

TALON CHANDLER

CURRICULUM VITÆ




Biographical Information

Born: June 24, 1993 in Calgary, Alberta
Citizenship: Canada
Address: 7 MBL Street
Woods Hole, MA
02543
Phone: (312) 978-1901
Email: talonchandler@uchicago.edu
Website: talonchandler.com

Education

- [2] **(In Progress) Ph.D. Medical Physics** 2015–2020
Thesis: “Three-dimensional fluorescence orientation microscopy”
Advisor: Dr. Patrick La Rivière
University of Chicago
- [1] **B.A.Sc. Engineering Physics** 2010–2015
with Electrical Engineering Minor, with Distinction
GPA: 3.93/4.00
University of British Columbia
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Publications

- [3] **Chandler, T.**, Mehta, S., Shroff, H., Oldenbourg, R., La Rivière, P. J., “Single-fluorophore orientation determination with multiview polarized illumination: Modeling and microscope design,” *Optics Express*, vol. 25, no. 25, 2017. DOI: 10.1364/OE.25.031309.  PDF
- [2] Day, K. J., La Rivière, P. J., **Chandler, T.**, Bindokas, V. P., Ferrier, N. J., Glick, B. S., “Improved deconvolution of very weak confocal signals,” *F1000Research*, vol. 6, no. 787, 2017. DOI: 10.12688/f1000research.11773.1.  PDF
- [1] Shechter, S. M., **Chandler, T.**, Skandari, M., Zalunardo, N., “Cost-effectiveness analysis of vascular access referral policies in CKD,” *American Journal of Kidney Diseases*, vol. 70, no. 3, pp. 368–376, 2017. DOI: 10.1053/j.ajkd.2017.04.020.  PDF
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Presentations

- [8] “Spatio-angular restoration of fluorescence microscopy data” 6/2018
Optics Society of America, Mathematics in Imaging, Orlando, FL. 12 minute talk.
- [7] “Spatio-angular restoration of fluorescence microscopy data” 6/2018
Gordon Image Science Conference, Easton, MA. 15 minute talk and poster.
- [6] “Single-fluorophore orientation determination with multiview polarized illumination microscope” IEEE International Symposium on Biomedical Imaging (ISBI), Washington, DC. Poster. 4/2018

- [5] “Are lenses necessary?” 3/2018
Graduate Program on Medical Physics Journal Club. 1 hour talk.
 - [4] “Mapping molecular order in living organisms using polarized light microscopy” 10/2017
with Rudolf Oldenbourg, University of California, Berkeley. 1 hour talk.
 - [3] “Mapping molecular order in living organisms using polarized light microscopy” 10/2017
with Rudolf Oldenbourg, SCIEN Colloquium, Stanford University. 1 hour talk.
 - [2] “Evaluating gambles using dynamics” 04/2017
Graduate Program on Medical Physics Journal Club. 1 hour talk.
Carl J. Vyborny Award for Outstanding Journal Club Presentation
 - [1] “Digital holography for radiation dosimetry” 04/2016
Graduate Program on Medical Physics Journal Club. 1 hour talk.
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Research History

- [5] **La Rivière Lab**, University of Chicago 05/2016–
Advisors: Dr. Patrick La Rivière & Dr. Rudolph Oldenbourg
Topics: Polarized light microscopy, 3D reconstruction
 - [4] **Kao Lab**, University of Chicago 01/2016–04/2016
Advisor: Dr. Chien-Min Kao
Topics: PET detectors, statistical signal processing
 - [3] **MRI Research Centre**, University of British Columbia 04/2014–09/2015
Advisors: Dr. Alex MacKay & Dr. Carl Michal
Topics: NMR, MRI, inhomogeneous magnetization transfer
 - [2] **Haas Lab**, University of British Columbia 01/2014–04/2014
Advisor: Dr. Kelly Sakaki
Topics: Single cell electroporation, two-photon microscopy
 - [1] **Centre For Operations Excellence**, University of British Columbia 04/2013–09/2015
Advisor: Dr. Steven Shechter
Topics: Health care optimization, Monte Carlo simulation
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Employment History

- [2] **Kardium Inc.**, Burnaby, BC 09/2013–12/2013
Junior Engineer
Topics: Cardiac ablation, tissue conductivity, image analysis
 - [1] **SRK Consulting Inc.**, Vancouver, BC 01/2012–04/2012
Junior Engineer
Topics: Waste water management, Monte Carlo simulation
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Teaching

- [2] **Medical Imaging 1**, University of Chicago 2017
Teaching Assistant
Topics: X-ray imaging, MRI, image restoration
Rating: 5.0/5.0 from 5 students
- [1] **Mathematics For Medical Physics**, University of Chicago 2016
Teaching Assistant
Topics: Linear systems theory, stochastic processes, image reconstruction
Rating: 4.8/5.0 from 5 students
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Awards

- [8] University of Chicago Biological Sciences Division Graduate Fellowship \$30k 2016
- [7] Eastern Irrigation District Graduate Scholarship \$2k 2014
- [6] NSERC Undergraduate Research Award \$4k 2014
- [5] NSERC Industrial Undergraduate Research Award \$4k 2013
- [4] Interpipeline Discovery Scholarship \$2k 2011
- [3] UBC President's Entrance Scholarship \$1.5k 2010
- [2] Alexander Rutherford Scholarship \$2.5k 2010
- [1] Junior Citizen of the Year, City of Brooks - 2010
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Professional Membership

- [4] The Optical Society of America (OSA) 2017–
- [3] The International Society for Optics and Photonics (SPIE) 2016–
- [2] The American Association of Physicists in Medicine (AAPM) 2015–
- [1] Engineers & Geoscientists of British Columbia (EGBC) 2010–
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Computing

Top Language: Python

Competent Languages: C, C++, Bash, MATLAB

Familiar Languages: R, Mathematica, HTML/CSS

Tools: GNU Emacs, L^AT_EX, git, OpenGL, ImageJ

Other Activities

Ultramarathon running 12 races \geq 26.2 miles

SCUBA diving 15 open water dives, \sim 600 minutes underwater

Apiculture