2, VVC	184
<i>Silvio Borer</i>	
QoE Assessment for Multi-Video Object Based Media	188
<i>Tomasz Lyko, Yehia Elkhatib, Michael Sparks, Rajiv Ramdhany, Nicholas Race</i>	
Human vs. GPT-3: The challenges of extracting emotions from child responses	192
<i>Myrthe Lammerse, Syed Zohaib Hassan, Saeed Shafiee Sabet, Michael Alexander Riegler, Pål Halvorsen</i>	
Compensating for Latency in Cloud-based Game Streaming using Attribute Scaling	196
<i>Xiaokun Xu, Michael Bosik, Adam Desveaux, Alejandra Garza, Alex Hunt, Cameron Person, James Plante, Joseph Swetz, Nina Taurich, Brian Clark, Doris Hung, Philip Lamoureux, Mark Claypool</i>	
Data - Driven Study of Long - Term Gaming Experience.....	200
<i>Jens Helge Reelfs, Oliver Hohlfeld</i>	
BiLSTM-based Quality of Experience Prediction using Physiological Signals.....	204
<i>Sowmya Vijayakumar, Ronan Flynn, Peter Corcoran, Niall Murray</i>	
A Novel Spherical Video Quality Metric for 360° Video Coding.....	208
<i>Jayasingam Adhuran, Chathura Galkandage, Gosala Kulupana, Anil Fernando</i>	

Author Index