

# He Aohan

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## EDUCATION

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**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

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Research Scholarship, NUS (2016 - 2020)

National Scholarship of China (2013)

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

## EXPERIENCE

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**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 CognexVisionPro.

**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

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[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.

[4] Y. Xiong, A. He, and C. Quan, "Security analysis of a double-image encryption technique based on an asymmetric algorithm," **JOSA A**, vol. 35, pp. 320-326, 2018.