

Optoelectronic imaging and its applications

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Perseverance Rooms 1 & 2

Optoelectronic imaging has attracted much attention in various fields, such as microscopy and security. Nowadays, a number of optoelectronic imaging systems have been developed, such as based on digital holography, phase retrieval algorithms, diffractive imaging and single-pixel imaging. In this talk, various optoelectronic imaging systems will be introduced, and imaging principles are presented. The potential applications, such as optical encoding and authentication, are discussed.

Dr Chen Wen received his Ph.D. degree in National University of Singapore, Singapore, in 2010. Subsequently, Dr Chen has conducted extensive research as Research Associate (2010) and Research Fellow (2011-2015) in the Department of Electrical and Computer Engineering, National University of Singapore, Singapore. He was a visiting scholar in Rowland Institute, Harvard University, U.S.A. from March 2013 to June 2013.

Dr Chen has published more than 60 international journal and conference papers, and some publications have been highlighted or reported, such as AIP press release. Dr Chen fulfills many professional services, and is an active reviewer for many important journals in his research field. He actively attends academic activities, and was awarded to attend Global Young Scientists Summit @one-north2014.

Dr Chen's current research interests focus on information security, optical encryption and authentication, applied cryptography algorithms, designs of optoelectronic systems, quantitative phase retrieval, numerical reconstruction, digital holography, computer-generated hologram, fringe projection, optical imaging, microscopy, non-destructive evaluation/test, signal/image processing and compressive sensing.

