

Casey M. Schneider-Mizell

Allen Institute for Brain Science, Seattle WA

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Current position

2018– **Allen Institute for Brain Science**

Scientist III — Jan 2022–*present*

Scientist II — June 2018–Jan 2022

Building computational infrastructure and tools and leading data analysis projects for petascale electron microscopy volumes of the nervous system.

Research Interests

My research aims to discover the cell types of the nervous system and the rules underlying their patterns of connectivity at synaptic resolution, with the ultimate goal to understanding the role of anatomical structure in shaping functional patterns of neuronal activity. I employ a combination of large-scale neuronal circuit reconstructions from large-scale volumetric electron microscopy (EM), quantitative analysis and computational modeling and have worked extensively in both vertebrate and invertebrate nervous systems. I also build scalable computational tools with the goal of helping specialists and non-specialists alike to analyze, explore, and proofread neuronal circuits and cellular neuroanatomy mapped in EM.

Previous Positions

2012–2018 **Janelia Research Campus, HHMI**

Research specialist (*i.e.* postdoctoral researcher) in the lab of Albert Cardona

2010–2012 **Institute of Neuroinformatics, ETH Zürich and University of Zürich**

Postdoctoral researcher in the lab of Albert Cardona

Education

2004–2010 **Ph.D. in Physics, University of Michigan, Ann Arbor**

Advisor: Leonard Sander

Thesis: “Simple Processes in Complex Places”

2000–2004 **B.S., University of Washington, Seattle**

Mathematics & Physics (with honors), *magna cum laude*

Highlighted Publications (* — multi-lead author. Note that MICrONS project author lists include all people responsible for generating structural data and analysis infrastructure if data was used before it was publicly available)

C M Schneider-Mizell, A Bodor, D Brittain, J Buchanan, D J Bumbarger, L Elabbady, D Kapner, S Kinn, G Mahalingam, S Seshamani, S Suckow, M Takeno, R Torres, W Yin, S Dorkenwald, J A Bae, M A Castro, P G Fahey, E Froudakis, A Halageri, Z Jia, C Jordan, N Kemnitz, K Lee, K Li, R Lu, T Macrina, E Mitchell, S S Mondal, S Mu, B Nehoran, S Papadopoulos, S Patel, X Pitkow, S Popovych, W Silversmith, F H Sinz, N L Turner, W Wong, J Wu, S Yu, J Reimer, A S Tolias, H S Seung, R C Reid, F Collman, N M da Costa, MICrONS Consortium. **Cell-type-specific inhibitory circuitry from a connectomic census of mouse visual cortex**. *bioRxiv* 2023.01.23.525290 (2023). *In revision, Nature*.

S. Dorkenwald*, **C. M. Schneider-Mizell***, D. Brittain, A. Halageri, C. Jordan, N. Kemnitz, M.A. Castro, W. Silversmith, J. Maitin-Shepard, J. Triodl, H. Pfister, V. Gillet, D. Xenos, J.A. Bae, A.L. Bodor, J. Buchanan, D. J. Bumbarger, L. Elabbady, Z. Jia, D. Kapner, S. Kinn, K. Lee, K. Li, R.

