

# Junhyung Park

updated 19<sup>th</sup> September, 2025

## Education

- Nov.2019– Jul.2024 **PhD in Machine Learning**, *Empirical Inference Department, Max-Planck-Institute for Intelligent Systems*, Tübingen, Germany  
Thesis: “A Measure-Theoretic Axiomatisation of Causality and Kernel Regression”, supervised by **Krikamol Muandet** and **Bernhard Schölkopf**
- Sep.2017 – Aug.2019 **MSc in Statistics**, *Seminar für Statistik, Dept. of Mathematics, ETH Zürich*, Switzerland  
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 – Jun.2016 **MMath in Mathematics**, *Trinity College, University of Cambridge*, Cambridge, UK  
Commutative Algebra, Functional Analysis, Differential Geometry, Representation Theory, etc.
- Oct.2012 – Jun.2015 **BA in Mathematics**, *Trinity College, University of Cambridge*, Cambridge, UK  
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 – Dec.2024 **Visiting Scholar**, *Simons Institute, UC Berkeley*, California, US  
Programme: **Modern Paradigms in Generalization**
- Aug.2023 – Dec 2023 **Applied Scientist Intern**, *Amazon Web Services*, Santa Clara, California, US  
Supervised by **Shiva Kasiviswanathan** and **Patrick Blöbaum**
- Sep.2016 – Jun.2017 **Junior Researcher in Statistics**, *Caleb ABC*, Seoul, Korea  
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

## Invited Talks

Oct 2025 Technical University of Munich, **Causal and 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  
Biometrika 2023  
Analysis and Applications 2023  
CDC 2022  
TPAMI 2024  
TMLR 2025

## Technical & Language Skills

Programming PYTHON, R, MATLAB  
Software L<sup>A</sup>T<sub>E</sub>X  
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.