

Oral Presentation

[PRJ7/LCT8]Eyewear

Special Topics of Interest on AR/VR and Hyper Reality

Chair: Dieter Cuypers (CMST)

Co-Chair: Subaru Kawasaki (JNC Korea)

Fri. Nov 29, 2019 3:00 PM - 4:20 PM Room 108 (1F)

4:00 PM - 4:20 PM

[PRJ7/LCT8-4]Ferroelectric Liquid Crystal Dammann Grating: for LiDAR Applications

*Zhengnan YUAN¹, Zhibo SUN¹, Abhishek K SRIVASTAVA¹ (1. The Hong Kong University of Science and Technology (Hong Kong))

Keywords:Ferroelectric liquid crystals, Dammann grating, 3D-imaging, LiDAR

We propose a ferroelectric liquid crystal Dammann grating (FLCDG) based polarization modulated depth-mapping system. Innovatively, FLCDG is used as high-speed shutter in this system. The application of FLCDG enables LiDAR as one-shot capturing system instead of iterative scanning. Moreover, the proposed device shows a fast data-collection time period ($50\mu s$) for per 49 points that can be further increased depending on the damman grating, and provide low cost solution to the problem.