

Li KEVIN Wenliang

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 6 Handyside St, London N1C 4UZ, UK

PROFESSIONAL EXPERIENCE

2022-pres. **DeepMind** Research Scientist, Universal Artificial Intelligence

2021-pres. **University College London** Research Fellow, with Prof Raymond Dolan

EDUCATION

2015-2021 **Gatsby Unit, University College London**

PhD in Machine Learning and Theoretical Neuroscience

Advisors: Maneesh Sahani and Peter Dayan

Thesis: Nonparametric Enrichment in Computational and Biological Representation of Distributions

2010-2014 **University of Cambridge, Trinity College**

BA (Class I) and MEng (Distinction), Information Engineering. Advisor: Máté Lengyel

Scholarship: £18,510 p.a. for four years, Trinity College Senior Scholar

Ranking: top 10 for 1st, 2nd, and 4th years (3rd year at MIT) among > 300 students

Master thesis: Inference and Learning on a Nonlinear State-space Model for Spiking Data

2012-2013 **Massachusetts Institute of Technology**

Cambridge-MIT Exchange in Electrical Engineering and Computer Science, GPA 4.9/5.0.

RESEARCH EXPERIENCE

2020-2021 **Amazon Web Services, Shanghai** Research Scientist Intern, with David Wipf

2020-2021 **Department of Psychology, University of Cambridge** Visitor to Zoe Kourtzi, visual perceptual learning

2020-2021 **Institute of Neuroscience, Chinese Academy of Science** Visitor of Liping Wang, sequence perception

7 / 2016 **Brains, Minds and Machines Summer School, Woods Hole** Participant

1-4 / 2015 **Tsinghua University, Beijing** Research Assistant, grasp planning, with Fuchun Sun

6-10 / 2014 **Microsoft Research Cambridge** Research Intern, computer vision, with Sebastian Nowozin

6-9 / 2013 **Microsoft R&D, Shanghai** Program Manager Intern, payment security

6-9 / 2011 **Swiftkey (acquired by Microsoft), London** Engineer Intern, natural language processing

Reviewer: JMLR, TMLR, NeurIPS (top 10%), ICML (expert), ICLR, ACML, AISTATS, Neurocomputing

TEACHING EXPERIENCE

7 / 2021 **NeuroMatch Academy Summer School, online** Course content consultant

7 / 2020 **NeuroMatch Academy Summer School, online** TA in fundamental theoretical neuroscience

7 / 2019 **Machine Learning Summer School, London** TA in fundamental machine learning

2016-2017 **Gatsby Unit courses, London** TA in unsupervised learning, theoretical and systems neuroscience

INVITED TALKS

3 / 2021 **Beijing Normal University, Ke Zhou Lab** Postdictive inference in perception

1 / 2021 **Chinese Institute for Brain Research, Beijing** Nonparametric methods for theoretical neuroscience

3 / 2020 **Neurocomputation and AI in Neuroscience, Cambridge** Postdictive inference in perception

SKILLS

Programming: Python (JAX, Haiku, PyTorch, TensorFlow, Caffe), Julia, MatLab, C/C++, Ruby, HTML/CSS, JavaScript

PUBLICATIONS

Referred journals and conference proceedings

- Grégoire Delétang, Anian Ruoss, ..., [LKW](#), ..., Shane Legg, Pedro A Ortega. *Neural networks and the chomsky hierarchy*. ICML, 2023
- [LKW](#), Ben Moran. *Score-based generative models learn manifold-like structures with constrained mixing*. [NeurIPS Workshop](#) on score-based models, 2022
- Bin Dai, [LKW](#), and David Wipf. *On the Value of Infinite Gradients in Variational Autoencoder Models*. [NeurIPS](#), 2021
- Longyuan Li, Jian Yao, [LKW](#), ..., David Wipf, Zheng Zhang. *GRIN: Generative Relation and Intention Network for Multi-agent Trajectory Prediction*, [NeurIPS](#), 2021
- [LKW](#), Heishiro Kanagawa. *Blindness of score-based methods to isolated components and mixing proportions*. [NeurIPS Workshop](#) Your model is wrong: Robustness and misspecification in probabilistic modeling, 2021
- Tianlin Xu*, [LKW](#)*, Michael Munn, Beatrice Acciaio. *COT-GAN: Generating sequential data via causal optimal transport*. [NeurIPS](#), 2020
- [LKW](#), Theodore Moskovitz, Heishiro Kanagawa, Maneesh Sahani. *Amortised learning by wake-sleep*. [ICML](#), 2020
- [LKW](#), Maneesh Sahani. *A Plausible model for online recognition and postdiction in dynamic environment*. [NeurIPS](#), 2019
- [LKW](#)*, Dougal Sutherland*, Heiko Strathmann, and Arthur Gretton. *Learning deep kernels for exponential family densities*. [ICML](#), 2019
- [LKW](#) and Aaron Seitz. *Deep neural network for modelling visual perceptual learning*. [Journal of Neuroscience](#), 2018
- Chunfang Liu, [Wenliang Li](#), Funchun Sun, Jianwei Zhang. *Grasp planning by human experience on objects with complex geometry*. [IROS](#), 2015

Referred conference abstracts

- Tianyuan Teng*, [LKW](#)*, Hang Zhang. *Economically expanding internal models in human density estimation*. [CCN](#), 2022
- [LKW](#). *A distributional Bayesian learning theory for visual perceptual learning*. [COSYNE](#), 2022
- [LKW](#), Eszter Vértés, Maneesh Sahani. *Accurate and adaptive recognition in a dynamic environment*. [COSYNE](#), 2019
- [LKW](#), Maneesh Sahani. *Neural network represents uncertainty by nonlinear moments*. [COSYNE](#), 2018