Teaching

09/2021 – 09/2022	Mentored undergraduate through Simons program, Maria Yuffa, for a year, teaching Neuro and ML, and pursuing research together that was published.
09/2021 – 04/2022	Teaching Fellow: Machine Learning, Theoretical & Systems Neuro for PhD students Crafted new course to give requisites for many backgrounds (cell bio to maths)
09/2019 – 12/2019	Teaching Fellow, Applied Maths: Neural Computation for 20 graduate students
10/2016 – 05/2017	Volunteer teacher in local Cambridge School for GCSE Science
06/2016 – 08/2016	Private tutor for key stage 3 science in Worcester, UK.

Other

10/2021	Attendent, CIMER Entering Mentoring Training, a mentorship training programme.
01/2020	Attendant, Imbizo Computational Neuroscience Summer School.
06/2019 – 08/2019	Proctor, Harvard University Summer Research Program.
09/2017 – 06/2018	Founded and ran a weekly discussion club: the Big Thinks' Club
Computer	Python, MATLAB, some Julia, some app & website development
Contributor	Minor contribution to openly available Point Process Model of Neural Sequences
Languages	English (native), French (B2)
Reviewer	Neurocomputing (2022), Neureps workshop at Neurips (2022)

PUBLICATIONS

- *"Actionable Neural Representations: Grid Cells from Minimal Constraints",*
  W Dorrell, P Latham, T Behrens, J Whittington, Arxiv, ICLR (2023).

- *"Meta-Learning the Inductive Biases of Simple Neural Circuits",*
  W Dorrell, M Yuffa, P Latham, Arxiv, (2022).

- *"Disentangling with Biological Constraints: A Theory of Functional Cell Types",*
  J Whittington, **W Dorrell**, S Ganguli, T Behrens, Arxiv, ICLR (2023).

- *"Bilateral Alignment of receptive fields in the olfactory cortex points to non-random connectivity",*
  J Grimaud, **W Dorrell**, C Pehlevan, V Murthy, biorXiv:2020.02.24.960922 (2020).

- *"A Differential Hebbian Framework for Biologically-Plausible Motor Control".*
  S Verduzco-Flores, **W Dorrell**, E De Schutter, Arxiv, Neural Networks, (2022).

- *"Simulating twistronics in acoustic metamaterials",*
  S. Gardezi, H. Pirie, S. Carr, **W. Dorrell**, J. Hoffman, Arxiv, 2D Materials, (2021).

- *"van der Waals metamaterials",*
  W Dorrell, H. Pirie, S. Gardezi, N. Drucker, J. Hoffman, Arxiv, Phys. Rev. B, (2020).