- Lu, T. Macrina, G. Mahalingam, E. Mitchell, S.S. Mondal, S. Mu, B. Nehoran, S. Popovych, M. Takeno, R. Torres, N. L. Turner, W. Wong, J. Wu, W. Yin, S. Yu, R.C. Reid, N. M. da Costa, H.S. Seung, F. Collman. **CAVE: Connectome Annotation Versioning Engine**. *bioRxiv* 2023.07.26.550598 (2023). *In revision, Nature Methods*.
- A L Bodor, **C M Schneider-Mizell**, C Zhang, L Elabbady, A Mallen, A Bergeson, D Brittain, J Buchanan, D J Bumbarger, R Dalley, C Gamlin, E Joyce, D Kapner, S Kinn, G Mahalingam, S Seshamani, S Suckow, M Takeno, R Torres, W Yin, J A Bae, M A Castro, S Dorckenwald, A Halageri, Z Jia, C Jordan, N Kemnitz, K Lee, K Li, R Lu, T Macrina, E Mitchell, S S Mondal, S Mu, B Nehoran, S Popovych, W Silversmith, N L Turner, S Yu, W Wong, J Wu, B Celi, L Campagnola, S Seeman, T Jarsky, N Ren, A Arkhipov, MICrONS Consortium, J Reimer, H S Seung, R C Reid, F Collman, N M da Costa. **The Synaptic Architecture of Layer 5 Thick Tufted Excitatory Neurons in the Visual Cortex of Mice**. *bioRxiv* 2023.10.18.562531 (2023).
- N. Turner*, T. Macrina*, J. Bae*, R. Yang*, A.M. Wilson*, **C.M. Schneider-Mizell***, K. Lee*, R. Lu*, J. Wu*, A. Bodor*, A. Bleckert*, D. Brittain*, E. Froudarakis*, S. Dorckenwald*, F. Collman*, N. Kemnitz*, D. Ih, W. Silversmith, J. Zung, A. Zlateski, I. Tartavull, S. Yu, S. Popovych, S. Mu, W. Wong, C. Jordan, M. Castro, J. Buchanan, D. Bumbarger, M. Takeno, R. Torres, G. Mahalingam, L. Elabbady, Y. Li, E. Cobos, P. Zhou, S. Suchow, L. Becker, L. Paninski, F. Polleux, J. Reimer, A.S. Tolias, R.C. Reid, N.M. da Costa, H.S. Seung. **Reconstruction of neocortex: Organelles, compartments, cell, circuits, and activity**. *Cell*, 185 (6) (2022)
- C. M. Schneider-Mizell***, A. L. Bodor*, F. Collman*, D. Brittain*, A.A. Bleckert*, S. Dorckenwald*, N.L. Turner*, T. Macrina*, K. Lee*, R. Lu*, J. Wu*, J. Zhuang, A. Nandi, B. Hu, J. Buchanan, M.M. Takeno, R. Torres, G. Mahalingam, D.J. Bumbarger, Y. Li, T. Chartrand, N. Kemnitz, W.M. Silversmith, D. Ih, J. Zung, A. Zlateski, I. Tartavull, S. Popovych, W. Wong, M. Castro, C. S. Jordan, E. Froudarakis, L. Becker, S. Suckow, J. Reimer, A. S. Tolias, C. Anastassiou, H. S. Seung, R. C. Reid, N. M. da Costa. **Structure and function of axo-axonic inhibition**. *eLife*;10:e73783 (2021)
- MICrONS Consortium *et al.* **Functional connectomics spanning multiple areas of mouse visual cortex**. *bioRxiv* 2021.07.28.454025 (2021). *In revision, Nature*.
- S. Gerhard, I. Andrade, R.D. Fetter, A. Cardona, **C.M. Schneider-Mizell (co-corresponding)**. **Conserved neural circuit structure across *Drosophila* larva development revealed by comparative connectomics**. *eLife*:e29089 (2017)
- T. Jovanic*, **C.M. Schneider-Mizell* (co-corresponding)**, M. Shao, J.-B. Masson, G. Denisov, R.D. Fetter, B.D. Mensh, J.W. Truman, A. Cardona, M. Zlatic. **Competitive disinhibition mediates behavioral choice and sequences in *Drosophila***. *Cell*, 167 (2016)
- C.M. Schneider-Mizell***, S. Gerhard*, M. Longair, T. Kazimiers, L. Feng, M. Zwart, T. Ohyama, M. Zlatic, A. Champion, F. Midgley, R. Fetter, S. Saalfeld, A. Cardona. **Quantitative neuroanatomy for connectomics in *Drosophila***. *eLife*:e12059 (2016)
- T. Ohyama*, **C.M. Schneider-Mizell***, R.D. Fetter, J.V. Aleman, R. Francoville, M. Rivera Alba, B.D. Mensch, K.M. Branson, J.H. Simpson, J.W. Truman, A. Cardona and M. Zlatic. **A multilevel multimodal circuit for action selection in *Drosophila***, *Nature*, 520 (2015)

Additional Publications (* — multi-lead author. Note that MICrONS project author lists include all people responsible for generating structural data and analysis infrastructure if data was used before it was publicly available)

- S. Dorckenwald, P. Li, M. Januszcwski, D. R. Berger, J. Maitin-Shephard, A. L. Bodor, F. Collman, **C. M. Schneider-Mizell**, N. M. da Costa, J. W. Lichtman, V. Jain. **Multi-layered maps of**

