

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. and Zhou, Y.** A fine-grained look at causal effects in causal spaces
- 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 **Park, J., Buchholz, S., Schölkopf, B. and Muandet, K.** A measure-theoretic axiomatisation of causality
- Oral (77/12343)
- 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 Axiomatisation of Causality**
- Apr 2025 Seoul National University, **A Measure-Theoretic Axiomatisation 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.