Keynote Talk 2: Eye Movement Detection Sensors, Biometrics, and Health Assessment

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Abstract:
The usage of eye tracking sensors is expected to grow in virtual (VR) and augmented reality (AR) platforms. In my talk I will discuss the past and present status of eye tracking sensors, along with my vision for future development. I will also discuss applications that necessitate the presence of such sensors in VR/AR devices, along with applications that would have the power to benefit society on a large scale when VR/AR solutions are widely adopted.

Short Biography:
Dr. Komogortsev is currently a tenured Professor at Texas State University. Dr. Komogortsev has received his B.S. in Applied Mathematics from Volgograd State University, Russia, and M.S./Ph.D. degree in Computer Science from Kent State University, Ohio. He has previously worked for such institutions as Johns Hopkins University, Notre Dame University, and Michigan State University. Dr. Komogortsev conducts research in eye tracking with a focus on cyber security (biometrics), health assessment, human computer interaction, usability, and bioengineering. This work has thus far yielded more than 100 peer reviewed publications and several patents. Dr. Komogortsev's research was covered by the national media including NBC News, Discovery, Yahoo, Livesience and others. Dr. Komogortsev is a recipient of four Google awards including two Virtual Reality Research Awards (2016, 2017), Google Faculty Research Award (2014), and Google Global Faculty Research Award (2018). Dr. Komogortsev has also won National Science Foundation CAREER award and Presidential Early Career Award for Scientists and Engineers (PECASE) from President Barack Obama on the topic of cybersecurity with the emphasis on eye movement-driven biometrics and health assessment. In addition, his research is supported by the National Science Foundation, National Institute of Health, National Institute of Standards, Sigma Xi the Scientific Research Society, and various industrial sources. Dr. Komogortsev's current grand vision is to push forward eye tracking solutions in the future virtual and augmented reality platforms as enablers of more immersive experiences, security, and assessment of human state.