

Junhyung Park

Education

- Nov.2019 – **PhD in Machine Learning**, *Empirical Inference Department, Max-Planck-Institute for Intelligent Systems*,
 Jul.2024 Tübingen, Germany
 Thesis: “A Measure-Theoretic Axiomatisation of Causality and Kernel Regression”, supervised by **Krikamol Muandet** and **Bernhard Schölkopf**
- Sep.2017 – **MSc in Statistics**, *Seminar für Statistik, Dept. of Mathematics, ETH Zürich*, Switzerland
 Aug.2019 Thesis: “Kernel Measures of Conditional Dependence”, supervised by **Sara van de Geer**
 Brownian Motion and Stochastic Calculus, Fundamentals of Mathematical Statistics, Computational Statistics, Introduction to Machine Learning, etc.
- Oct.2015 – **MMath in Mathematics**, *Trinity College, University of Cambridge*, Cambridge, UK
 Jun.2016 Commutative Algebra, Functional Analysis, Differential Geometry, Representation Theory, etc.
- Oct.2012 – **BA in Mathematics**, *Trinity College, University of Cambridge*, Cambridge, UK
 Jun.2015 Galois Theory, Linear Analysis, Differential Geometry, Number Fields, Complex Analysis, etc.

Work Experience

- Oct.2024 – **Post-Doctoral Researcher**, *ETH Zürich*, Switzerland
 Supervised by **Fanny Yang**
- Sep.2024 – **Visiting Scholar**, *Simons Institute, UC Berkeley*, California, US
 Dec.2024 Programme: **Modern Paradigms in Generalization**
- Aug.2023 – **Applied Scientist Intern**, *Amazon Web Services*, Santa Clara, California, US
 Dec 2023 Supervised by **Shiva Kasiviswanathan** and **Patrick Blöbaum**
- Sep.2016 – **Junior Researcher in Statistics**, *Caleb ABC*, Seoul, Korea
 Jun.2017 Developed data envelopment analysis and logistic regression features on B-Box, a statistics software

Publications

- Submitted 2025 **Park, J., Icard, T. and Yang, F.** Counterfactual spaces
- Submitted 2025 **Näf, J., Park, J. and Susmann, H.** Causal-DRF: Conditional kernel treatment effect estimation using distributional random forest
- Submitted 2024 **Park, J., Blöbaum, P. and Kasiviswanathan, K.** A classical view on benign overfitting: the role of sample size
- NeurIPS 2025 **Wegel, T., So, G., Park, J. and Yang, F.** On the sample complexity of semi-supervised multi-objective learning
- UAI 2024 **Buchholz, S.*, Park, J.* and Schölkopf, B.** Products, abstractions and inclusions of causal spaces
- PCIC 2024 **Dhanakshirur, M., Laumann, F., Park, J. and Barahona, M.** A continuous structural intervention distance to compare causal graphs
- NeurIPS 2023 Oral (77/12343) **Park, J., Buchholz, S., Schölkopf, B. and Muandet, K.** A measure-theoretic axiomatisation of causality
- Entropy 2023 **Laumann, F., von Kügelgen, J., Park, J., Schölkopf, B. and Barahona, M.** Kernel-based independence tests for causal structure learning on functional data
- ALT 2023 **Park, J. and Muandet, K.** Towards empirical process theory for vector-valued functions: metric entropy of smooth function classes
- ICML 2021 **Park, J., Shalit, U., Schölkopf, B. and Muandet, K.** Conditional distributional treatment effect with kernel conditional mean embeddings and U-statistic regression
- arXiv 2020 **Park, J. and Muandet, K.** Regularised least-squares regression with infinite dimensional output space
- NeurIPS 2020 **Park, J. and Muandet, K.** A measure-theoretic approach to kernel conditional mean embeddings

Presentations

- Nov 2025 University College London, **Causal and Counterfactual Spaces**
- Oct 2025 Technical University of Munich, **Causal and Counterfactual Spaces**
- Oct 2025 Symposium on Mathematical Foundations of Trustworthy Learning, **Causal and Counterfactual Spaces**
- Oct 2025 ETH Zürich, **Counterfactual Spaces**

