

# New Challenges for Image Quality: A New Database and a New Modality

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In this talk I will discuss a couple of emerging topics on the frontier of image quality research. First I'll talk about a challenging new image quality database that we have recently released. Unlike our prior experimental work, the new database focuses on the authentic, real-world distortions that occur when capturing digital photographs. We conducted a massive crowdsourcing study to gather human subject scores on more than a thousand mobile pictures captured around the world. All leading no-reference picture quality prediction models are steeply challenged by this database. Second, I'll discuss our recent efforts on modeling the natural statistics of infrared (IR) images, and using these models for a variety of interesting tasks, including IR picture quality, recognition on IR images, and IR image identification. I'll also discuss our broader plans to evaluate pictures delivered by other security-directed modalities, such as x-ray imagers and millimeter-wave imagers.

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**Al Bovik** is the Cockrell Family Regents Endowed Chair Professor at The University of Texas at Austin. He has received a number of major awards including a Primetime Emmy Award for the Academy of Television Arts and Sciences and the 'Society Award' of the IEEE Signal Processing Society. His books include *The Handbook of Image and Video Processing*, *Modern Image Quality Assessment*, and two recent books, *The Essential Guides to Image and Video Processing*.

Al co-founded and was the longest-serving Editor-in-Chief of the *IEEE Transactions on Image Processing* and created the *IEEE International Conference on Image Processing* in Austin, Texas, in November, 1994.