

Brian Matejek

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EDUCATION

Harvard University, Cambridge, Massachusetts, USA

Ph.D. Candidate in Computer Science Aug 2016 – Present
Focus: connectomics, computer vision, neuroscience
Advisor: Hanspeter Pfister
GPA: 4.00 / 4.00

Princeton University, Princeton, New Jersey, USA

M.S.E. in Computer Science Sep 2014 – Jun 2016
Thesis: Learning Global Features for Neuron Reconstruction in EM Images
Advisor: Thomas Funkhouser
GPA: 3.85 / 4.00

B.S.E. in Computer Science Sep 2010 – Jun 2014
Independent Research: Detecting Objects Using Google Street View Data
Independent Research: A Computational Analysis of Arbitrage Opportunities in Sports Gambling
GPA: 3.79 / 4.00, High Honors

PUBLICATIONS

- [9] Lin, Z., Wei, D., Jang, W.D., Zhou, S., Chen, X., Wang, X., Schalek, R., Berger, D., Suissa-Peleg, A., **Matejek, B.**, Kamentsky, L., Parag, T., Jones, T., Haehn, D., Lichtman, J., and Pfister, H. Multimodal Active Clustering for Efficient Object Annotation in Connectomics. *Under review.*
- [8] **Matejek, B.**, Wei, D., Wang, X., Zhao, J., Palagyi, K., and Pfister, H. Synapse-Aware Skeleton Generation for Neural Circuits. In *International Conference on Medical Image Computing and Computer-Assisted Intervention*. Springer, Cham.
- [7] **Matejek, B.**, Haehn, D., Zhu, H., Wei, D., Parag, T., and Pfister, H. Biologically-Constrained Graphs for Global Connectomics Reconstruction. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2019*.
- [6] Dmitriev, K., Parag, T., **Matejek, B.**, Kaufman, A., and Pfister, H., 2018, September. Efficient Correction for EM Connectomics with Skeletal Representation. In *British Machine Vision Conference (BMVC) 2018*.
- [5] Behrisch, M., Streeb, D., Stoffel, F., Seebacher, D., **Matejek, B.**, Hagen Weber, S., Mittelstädt, S., Pfister, H., Keim, D. Commercial Visual Analytics Systems - Advances in the Big Data Analytics Field. *IEEE TVCG 2018*.
- [4] Haehn, D., Hoffer, J., **Matejek, B.**, Suissa-Peleg, A., Al-Awami, A.K., Kamentsky, L., Gonda, F., Meng, E., Zhang, W., Schalek, R., Wilson, A. et al., 2017, August. Scalable Interactive Visualization for Connectomics. In *Informatics* (Vol. 4, No. 3, p. 29). Multidisciplinary Digital Publishing Institute.
- [3] Parag, T., Tschopp, F., Grisaitis, W., Turaga, S.C., Zhang, X., **Matejek, B.**, Kamentsky, L., Lichtman, J.W. and Pfister, H., 2017. Anisotropic EM Segmentation by 3D Affinity Learning and Agglomeration. *arXiv preprint arXiv:1707.08935*.
- [2] **Matejek, B.**, Haehn, D., Lekschas, F., Mitzenmacher, M. and Pfister, H., 2017, September. Compresso: Efficient Compression of Segmentation Data For Connectomics. In *International Conference on Medical Image Computing and Computer-Assisted Intervention* (pp. 781-788). Springer, Cham.
- [1] Dohan, D., **Matejek, B.** and Funkhouser, T., 2015, October. Learning hierarchical semantic segmentations of lidar data. In *3D Vision (3DV), 2015 International Conference on* (pp. 273-281). IEEE.

INVITED TALKS	Efficient Error Correction for Connectomics, Bioimage Computing	Jun 2019
AWARDS & SCHOLARSHIPS	Smith Family Fellowship Tess Denny Chen Graduate Student Research Fellowship Member of Sigma Xi, Scientific Research Society Member of Tau Beta Pi, Engineering Honor Society	Jul 2017 – Jun 2018 Aug 2016 – Jun 2017 Admitted Jun 2014 Admitted Nov 2012
TEACHING EXPERIENCE	Harvard University Computer Science 109A: Introduction to Data Science Princeton University Computer Science 423: Theory of Algorithms Computer Science 402: Artificial Intelligence Computer Science 340: Reasoning About Computation Computer Science 429: Computer Vision	Fall 2018 Spring 2016 Fall 2015 Spring 2015 Fall 2014
MENTORED STUDENTS	Antoine Alleon, EPFL Romil Sirohi, Harvard University Bruno Mlodozienec, University of Cambridge	Spring – Summer 2019 Spring 2019 Summer 2018
SKILLS	Languages: Python, C++, MATLAB, Java, JavaScript, Julia, HTML, C Other Tools: Cython, Keras, LaTeX, CSS, Django	