- neuropil with segmentation-guided contrastive learning.** bioRxiv 2022.03.29.486320. *In press, Nature Methods* (2023).
- S Dorkenwald, A Matsliah, A R Sterling, P Schlegel, S Yu, C E McKellar, A Lin, M Costa, K Eichler, Y Yin, W Silversmith, **C M Schneider-Mizell**, C S Jordan, D Brittain, A Halageri, K Kuehner, O Ogedengbe, R Morey, J Gager, K Kruk, E Perlman, R Yang, D Deutsch, D Bland, M Sorek, R Lu, T Macrina, K Lee, J A Bae, S Mu, B Nehoran, E Mitchell, S Popovych, J Wu, Z Jia, M Castro, N Kemnitz, D Ih, A S Bates, N Eckstein, J Funke, F Collman, D D Bock, G SXE Jefferis, H S Seung, M Murthy, FlyWire Consortium. **Neuronal wiring diagram of an adult brain.** *bioRxiv 2023.06.27.546656* (2023). *In revisions, Nature*.
- E Lesser, A W Azevedo, J S Phelps, L Elabbady, A Cook, B Mark, S Kuroda, A Sustar, A Moussa, C J Dallmann, S Agrawal, S J Lee, B Pratt, K Skutt-Kakaria, S Gerhard, R Lu, N Kemnitz, K Lee, A Halageri, M Castro, D Ih, J Gager, M Tammam, S Dorkenwald, F Collman, **C. M. Schneider-Mizell**, D Brittain, C S Jordan, H S Seung, T Macrina, M Dickinson, W-C A Lee, J C Tuthill. **Synaptic architecture of leg and wing motor control networks in *Drosophila*.** *bioRxiv 2023.05.30.542725* (2023).
- A Schoofs, A Miroschnikow, P Schlegel, I Zinke, **C M Schneider-Mizell**, A M Cardona, M J Pankratz. Serotonergic reinforcement of a complete swallowing circuit. *bioRxiv 2023.05.26.542464* (2023)
- C R Gamlin, **C M Schneider-Mizell**, M Mallory, L Elabbady, N Gouwens, G Williams, A Mukora, R Dalley, A L Bodor, D Brittain, J Buchanan, D J Bumbarger, D Kapner, S Kinn, G Mahalingam, S Seshamani, M Takeno, R Torres, W Yin, P R Nicovich, J A Bae, M A Castro, S Dorkenwald, A Halageri, Z Jia, C Jordan, N Kemnitz, K Lee, K Li, R Lu, T Macrina, E Mitchell, S S Mondal, S Mu, B Nehoran, S Popovych, W Silversmith, N L Turner, W Wong, J Wu, S Yu, J Berg, T Jarsky, B Lee, H S Seung, H Zeng, R C Reid, F Collman, N M da Costa, S A Sorensen. **Integrating EM and Patch-seq data: Synaptic connectivity and target specificity of predicted Sst transcriptomic types.** *bioRxiv 2023.03.22.533857* (2023).
- B Celi, S Papadopoulos, Z Ding, P G Fahey, E Wang, C Papadopoulos, A B Kunin, S Patel, J A Bae, A L Bodor, D Brittain, J Buchanan, D J Bumbarger, M A Castro, E Cobos, S Dorkenwald, L Elabbady, A Halageri, Z Jia, C Jordan, D Kapner, N Kemnitz, S Kinn, K Lee, K Li, R Lu, T Macrina, G Mahalingam, E Mitchell, S S Mondal, S Mu, B Nehoran, S Popovych, **C M Schneider-Mizell**, W Silversmith, M Takeno, R Torres, N L Turner, W Wong, J Wu, S Yu, W Yin, D Xenos, L M Kitchell, P K Rivlin, V A Rose, C A Bishop, B Wester, E Froudarakis, E Y Walker, F Sinz, H S Seung, F Collman, N M da Costa, R C Reid, X Pitkow, A S Tolias, J Reimer. **NEURD: automated proofreading and feature extraction for connectomics.** *bioRxiv 2023.03.14.532674* (2023).
- Z Ding, P G Fahey, S Papadopoulos, E Y Wang, B Celi, C Papadopoulos, A B Kunin, A Chang, J Fu, Z Ding, S Patel, K Ponder, T Muhammad, J A Bae, A L Bodor, D Brittain, J Buchanan, D J Bumbarger, M A Castro, E Cobos, S Dorkenwald, L Elabbady, A Halageri, Z Jia, C Jordan, D Kapner, N Kemnitz, S Kinn, K Lee, K Li, R Lu, T Macrina, G Mahalingam, E Mitchell, S S Mondal, S Mu, B Nehoran, S Popovych, **C M Schneider-Mizell**, W Silversmith, M Takeno, R Torres, N L Turner, W Wong, J Wu, W Yin, S Yu, E Froudarakis, F Sinz, H S Seung, F Collman, N M da Costa, R C Reid, E Y Walker, X Pitkow, J Reimer, A S Tolias. **Functional connectomics reveals general wiring rule in mouse visual cortex.** *bioRxiv 2023.03.13.531369* (2023).
- S. Dorkenwald, C. McKeller, T. Macrina, N. Kemnitz, K. Lee, L. Ran, J. Wu, S. Popovych, E. Mitchell, B. Nehoran, Z. Jia, J. Bae, S. Mu, D. Ih, M. Castro, O. Ogedengbe, A. Halageri, Z. Ashwood, J. Zung, D. Brittain, F. Collman, **C.M. Schneider-Mizell**, C. Jordan, W. Silversmith, C. Baker, D. Deutsch, L. Encarnacion-Rivera, S. Kumar, A. Burke, J. Gager, J. Hebditch, S. Koolman, M.

