

# Li KEVIN Wenliang

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## **PROFESSIONAL EXPERIENCE**

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2022-pres. [Google DeepMind](#) Research Scientist, Technical Artificial General Intelligence Safety

2021-pres. [University College London](#) Research Fellow, with Raymond Dolan

## **EDUCATION**

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2015-2021 [Gatsby Unit, University College London](#)

PhD in Machine Learning and Theoretical Neuroscience

Supervisors: 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. Supervisors: Máté Lengyel, Joan Lasenby

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

Ranking: top 10 for 1<sup>st</sup>, 2<sup>nd</sup>, and 4<sup>th</sup> years (3<sup>rd</sup> 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**

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2020-2021 [Amazon Web Services, Shanghai](#) Research Scientist Intern, with David Wipf

2021 [Department of Psychology, University of Cambridge](#) Visitor to Zoe Kourtzi, visual perceptual learning

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

2020-2021 [Institute of Neuroscience, Chinese Academy of Science](#) Visitor to Liping Wang, sequence perception

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

## **TEACHING EXPERIENCE**

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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**

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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**

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

## ***PUBLICATIONS***

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### **Referred journals and conference proceedings**

- **LKW** and Aaron Seitz. *Deep neural network for modelling visual perceptual learning*. **Journal of Neuroscience**, 2018
- Bin Dai, **LKW**, and David Wipf. On the Value of Infinite Gradients in Variational Autoencoder Models, **NeurIPS**, 2021
- Longyuan Li, Jian Yao, **LKW**, Tong He, Tianjun Xiao, Junchi Yan, David Wipf, Zheng Zhang. GRIN: Generative Relation and Intention Network for Multi-agent Trajectory Prediction, **NeurIPS**, 2021
- **LKW** and Heishiro Kanagawa. Blindness of score-based methods to isolated components and mixing proportions, **NeurIPS Workshop**, 2021
- Tianlin Xu, **LKW**, Michael Munn, and Beatrice Acciaio. *COT-GAN: Generating sequential data via causal optimal transport*. **NeurIPS**, 2020
- **LKW**, Theodore Moskovitz, Heishiro Kanagawa, and Maneesh Sahani. *Amortised learning by wake-sleep*. **ICML**, 2020
- **LKW** and Maneesh Sahani. *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
- Chunfang Liu, **Wenliang Li**, Funchun Sun, and Jianwei Zhang. *Grasp planning by human experience on objects with complex geometry*. **IROS**, 2015

### **Referred conference abstracts**

- **LKW**. *A distributional Bayesian learning theory for visual perceptual learning*. **COSYNE**, 2022
- **LKW**, Eszter Vértés and Maneesh Sahani. *Accurate and adaptive recognition in a dynamic environment*. **COSYNE**, 2019
- **LKW** and Maneesh Sahani. *Neural network represents uncertainty by nonlinear moments*. **COSYNE**, 2018