Zoltán Szabó

Zoltán Szabó
Professor of Data Science

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Contact Information

Department of Statistics
London School of Economics (LSE)
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United Kingdom

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Research Interest

∘ Theory: statistical machine learning; kernel methods, information theory[1], randomized algorithms, scalable computation.
∘ Applications:
- shape-constrained prediction, hypothesis testing, safety-critical learning, style transfer, distribution regression, dictionary learning, structured sparsity, independent subspace analysis, bioinformatics, Bayesian inference, computer vision,
- finance, economics, analysis of climate data, criminal data analysis, collaborative filtering, emotion recognition, face tracking, remote sensing, natural language processing, gene analysis.

Employment

London School of Economics, United Kingdom
Department of Statistics
Professor of Data Science 2021–
École Polytechnique, France
Center of Applied Mathematics
Senior Researcher (1st class, HDR) 2019–2021
Senior Researcher (1st class) 2016–2019
University College London, United Kingdom
Gatsby Unit
Research Associate (with Prof. Arthur Gretton) 2013–2016
Eötvös Loránd University, Hungary
School of Computer Science
Research Fellow 2009–2013
Assistant Research Fellow 2008–2009
Assistant Professor 2007–2008

Education and Habilitation

Paris-Sud University, France
HDR (with distinction) 2019
Title: Contributions to Kernel Techniques.
Eötvös Loránd University, Hungary
School of Computer Science
Ph.D. (summa cum laude) 2004–2007
Title: Separation Principles in Independent Process Analysis.
Faculty of Natural Sciences, Applied Mathematics

[1] Information Theoretical Estimators (ITE) Toolbox: `https://bitbucket.org/szzoli/ite-in-python/`.

Ph.D. (summa cum laude) 2003–2006
Title: Group-Structured and Independent Subspace Based Dictionary Learning.
M.Sc. (with distinction) 1998–2003
Title: Retina Based Sampling in Face Component Recognition.
Specialization in Systems Theory, Signal and Image Processing, Financial and Actuarial Mathematics.

Professional Activities (Global)

Moderator of
Statistical Machine Learning (stat.ML) on arXiv 2018–

Reviewing Grant Applications
Israel Science Foundation (ISF) 2021–
European Research Council (ERC) 2018–
Swiss National Science Foundation (SNSF) 2017–

Senior Area Chair (SAC)
International Conference on Machine Learning (ICML) 2026
International Conference on Artificial Intelligence and Statistics (AISTATS-2026) 2025
Advances in Neural Information Processing Systems (NeurIPS) 2025
International Conference on Artificial Intelligence and Statistics (AISTATS-2025) 2024
Advances in Neural Information Processing Systems (NeurIPS) 2024
International Conference on Artificial Intelligence and Statistics (AISTATS-2024) 2023
International Conference on Artificial Intelligence and Statistics (AISTATS-2023) 2022
Advances in Neural Information Processing Systems (NeurIPS) 2019

Area Chair (AC)
Conference on Uncertainty in Artificial Intelligence (UAI) 2025
International Conference on Machine Learning (ICML) 2025
Conference on Uncertainty in Artificial Intelligence (UAI) 2024
International Conference on Machine Learning (ICML) 2024
Conference on Learning Theory (COLT) 2024
Advances in Neural Information Processing Systems (NeurIPS) 2023
International Conference on Machine Learning (ICML) 2023
Conference on Uncertainty in Artificial Intelligence (UAI) 2023
Conference on Learning Theory (COLT) 2023
International Conference on Learning Representations (ICLR-2023) 2022
Advances in Neural Information Processing Systems (NeurIPS) 2022
International Conference on Machine Learning (ICML) 2022
Conference on Uncertainty in Artificial Intelligence (UAI) 2022
Conference on Learning Theory (COLT) 2022
International Conference on Artificial Intelligence and Statistics (AISTATS-2022) 2021
International Conference on Learning Representations (ICLR-2022) 2021
Advances in Neural Information Processing Systems (NeurIPS) 2021
International Conference on Machine Learning (ICML) 2021
Conference on Learning Theory (COLT) 2021
Conference on Uncertainty in Artificial Intelligence (UAI) 2021
International Joint Conference on Artificial Intelligence (IJCAI) 2021
International Conference on Artificial Intelligence and Statistics (AISTATS-2021) 2020
International Conference on Learning Representations (ICLR-2021) 2020
Advances in Neural Information Processing Systems (NeurIPS) 2020
Conference on Uncertainty in Artificial Intelligence (UAI) 2020
International Conference on Machine Learning (ICML) 2020