- Moor, S. Morejohn, B. Silverman, K. Willie, R. Willie, S. Yu, M. Murthy, H.S. Seung. **FlyWire: Online community for whole-brain connectomics.** *Nature Methods*, 19, (2022).
- J. Buchanan, L. Elabbady, F. Collman, N. Jorstad, T. Bakken, C. Ott, J. Glatzer, A. Bleckert, A. Bodor, D. Brittain, D. Bumbarger, G. Mahalingam, S. Seshamani, **C.M. Schneider-Mizell**, M. Takeno, R. Torres, W. Yin, R. Hodge, M. Castro, S. Dorkenwald, D. Ih, C. Jordan, N. Kemnitz, K. Lee, R. Lu, T. Macrina, S. Mu, S. Popovych, W. Silversmith, I. Tartavull, N. Turner, A. Wilson, W. Wong, J. Wu, A. Zlateski, J. Zung, J. Lippincott-Schwartz, E. Lein, H.S. Seung, D.E. Berges, R.C. Reid, N.M. da Costa. **Oligodendrocyte precursor cells prune axons in the mouse neocortex.** PNAS 119 (2022).
- S. Dorkenwald, N.L. Turner, T. Macrina, K. Lee, R. Lu, J. Wu, A.L. Bodor, A. Beckert, D. Brittain, N. Kemnitz, W. Silversmith, D. Ih, J. Zung, A. Zlateski, I. Tartavull, S. Yu, S. Popovych, W. Wong, M. Castro, C.S. Jordan, A.M. Wilson, E. Froudarakis, J. Buchanan, M. Takeno, R. Torres, G. Mahalingam, F. Collman, **C.M. Schneider-Mizell**, D. Bumbarger, Y. Li, L. Becker, S. Suchow, J. Reimer, A.S. Tolias, N.M. da Costa, R.C. Reid, H.S. Seung. **Binary and analog variation of synapses between cortical pyramidal neurons.** *eLife* e76120. (2022).
- L Elabbady, S Seshamani, S Mu, G Mahalingam, **C M Schneider-Mizell**, A Bodor, J A Bae, Derrick Brittain, J Buchanan, D J Bumbarger, M A Castro, E Cobos, S Dorkenwald, P G Fahey, E Froudarakis, A Halageri, Z Jia, C Jordan, D Kapner, N Kemnitz, S Kinn, K Lee, K Li, R Lu, T Macrina, E Mitchell, S S Mondal, B Nehoran, S Papadopoulos, S Patel, X Pitkow, S Popovych, J Reimer, W Silversmith, F H Sinz, M Takeno, R Torres, N Turner, W Wong, J Wu, W Yin, S Yu, A Tolias, H S Seung, R C Reid, N M Da Costa, F Collman **Quantitative Census of Local Somatic Features in Mouse Visual Cortex.** *bioRxiv* 2022.07.20.499976 (2022)
- M A Weis, S Papadopoulos, L Hansel, T Lüddecke, B Celii, P G Fahey, J A Bae, A L Bodor, D Brittain, J Buchanan, D J Bumbarger, M A Castro, F Collman, N M da Costa, S Dorkenwald, L Elabbady, A Halageri, Z Jia, C Jordan, D Kapner, N Kemnitz, S Kinn, K Lee, K Li, R Lu, T Macrina, G Mahalingam, E Mitchell, S S Mondal, S Mu, B Nehoran, S Popovych, R C Reid, **C M Schneider-Mizell**, H S Seung, W Silversmith, M Takeno, R Torres, N L Turner, W Wong, J Wu, W Yin, S Yu, J Reimer, A S Tolias, A S Ecker. **Large-scale unsupervised discovery of excitatory morphological cell types in mouse visual cortex.** *bioRxiv* 2022.12.22.521541. (2022)
- S. Seshamani, L. Elabbady, **C. M. Schneider-Mizell**, G. Mahalingam, S. Dorkenwald, A. L. Bodor, T. Macrina, D. Bumbarger, J. Buchanan, M. Takeno, W. Yin, D. Brittain, R. Torres, D. Kapner, R. Lu, J. Wu, N. M. da Costa, R.C. Reid, F. Collman. **Automated Neuron Shape Analysis from Electron Microscopy.** *arXiv:2006.00100* (2020)
- C. Eschbach, A. Fushiki, M. Winding, **C. M. Schneider-Mizell**, M. Shao, R. Arruda, K. Eichler, J. Valdes-Aleman, T. Ohyama, A.S. Thum, B. Gerber, R.D. Fetter, J.W. Truman, A. Litwin-Kumar, A. Cardona, M. Zlatic. **Recurrent architecture for adaptive regulation of learning in the insect brain.** *Nature Neuroscience*, 23 (2020).
- I. Larderet, P. Fritsch, N. Gendre, L. Maier, R.D. Fetter, **C.M. Schneider-Mizell**, J. Truman, M. Zlatic, A. Cardona, S. Sprecher. **Organization of the *Drosophila* larva visual circuit.** *eLife*:e28387 (2017)
- K. Eichler, F. Li, A. Kumar, Y. Park, I. Andrade, **C.M. Schneider-Mizell**, T. Saumweber, A. Huser, D. Bonnery, B. Gerber, R.D. Fetter, J.W. Truman, C. Priebe, L.F. Abbott, A. Thum, M. Zlatic, A. Cardona. **The complete wiring diagram of a high-order learning and memory center, the insect mushroom body.** *Nature*, 548 (2017)

