

Reconstruction methods for combined HAADF-STEM and EDS tomography

Zhong, Z.

Citation

Zhong, Z. (2018, December 10). *Reconstruction methods for combined HAADF-STEM and EDS tomography*. Retrieved from https://hdl.handle.net/1887/67129

Version: Not Applicable (or Unknown)

License: License agreement concerning inclusion of doctoral thesis in the

Institutional Repository of the University of Leiden

Downloaded from: https://hdl.handle.net/1887/67129

Note: To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The following handle holds various files of this Leiden University dissertation: http://hdl.handle.net/1887/67129

Author: Zhong, Z.

Title: Reconstruction methods for combined HAADF-STEM and EDS tomography

Issue Date: 2018-12-10

Curriculum Vitae

Zhichao Zhong was born in Guangdong, China in 1987. From 2008, he studied Optical Information Science and Technology at Sun Yat-sen University, China. In 2012, he obtained his bachelor's degree. From 2012, he studied Optics and Photonics at Karlsruhe Institute of Technology (Germany) and Aix-Marseille University (France) as a student of the Erasmus Mundus Master program Europhotonics. In 2014, he obtained master's degrees from the two universities after writing a master thesis entitled "Stair Detection and Estimation From Stereo Vision". After the master study, he joined the Centrum Wiskunde & Informatica (CWI) in Amsterdam as a PhD candidate under the supervision of Prof. dr. K.J. Batenburg (Leiden University). At CWI he worked on developing advanced tomographic reconstruction techniques based on electron microscopy. He closely collaborated with researchers from University of Antwerp, TU Delft, imec, and Thermo Fisher Scientific. In the last year, he conducted an internship at Thermo Fisher Scientific. In November 2018, he finished his PhD research. Now he works as a data scientist at Wehkamp B. V. in the Netherlands.

Acknowledgments

This thesis could not have been completed without the support of many people. Here I would like to acknowledge some of them in particular.

First and foremost, I would like to express my gratitude to my supervisor Joost Batenburg. From you I learned not only how to do research but also how to be a researcher. Thanks to your useful comments I learned to write scientific articles; thanks to many discussions with you I learned to look at problems from a bigger picture; and thanks to your support in networking, I learned to collaborate with people.

I would like to thank all my colleagues at CWI. I have very happy memories about barbecues, summer trips and gaming nights with you. I especially thank my officemates Allard Hendriksen, Rien Lagerwerf and Jan-Willem Buurlage. Your jokes, whining and genuine concerns made everyday in the office lovely. Also thank you for teaching me table tennis. I thank Willem Jan Palenstijn for answering countless questions and helping to polish my writings. I thank Nicola Vigano and Xiaodong Zhuge for the helpful supervision. I also would like to thank the other colleagues in the Computational Imaging group: Adriaan Graas, Alexander Kostenko, Daniël Pelt, Folkert Bleichrodt, Francien Bossema, Felix Lucka, Giulia Colacicco, Henri Der Sarkissian, Holger Kohr, Maureen van Eijnatten, Mathé Zeegers, Poulami Ganguly, Rob Bisseling, Robert van Liere, Richard Schoonhoven and Sophia Coban. I am very proud that you are making tomography fun and exciting. I also want to express my gratitude to the supporting staff at CWI, especially Nada Mitrovic and Duda Tepsic for your excellent works.

I also would like to thank people outside CWI who have helped me during the research. I thank Bernd Rieger, Richard Aveyard and Yan Guo for the intriguing discussions and the useful comments. I thank Bart Goris and Sara Bals for sharing the experimental data and for hosting me at EMAT. I thank Remco Schoenmakers for comments from the industrial perspective and for arranging the internship. I also thank Hugo Bender, Jonas Adler, Johannes Schmidt-Hieber, Tristan van Leeuwen and the many other people that I have had the pleasure to interact with over the past four years.

This thesis would not have been possible without the support of my family. 感谢我所有的家人朋友,特别是我的父母,哥哥和姐姐。感谢你们支持追求我的理想。虽然我们相隔千山万水,每个周末跟你们视频的时间都是我最温暖的时候,因为你们一直都是世界上最关心我的人。希望我的小小成就能让你们感到自豪。愿天堂的奶奶可以看看我拿到博士学位的时刻,多么希望你能够亲眼看到这本论文,再听我讲讲这背后的故事。

Lastly, I would like to give special thanks to Xinyi Zhao. Like many PhD students, for a time I felt very confused about myself. But that has never happened again since I met you. You always care about my feelings, understand my thoughts and support my decisions. Thanks to you, I could write this thesis with faith in myself. I hope we will make many more achievements together in the future.