Speeding it Up: Perception of High-Frame Rate Videos

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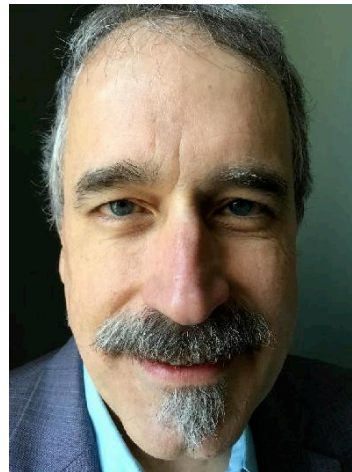Austin, Texas USA
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ABSTRACT

Modern streaming video providers continuously seek to improve consumer experiences by delivering higher-quality, denser content. An important direction that bears study is high-frame rate (HFR) videos, which present unique problems involving balances between frame rate, video quality, and compression. I will describe new large-scale perceptual studies that we have conducted that are focused on these issues. I will also describe new computational video quality models that address highly practical questions, such as frame rate selection versus compression, and how to combine space-time sampling with compression. My hopes are that these contributions will help further advance the global delivery of HFR video content.

Author Keywords

High frame rate video; video quality; temporal video sampling; human perception

BIOGRAPHY

Al Bovik is the Cockrell Family Regents Endowed Chair Professor at The University of Texas at Austin. His research interests land squarely at the nexus of visual neuroscience and digital pictures. His many international honors include the 2019 Progress Medal of the Royal Photographic Society, the 2019 IEEE Fourier Award, the 2017 OSA Edwin H. Land Medal, a 2015 Primetime Emmy Award from the Academy of Television Arts and Sciences, and the Norbert Wiener and 'Sustained Impact' Awards of the IEEE Signal Processing Society.