
Research on 3D measuring technology based on structured light illumination

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Optical non-contact 3D measuring technology based on structured light projection (or illumination) has been deeply studied and widely used in various industries fields. Founded in 1988 by Professor Su Xianyu, 3D Sensing and Machine Vision Laboratory of Sichuan University has taken the lead in conducting 3D measuring research based on structured light lighting [1] in China and has been actively promoting the application of scientific research results. The report reviewed some research achievements made by this research group in the field of computational optical imaging in recent years, and described the research progress in dynamic 3D measuring [2,3] and scattering imaging technology by combining structured light illumination, fringe phase analysis and deep learning algorithms [4]. It includes the basic principle, implementation scheme and application of such these works.

References

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Short Bio:



Qican Zhang graduated from Sichuan University in 2005 and received his doctor degree in Optical Engineering and is a full professor in the same university now.

He is a senior member of Chinese Optical Society (COS), member of the Optical Society of America (OSA), member of International Society for Optical Engineering (SPIE), committee member of Opto-electronic Technology Committee of COS, and committee member of COES. His research interests include optical 3D sensing, computer vision, optical information processing and related applications.