

Sunny Wang

POSTDOCTORAL RESEARCH FELLOW · STATISTICS & MACHINE LEARNING

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Employment

Postdoctoral Research Fellow

NANYANG TECHNOLOGICAL UNIVERSITY (NTU)

- Advisor: Dr. Hemant Tyagi

Singapore

September 2025 - ...

Education

École Nationale de la Statistique et de l'Analyse de l'Information (ENSAI)

PHD APPLIED MATHEMATICS (STATISTICS)

- Advisor: Dr. Valentin Patilea
- Thesis: Adaptive functional data analysis, with applications to sports modelling

Rennes, France

October 2021 - May 2025

Toulouse School of Economics

MSc STATISTICS & ECONOMETRICS

- Mention Très Bien (Highest Honours)

Toulouse, France

August 2019 - October 2021

Singapore Management University

BSc ECONOMICS

Singapore

August 2014 - January 2019

Publications

Adaptive Functional Principal Components Analysis (with V. Patilea, N. Klutchnikoff);

Journal of the Royal Statistical Society Series B: Statistical Methodology, 87(3), 603-631

Rate accelerated inference for integrals of multivariate random functions (with V. Patilea);

Accepted, Computational Statistics & Data Analysis

PREPRINTS

Structural adaptation via directional regularity: rate accelerated estimation in multivariate functional data (with O. Kass);
arxiv:2409.00817 (Major Revision, Bernoulli)

Professional Experience

2021 **Research Intern**, CREST-ENSAI (Supervisors: V. Patilea & E. Solea)

2020 **Research Intern**, Institute for Advanced Study in Toulouse (Supervisor: P. Seabright)

2018 **Research Intern**, Institute for Advanced Study in Toulouse (Supervisor: P. Seabright)

2017 **Intern**, Nest Ventures

2014-2015 **Project Manager**, Tech startup

Conferences / Seminars

January 2025. *Structural adaptation in multivariate functional data*. Bocconi Job Market Seminar, 2025, Milan

December 2024. *Fast rate integral estimation for multivariate random functions*. CMStatistics 2024, London, United Kingdom

December 2024. *Fast rate integral estimation for multivariate random functions*. ICSDS 2024, Nice, France

August 2024. *Directional Regularity*. IMS World Congress, Bochum, Germany

June 2024. *Functional scores inference*. ISNPS, Braga, Portugal
April 2024. *Directional Regularity*. JSTAR, Rennes, France
March 2024. *Directional Regularity*. FDAWorkshop, Lille, France
December 2023. *Adaptive Functional Scores*. CMStatistics 2023, Berlin, Germany
November 2023. *Adaptive Functional Principal Components Analysis*. HKBU Seminar, Hong Kong
November 2023. *Adaptive Functional Principal Components Analysis*. NUS Seminar, Singapore
July 2023. *Adaptive Functional Principal Components Analysis*. JdS Sfds, Brussels, Belgium
May 2023. *Adaptive Functional Principal Components Analysis*. ATMS Workshop, Leuven, Belgium
December 2022. *Adaptive Functional Principal Components Analysis*. CMStatistics, London, UK
September 2022. *Adaptive Functional Principal Components Analysis*. GOFCP, Rennes, France

Teaching Experience _____

2023-2024	Parallel Computing in R , Lecturer	ENSAI, France
2023-2024	Introduction to R Programming , Lecturer	ENSAI, France
2024	Missing Data , Tutorial Instructor	ENSAI, France
2023-2024	Functional Data Analysis , Guest Lecturer	ENSAI, France
2022-2024	Multivariate time series analysis , Tutorial Instructor	ENSAI, France
2022-2024	Survival Analysis , Tutorial Instructor	ENSAI, France

Software _____

integratefda	https://github.com/sunnywang93/integratefda , R package for fast rate integral approximation
direg	https://github.com/sunnywang93/direg , R package for directional regularity
FDAdapt	https://github.com/sunnywang93/FDAdapt , R package for adaptive FPCA

Miscellaneous _____

Language Skills: English (Native), Mandarin (Limited Working Proficiency), French (Conversational Proficiency)
Citizenship: Singapore