- P. Schlegel, M.J. Texada, A. Miroschnikow, M. Peters, **C.M. Schneider-Mizell**, H. Lacin, F. Li, R.D. Fetter, J. W. Truman, A. Cardona, M. J. Pankratz. **Synaptic transmission parallels neuromodulation in a central food-intake circuit.** *eLife*:e16799 (2016)
- E.S. Heckscher, A. A. Zarin, S. Faumont, M.Q. Clark, L. Manning, A. Fushiki, **C.M. Schneider-Mizell**, R.D. Fetter, J.W. Truman, M.F. Zwart, M. Landgraf, A. Cardona, S.R. Lockery, C.Q. Doe. **Even-skipped+ interneurons are core components of a sensorimotor circuit that maintains left-right symmetric muscle contraction amplitude.** *Neuron*, 88 (2015)
- C.M. Schneider-Mizell**, J.M. Parent, E. Ben-Jacob, M.R. Zochowski, L.M. Sander. **From network structure to network reorganization: implications for adult neurogenesis.** *Physical Biology*, 7 (2010)
- C.M. Schneider-Mizell** and L.M. Sander. **A generalized voter model on complex networks.** *Journal of Statistical Physics*, 136 (2009).
- E. Khain, M.O. Nowicki, **C.M. Schneider-Mizell**, E.A. Chiocca, S.E. Lawler, and L.M. Sander. **Pattern formation in glioma cells: Effects of adhesion.** *Europhysics Letters*, 88 (2009)
- S. Page, L.M. Sander, and **C.M. Schneider-Mizell**. **Conformity and dissonance in generalized voter models.** *Journal of Statistical Physics*, 128 (2007)
- E. Khain, L.M. Sander, and **C.M. Schneider-Mizell**. **The role of cell-cell adhesion in wound healing.** *Journal of Statistical Physics*, 128 (2007)

