

Xiaofei Wu

updated Jan 1th, 2016

PERSONAL

Address: Room 512, Chow Yei Ching Bldg, Pokfulam, Hong Kong
Phone and Email: +852 2859 2696 | xiaofei@eee.hku.hk
Web: <http://www.eee.hku.hk/~xiaofei>

EDUCATION

The University of Hong Kong, Hong Kong Aug., 2016 (Expected)

Ph.D Candidate, Department of Electrical and Electronic Engineering

Research field: ``Computational Lithography" | Advisor: Prof. **Edmund Y. Lam**

Huazhong University of Science and Technology, Wuhan, P. R. China Mar., 2012

M.S., Department of Mechatronic Engineering

Research field: ``Optical lithography" | Advisor: Prof. **Shiyuan Liu**

Thesis: Methods of mask pattern optimization for optical lithography with partially coherent illumination

Huazhong University of Science and Technology, Wuhan, P. R. China Fall, 2009

B.E., Department of Mechanic design, Manufacturing, and Automation

GPA: 87.0/100

PROFESSIONAL EXPERIENCES

Research Assistant, Computational Lithography Mar., 2012 -- Present

Imaging System Laboratory, University of Hong Kong

Teaching Assistant, Tutor for ENGG1203 Spring, 2014 & 2015

Dept of Electrical and Electronic Engineering, University of Hong Kong

R&D Engineer Intern, Optical proximity correction Mar.-Jun., 2010& Sept.-Nov., 2011

Shanghai Micro Electronics Equipment (SMEE) Co., Ltd, Shanghai

Research Assistant, Lithography simulation Sept., 2009--Mar., 2012

Wuhan National Laboratory for Optoelectronics, Wuhan

HONORS AND AWARDS

ECS Best Student Paper, 1st place	CSTIC	2015
Outstanding Teaching Assistant	HKU	2014
Best Master Thesis Award	Ministry of Education	2014
Postgraduate Scholarship	HKU	2012-2016
Outstanding Paper Awards	HUST	2010
Graduate Full Scholarship	HUST	2009-2012
Outstanding Graduate Student	HUST	2009
Outstanding Student Leader	HUST	2007, 2008

LANGUAGES

Mandarin: Mothertongue

English: Full professional

Cantonese: Basic Knowledge

COMPUTER SKILLS

Programming: familiar with Python, Matlab, Latex, Vim; elementary with C, C++, C#
OS: Windows, Linux, Mac OSX

PROFESSIONAL SERVICES

Journal Reviewer

- Applied Optics (AO), OSA
- Journal of Micro/Nanolithography, MEMS, and MOEMS (JM3), SPIE
- Optics Communications

Conference Helper

- SIAM Conference on IMAGING SCIENCE, Hong Kong, 2014
- ICNP/AOM Joint Conference, Hong Kong, 2013
- ACM/IEEE International Conference on Distributed Smart Cameras, Hong Kong, 2012

JOURNAL PUBLICATIONS

1. **Xiaofei Wu**, Shiyuan Liu, Wen Lv, and Edmund Y. Lam. Sparse nonlinear inverse imaging for shot count reduction in inverse lithography. *Opt. Express*, 23(21):26919--26931, 2015
2. **Xiaofei Wu**, Shiyuan Liu, Wen Lv, and Edmund Y. Lam. Robust and efficient inverse mask synthesis with basis function representation. *Journal of the Optical Society of America A*, 31(12):B1, 2014
3. **Xiaofei Wu**, Shiyuan Liu, Jia Li, and Edmund Y. Lam. Efficient source mask optimization with Zernike polynomial functions for source representation. *Opt. Express*, 22(4):3924--37, 2014
4. Wen Lv, Shiyuan Liu, **Xiaofei Wu**, and Edmund Y. Lam. Illumination source optimization in optical lithography via derivative-free optimization. *Journal of the Optical Society of America A*, 31(12):B19--B26, 2014
5. Wen Lv, Shiyuan Liu, Qi Xia, **Xiaofei Wu**, Yijiang Shen, and Edmund Y. Lam. Level-set-based inverse lithography for mask synthesis using the conjugate gradient and an optimal time step. *Journal of Vacuum Science & Technology B*, 31(4):041605, 2013
6. Shiyuan Liu, Shuang Xu, **Xiaofei Wu**, and Wei Liu. Iterative method for in situ measurement of lens aberrations in lithographic tools using CTC-based quadratic aberration model. *Opt. Express*, 20(13):14272, 2012
7. Shiyuan Liu, **Xiaofei Wu**, Wei Liu, and Chuanwei Zhang. Fast aerial image simulations using one basis mask pattern for optical proximity correction. *Journal of Vacuum Science & Technology B*, 29(6):06FH03, 2011
8. Shiyuan Liu, Wei Liu, and **Xiaofei Wu**. Fast evaluation of aberration-induced intensity distribution in partially coherent imaging systems by cross triple correlation. *Chinese Physics Letters*, 28(10):104212, 2011

CONFERENCES and PRESENTATIONS

1. **Xiaofei Wu**, Shiyuan Liu, Andreas Erdmann, and Edmund Y. Lam. Incorporating photomask shape uncertainty in computational lithography. In *Optical Microlithography XXIX*, volume 9780, accepted, 2016

2. **Xiaofei Wu**, Shiyuan Liu, and Edmund Y. Lam. Computational techniques to incorporate shot count reduction into inverse lithography. In *Semiconductor Technology International Conference (CSTIC)*, pages 1--3, 2015
3. **Xiaofei Wu**, Wen Lv, Shiyuan Liu, and Edmund Y. Lam. Application of basis function to robust and efficient lithography optimization. In *12th Fraunhofer IISB Lithography Simulation Workshop*, 2014
4. **Xiaofei Wu**, Shiyuan Liu, Jia Li, and Edmund Y. Lam. Efficient source mask optimization with Zernike polynomial function-based source representation. In *International Photonics and Optoelectronics Meetings (POEM)*, page NSa3A.15, 2013
5. **Xiaofei Wu**, Shiyuan Liu, and Edmund Y. Lam. Fast aerial image simulation of partially coherent illumination system for source mask optimization. In *OSA Conference on Advances in Optoelectronics and Micro/Nano Optics*, page 135, 2013
6. **Xiaofei Wu**, Shiyuan Liu, Shuang Xu, Xinjiang Zhou, and Wei Liu. In-situ measurement of lens aberrations in lithographic tools using CTC-based quadratic aberration model. In *Optical Microlithography XXV*, volume 8326, page 832629, 2012
7. **Xiaofei Wu**, Shiyuan Liu, Wei Liu, Tingting Zhou, and Lijuan Wang. Comparison of three TCC calculation algorithms for partially coherent imaging simulation. In *Sixth International Symposium on Precision Engineering Measurements and Instrumentation*, volume 7544, page 75440Z, 2010

SUMMARY

Xiaofei Wu received his B.S. and M.S. in school of Mechanic Science and Engineering, both from Huazhong University of Science and Technology. He is now a Ph.D. candidate in Department of Electrical and Electronic Engineering at the University of Hong Kong, working in the field of computational lithography. He has received numerous awards such as the Outstanding Teaching Assistant award in 2014 at HKU, the CSTIC 1st place Best Student Paper award in 2015.