International Joint Conference on Artificial Intelligence (IJCAI)	2020
International Conference on Artificial Intelligence and Statistics (AISTATS-2020)	2019
International Joint Conference on Artificial Intelligence (IJCAI)	2019
International Conference on Machine Learning (ICML)	2019
International Conference on Artificial Intelligence and Statistics (AISTATS-2019)	2018
Advances in Neural Information Processing Systems (NeurIPS)	2018
International Conference on Machine Learning (ICML)	2018
International Conference on Artificial Intelligence and Statistics (AISTATS-2018)	2017
Conference on Uncertainty in Artificial Intelligence (UAI)	2017
International Conference on Machine Learning (ICML)	2017
International Conference on Artificial Intelligence and Statistics (AISTATS-2017)	2016
Conference on Uncertainty in Artificial Intelligence (UAI)	2016

Advisory Committee

arXiv Statistics Advisory Committee Member	2019–

Editorial Board Member

Journal of Machine Learning Research	2020–

Senior Associate Editor

ACM Transactions on Probabilistic Machine Learning	2023–

Associate Editor

Mathematical Foundations of Computing	2019–

Reviewing for Journals

Journal of the Royal Statistical Society: Series B	2024–
Annals of the Institute of Statistical Mathematics	2024–
Constructive Approximation	2023–
Latin American Journal of Probability and Mathematical Statistics	2022–
Applied and Computational Harmonic Analysis	2022–
Journal of Complexity	2022–
Annals of Applied Probability	2021–
Journal of the American Statistical Association	2021–
Information and Inference: A Journal of the IMA	2020–
Nature Machine Intelligence	2020–
Transactions on Knowledge and Data Engineering	2020–
Foundations of Data Science	2019–
Foundations of Computational Mathematics	2019–
Electronic Journal of Statistics	2019–
Journal of Multivariate Analysis	2017–
Annals of Statistics	2016–
Machine Learning	2016–
Statistics and Computing	2015–
IEEE Signal Processing Letters	2015–
Statistical Analysis and Data Mining	2014–
IET Computer Vision	2014–
International Journal of Computer Vision	2014–
IEEE Transactions on Information Theory	2013–
Journal of Machine Learning Research	2013–2019
IEEE Transactions on Pattern Analysis and Machine Intelligence	2013–
Progress in Artificial Intelligence	2013–
Entropy	2012–
IEEE Transactions on Neural Networks and Learning Systems	2012–
Signal, Image and Video Processing	2012–

IEEE Transactions on Signal Processing 2009–
Neurocomputing 2009–
IEEE Transactions on Neural Networks 2007–2011

Reviewing Books

Cambridge University Press 2018–

Reviewing for Conferences

IEEE International Symposium on Information Theory (ISIT) 2021
International Conference on Artificial Neural Networks (ICANN) 2019
International Conference on Learning Representations (ICLR-2019) 2018
Conference on Learning Theory (COLT) 2018
International Conference on Learning Representations (ICLR-2018) 2017
Conference on Learning Theory (COLT) 2017
Advances in Neural Information Processing Systems (NIPS) 2017
Advances in Neural Information Processing Systems (NIPS) 2016
International Conference on Machine Learning (ICML) 2016
Advances in Neural Information Processing Systems (NIPS) 2015
Advances in Neural Information Processing Systems (NIPS) 2014
International Conference on Machine Learning (ICML) 2012
International Conference on Latent Variable Analysis and Signal Separation (LVA/ICA) 2012
International Joint Conference on Artificial Intelligence (IJCAI) 2011
International Joint Conference on Neural Networks (IJCNN) 2011
European Conference on Complex Systems (ECCS) 2011
European Signal Processing Conference (EUSIPCO) 2011
European Conference on Complex Systems (ECCS) 2009

Reviewing Workshop Proposals

International Conference on Machine Learning (ICML) Workshops 2019

Reviewing for Workshops

Signal Processing with Adaptive Sparse Structured Representations (SPARS) 2019
Challenges in Machine Learning (CiML) @ N(eur)IPS:
Machine Learning Competitions "in the Wild": Playing in the Real World or in Real 2018
Time Gaming and Education 2016

Organizing (workshop, conference)