- Jul 2025 MPI for Intelligent Systems, Tübingen, **Causal and Counterfactual Spaces**
- Jul 2025 Technical University of Munich, **A Measure-Theoretic Axiomatisation of Causality**
- Jun 2025 German Research Center for Artificial Intelligence, **A Measure-Theoretic Axiomatisaiton of Causality**
- Apr 2025 Seoul National University, **A Measure-Theoretic Axiomatisaiton of Causality**
- Jan 2025 Korea University, **A Measure-Theoretic Axiomatisation of Causality**
- Jan 2025 Korean Institute for Advanced Study, **A Measure-Theoretic Axiomatisation of Causality**
- Nov 2024 University of Pisa, **A Measure-Theoretic Axiomatisation of Causality**
- Oct 2024 Seminar for Statistics, ETH Zürich, **A Measure-Theoretic Axiomatisation of Causality**
- Aug 2024 University of Copenhagen, **A Measure-Theoretic Axiomatisation of Causality**
- Feb 2024 ETH Zürich, **A Measure-Theoretic Axiomatisation of Causality**
- Nov 2023 Leipzig University, **A Measure-Theoretic Axiomatisation of Causality**
- Nov 2023 Amazon, **A Measure-Theoretic Axiomatisation of Causality**
- Oct 2023 Stanford University, USA, **A Measure-Theoretic Axiomatisation of Causality**
- Jul 2023 European Meeting of Statisticians, Warsaw, Poland, **Towards a Measure-Theoretic Axiomatisation of Causality**
- May 2023 Colloquium on “Fundamental Challenges in Causality”, Grenoble, France, **Towards a Measure-Theoretic Axiomatisation of Causality**
- Apr 2023 Colloquium on “When Causal Inference meets Statistical Analysis”, Paris, France, **Towards a Measure-Theoretic Axiomatisation of Causality**
- Apr 2023 Workshop on Causal Representation Learning, Tübingen, Germany, **Towards a Measure-Theoretic Axiomatisation of Causality**
- Mar 2023 CISPA – Helmholtz Center for Information Security, Saarbrücken, Germany, **Towards a Measure-Theoretic Axiomatisation of Causality**
- Sep 2022 ELISE Theory workshop on machine learning fundamentals, Antibes, France, **Kernel Conditional Mean Embeddings and Empirical Process Theory for Vector-Valued Functions**
- Jul 2022 Saint Flour Probability Summer School, Saint Flour, France, **Empirical Process Theory for Vector-Valued Functions**
- Mar 2022 Cornell University, USA, **Distributional Treatment Effects with Kernels**
- Jul 2020 Petnica Summer Institute Machine Learning (Microsoft, Belgrade), **Kernel Methods in Machine Learning**

Supervised Students

- Autumn 2025 Yuqing Zhou, Masters student semester project at ETH Zürich

Teaching Experience

- Autumn 2025 Advanced topics in machine learning, Guarantees in machine learning
- Spring 2025 Introduction to machine learning

Reviews

- NeurIPS 2021, 2022, 2023, 2024, 2025
- ICML 2022, 2023, 2024, 2025
- JMLR 2025
- AoS 2021, 2023
- ICLR 2022
- AISTATS 2022 (Top 10% of reviewers), 2023, 2026
- Biometrika 2023
- Analysis and Applications
- CDC 2022
- TPAMI 2024
- TMLR 2025

Technical & Language Skills

- Programming PYTHON, R, MATLAB
- Software L^AT_EX

Languages Korean (Mother Tongue), English (Bilingual), French (Intermediate), German (Elementary)

Additional Activities

- Football Member of Trinity College 1st Football Team (2012–2016) with captaincy (2013–2014). Member of TV Derendingen (2021–2024)
- Music Piano, grade 8, Associated Board of the Royal Schools of Music, UK

Volunteering Experience

- Oct.2012 – **Volunteer teaching assistant**, *Perse School*, Cambridge, UK
Jun.2013 Helping underperforming students with maths
- Oct.2014 – **Soup run**, Cambridge, UK
Jun.2016 Handing out food to the local homeless population.
- Dec.2015 **Warehouse volunteer**, *Care4Calais*, Calais, France
Sorting and distributing donated goods to refugees
- May.2024 – **WASH centre volunteer**, *CollectiveAid*, Calais, France
Jun.2024 Laundry and tent distribution for refugees.