Talks, Conferences and Schools

- July 2023 Inhibition in the CNS, Gordon Research Conference(Poster)
- June 2022 Max Planck/HHMI Connectomics Meeting, Berlin, Germany (Talk)
- May 2022 Janelia Research Campus, Ashburn, VA (Invited talk)
- Jun 2021 Japan Neuroscience Society (Virtual talk)
- Nov 2019 Society for Neuroscience, Chicago (Poster)
- Apr 2019 Max Planck / HHMI Connectomics Conference, Berlin, Germany (Talk)
- Jul 2018 Super 3DEM: A NeuroNex Workshop on Creating a 3DEM Discovery Environment. Austin, TX (talk)
- Jan 2018 Flatiron Institute, New York, NY. (talk)
- Sep 2017 Neurobiology of Drosophila, Cold Spring Harbor, New York
- Jul 2017 Kavli Workshop on Neural Circuits and Behavior in Drosophila, Kolymbari, Greece (Talk)
- Jun 2017 SPiNES seminar, Dept. of Neuroscience, New York University (Invited Talk)
- Apr 2017 Max Planck/HHMI Connectomics Meeting, Berlin, Germany (Poster)
- Sep 2016 Action Selection Across the Animal Kingdom, Janelia Research Campus (Talk)
- Sep 2016 Champalimaud Neuroscience Symposium, Lisbon, Portugal (Talk)
- Apr 2016 High-resolution Circuit Reconstruction, Janelia Research Campus (Poster)
- Feb 2016 COSYNE 16 (Poster)
- Oct 2015 Center for Brain Science, Harvard University (Invited Talk)
- Feb 2015 Complex Systems Seminar, Dept. of Bioengineering, University of Pennsylvania (Invited Talk)
- Nov 2014 MiniBrains, ESF/EMBO. San Feliu, Spain (Talk)

- Oct 2014 Max Planck/HHMI Connectomics Conference. Berlin, Germany (Poster)
- Mar 2014 Behavioral Neurogenetics of Drosophila Larva. Atami, Japan (Talk)
- Oct 2013 CSHL Meeting on Drosophila Neurobiology, Cold Spring Harbor, NY (Poster)
- Jun 2012 CSHL Course on Drosophila Neurobiology, Cold Spring Harbor, NY (School)
- Sep 2012 Behavioral Neurogenetics of Drosophila Larva, Janelia Research Campus (Poster)
- Jan 2009 Neural Coding in Sensory Systems (FENS-IBRO-Hertie Winter School). Obergurgl, Austria. (School)
- Mar 2009 American Physical Society March Meeting, Pittsburgh, PA (Talk)
- Jul 2008 Workshop on Growth and Control of Tumors: Theory and Experiment. Fields Institute, University of Toronto, Canada. (Participant)
- May 2008 Quantitative Approaches to Cell Motility and Chemotaxis. IMA, University of Minnesota, Minneapolis. (Participant)
- Aug 2006 The Physics of Cellular Objects (I2CAM Summer School). Cargèse, France. (School)

Teaching and Advising

- Sep-Oct 2023 **Connectomics from Micro to Mesa-Scale, University of Bordeaux (CAJAL Training Program)**
Co-organiser with Greg Jefferis, Jenny Kim, and Nicholas Renier of a three week course teaching 20 graduate students and postdocs brain mapping from light and EM levels. I put together the speaker list, lectured, and led student research projects.
- Sep 2023 **Summer Workshop on the Dynamic Brain, Allen Institute & UW**
Instructor for intensive school in data-driven neuroscience methods for graduate students and postdoctoral researchers.
- Jun-Aug 2021 **Allen Institute Summer Internship Mentor**
Mentored an undergraduate student to measure distance-dependent connectivity of inhibitory neurons.
- Sep 2019 **Summer Workshop on the Dynamic Brain, Allen Institute & UW**
As above
- 2010 **University of Michigan, Ann Arbor**
TA for an integrated lab/lecture experiential-learning course in basic physics for non-science students.
- 2004–2005, **University of Michigan, Ann Arbor**
2008–2010 TA for introductory physics labs in mechanics and electricity & magnetism
- 2003–2004 **University of Washington, Seattle**
TA for Honors Advanced Calculus with James Morrow

Software Packages

Built, contributed to, and maintained numerous software packages for working with connectomics data. Some of those packages include:

MeshParty — <https://github.com/sdorkenw/MeshParty>

Tools for working with neuronal meshes, skeletons, and connectivity.

CAVEclient — <https://github.com/seung-lab/CAVEclient>

Python Client for interacting with the connectomics analysis framework CAVE.

pcg_skel — https://github.com/AllenInstitute/pcg_skel

Fast skeletonization of cortical neurons

NGLui — <https://github.com/seung-lab/NeuroglancerAnnotationUI>

Rules-based conversion of dataframes to explorable Neuroglancer states.

ConnectivityViewer — <https://github.com/ceesem/dash-connectivity-viewer>

Web-based interface for interacting with connectomics analysis framework CAVE

Service

Reviewed manuscripts for eLife and Cell.

2021	Allen Institute Next Generation Leaders Selection Committee
2015–2016	Janelia Association of Research Scientists Vice Chair (grad student and postdoc affairs)
2007–2008	Co-chair, Complex Systems Advanced Academic Workshop, University of Michigan