Representing, calibrating & leveraging prediction uncertainty from statistics to machine learning (Isaac Newton Institute): May 6 - Aug. 29, 2025
W1 Uncertainty in multivariate, non-Euclidean, and functional spaces: theory and practice, May 6-9, 2025
– principal workshop organizer,
– co-organizers: Alexandra Menafoglio, David Ginsbourger, Florence d'Alché-Buc, Judith Rousseau, Neil Lawrence.
NIPS: 'Learning on Distributions, Functions, Graphs and Groups' 2017
– co-organizers: Bharath K. Sriperumbudur, Florence d'Alché-Buc, Krikamol Muandet.
NIPS: 'Adaptive and Scalable Nonparametric Methods in Machine Learning' 2016
– co-organizers: Aaditya Ramdas, Bharath K. Sriperumbudur, Han Liu, John Lafferty, Mladen Kolar, Samory Kpotufe.
NIPS: 'Modern Nonparametrics 3: Automating the Learning Pipeline' 2014
– co-organizers: Andrew G. Wilson, Arthur Gretton, Eric Xing, Han Liu, Le Song, Mladen Kolar, Samory Kpotufe.
Conference (Workflow Chair)
International Conference on Artificial Intelligence and Statistics (AISTATS) 2016

– co-workflow chair: Rodolphe Jenatton.

Session Chair (conference)

Lifting Inference with Kernel Embeddings (LIKE) 2023
Session: Kernel-based Hypothesis Testing and Optimization
International Conference on Artificial Intelligence and Statistics (AISTATS) 2022
Session: Learning Theory / Kernels.
International Conference on Machine Learning (ICML) 2021
Sessions: Kernel Methods, Learning Theory.
Conference on Uncertainty in Artificial Intelligence (UAI) 2020
Session: Optimization.
International Conference on Mathematics of Data Science (MathoDS 3) 2019
International Conference on Machine Learning (ICML) 2018
Session: Statistical Learning Theory.
Paris Summit on Big Data (ParisBD) 2017

Mentoring Newcomers

3 Newcomers @ ICML 2020

Mentoring Oral Presentations

Rahul Singh (MIT Economics) @ NeurIPS 2019

Reviewing Scientific Competitions

National Scientific Student Competition and Conference 2005, 2013
Scientific Student Competition and Conference 2012

Thesis Committee

Motonobu Kanagawa (HDR) 2026
– Data Science Department, Eurecom, France,
– role: Reviewer.
Roman Kern (HDR) 2026
– Department of Computer Science and Biomedical Engineering,
Graz University of Technology, Austria,
– role: Reviewer.
Yanzhi Chen (Ph.D.) 2026
– Department of Engineering, University of Cambridge, UK,
– thesis title: On Dependence Modeling with Mutual Information,
– role: Reviewer.
Tobias Schroder (Ph.D.) 2026
– Department of Mathematics, Imperial College London, UK,
– role: Reviewer.
Masha Naslidnyk (Ph.D.) 2025
– Department of Statistical Science, University College London, UK,
– role: Reviewer.
Florian Kalinke (Ph.D.) May 19, 2025
– Institute for Program Structures and Data Organization,
Karlsruhe Institute of Technology, Germany,
– role: Reviewer.
Théophile Cantelobre (Ph.D.) Oct. 16, 2024
– SIERRA Team, INRIA Paris, France,
– thesis title: Contributions to Structured Statistical Learning:
Theory and Algorithms,
– role: Examiner.
Tamim El Ahmad (Ph.D.) July 9, 2024
– LTCI, Télécom Paris, France.

– thesis title: Learning Deep Kernel Networks: Application to Efficient and Robust Structured Prediction,
– role: Examiner.

Omar Hagrass (Ph.D.) May 20, 2024
– Department of Statistics, Pennsylvania State University, US,
– thesis title: Spectral Regularized Kernel Two-Sample Tests,
– role: Reviewer.

Anthony Ozier-Lafontaine (Ph.D.) Nov. 24, 2023
– Jean Leray Mathematics Lab, University of Nantes, France,
– thesis title: Kernel-based testing and their application to single-cell data,
– role: Reviewer.

Zhanliang Huang (Ph.D.) May 30, 2023
– School of Computer, University of Birmingham, UK,
– thesis title: Noise Reduction in Differentially Private Learning,
– role: Reviewer.

Hai Pham (Ph.D.) Apr. 28, 2023
– School of Computer Science, Carnegie Mellon University, US,
– thesis title: Towards Efficient and Scalable Representation Learning,
– role: Reviewer.

Valerii Likhosherstov (Ph.D.) Mar. 15, 2023
– Department of Engineering, University of Cambridge, UK,
– thesis title: Random Features for Efficient Attention Approximation,
– role: Reviewer.

