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EDUCATION

Jan 2016-April 2020 PhD, Department of Mechanical Engineering, **National University of Singapore**

Sept 2011-June 2015 Bachelor, Department of Measurement Control and Information Technology, **Beihang University**

AWARDS

Research Scholarship, NUS (2016 - 2020)

National Scholarship of China (2013)

First-prize Scholarship of Academic Performance of Beihang University (2012, 2013, 2014)

EXPERIENCE

Mar 2022-Current Senior Engineer at Seagate Singapore International Headquarters Pte. Ltd. The role involves working within a multidisciplinary team to carry out machine vision development for assembly equipment. Use Halcon and Cognex to implement rule-based and machine learning based vision algorithms.

Feb 2020-Mar 2022 Software Engineer at Semiconductor Technologies & Instruments Pte Ltd. The role involves working within a multidisciplinary team to carry out image processing / computer vision algorithm development for automatic wafer inspection equipment. Take charge of modules such as Wafer Edge Defect Inspection, 3D Inspection using Laser / Confocal Microscopy, and Deep Learning Inspection using Cognex.

Jan 2016-Feb 2020 PhD Candidate at ME Department, NUS. Research interests include Phase retrieval Techniques for Surface, Displacement and Strain Measurement by Optical Coherent Methods and Optical Encryption. Experienced in C++ as using CUDA based GPU acceleration on research; experienced in Building Optics Experiment Platforms related to Laser Interference and Spatial Light Modulator.

Jan 2016-Jan 2019 Teaching Assistant at NUS for modules including Mechanics of Machines, Engineering Principles and Practice, and Mechanics of Materials.

Aug 2015-Nov 2015 Assistant Manager at Head Aerospace Inc., Beijing. File translation and website maintenance.

Feb 2015-June 2015 Research student at Precision Opto-mechatronics Technology Lab of Beihang University. Participate in the lab project: On-train Dynamic Rail Wear Measurement System.

PUBLICATIONS

[1] A. He and C. Quan, "Wavefront correction for spatial nonuniformity of the liquid crystal on silicon based spatial light modulator", **Optics and Lasers in Engineering**, vol. 121, pp. 377-388, 2019.

[2] A. He and C. Quan, "An improved principal component analysis based region matching method for fringe direction estimation," **Optics Communications**, vol. 413, pp. 87-102, 2018.

[3] A. He, B. Deepan, and C. Quan, "Simplified paraboloid phase model-based phase tracker for demodulation of a single complex fringe," **Applied Optics**, vol. 56, pp. 7217-7224, 2017.