Omar Hagrass (Ph.D.) Nov. 15, 2022
– Department of Statistics, Pennsylvania State University, US,
– thesis title: Spectral Regularized Kernel Two-Sample Tests,
– role: Reviewer of Comprehensive Exam.

Jonas Wacker (Ph.D.) July 12, 2022
– Data Science Department, Eurecom, France,
– thesis title: Random Features for Dot Product Kernels and Beyond,
– role: Reviewer.

Hai Pham (Ph.D.) Apr. 21, 2022
– School of Computer Science, Carnegie Mellon University, US,
– thesis title: Towards Efficient and Scalable Representation Learning,
– role: Committee Member for Thesis Proposal.

Guillaume Staerman (Ph.D.) Apr. 12, 2022
– Télécom Paris, France,
– thesis title: Functional Anomaly Detection and Robust Estimation,
– role: Reviewer.

Luigi Carratino (Ph.D.) 2020
– Computer Science and Systems Engineering Program, University of Genova, Italy,
– thesis title: Resource Efficient Large-Scale Machine Learning,
– role: Reviewer.

Romain Brault (Ph.D.) 2017
– Télécom ParisTech, France,
– thesis title: Large-scale Operator-Valued Kernel Regression,
– role: Reviewer.

Gábor Matuz (M.Sc.) 2010
– Budapest University of Technology and Economics, Hungary,
– thesis title: Adaptive Algorithms in Multiagent Environments,
– role: Reviewer.

Kornél Kovács (Ph.D.) 2008

– University of Szeged, Hungary,
– thesis title: Various Kernel Methods with Applications,
– role: Reviewer.

Professional Activities (London School of Economics)

Turing Academic Liaison 2023–2025

Programme Director
MSc Data Science Sept., 2022–

Sub-Board Chair of MSc Data Science Sept., 2022–

Management Committee/Board
DSI Management Committee 2021–2025
DTS Management Board June, 2024–

Member of Review Panel
RISF AI grant applications Feb.-Mar., 2024

Recruitment Committee
Departmental Search Committee 2022–2025
Departmental Research Panel 2022–2025
Departmental Teaching Panel 2022–2024
Departmental Selection Panel Mar., 2024
LSE Fellow Recruitment Panel Apr., 2022

Organizing (research showcase)
Statistics Research Showcase 2026
Statistics Research Showcase Apr. 7–8, 2025
PSS support: Penny Montague.
Statistics Research Showcase June 20–21, 2024
co-organizers: Giulia Livieri, Sara Geneletti, Chengchun Shi, Kostas Kardaras,
PSS support: Penny Montague.
Statistics Research Showcase June 5–6, 2023
co-organizers: Yunxiao Chen, Tengyao Wang, Erik Baurdoux,
PSS support: Penny Montague, Charlotte Morgan.
Statistics Research Showcase June 14–15, 2022
co-organizers: Fiona Steele, Clifford Lam, Kostas Kardaras,
PSS support: Penny Montague, Joey Hoang.

Organizing (seminar)
Industrial Seminars @ Department of Statistics Apr. 2025–
Data Science Seminars @ Department of Statistics 2021–2023
co-organizer: Francesca Panero. 2022–2023

Organizing (Cumberland Lodge weekend for MSc students) Oct. 11-13, 2024
co-organizer: Irini Moustaki.

Departmental EDI Committee Sept., 2023–
Departmental Research Committee Sept., 2021–
Departmental Teaching Committee Sept., 2021–

PhD Upgrade (MPhil to PhD) Reviewer
Xianghe Zhu (MPhil) July 16, 2025
– Department of Statistics, LSE,
– title: Autoregressive Hypergraphs,
– supervisor: Prof. Qiwei Yao.

Sakina Hansen (MPhil) Sept. 26, 2024
– Department of Statistics, LSE,
– title: Explainable Machine Learning: Philosophy, Methods and Applications,
– supervisor: Prof. Joshua Loftus.

System Administration May–, 2024
Departmental GPU server

β-Tester and Shaping LSE RONIN July-Sept. 2025
Working with the Research Computing team.

Session Chair
PhD Presentation Event (Dept. of Statistics) June 11, 2024
PhD Presentation Event (Dept. of Statistics) May 31, 2023
PhD Presentation Event (Dept. of Statistics) May 13, 2022

Student Support
In-Place Support of the Cumberland Lodge Student Residential Weekend (MSc) Oct. 10-12, 2025
In-Place Support of the Cumberland Lodge Student Residential Weekend (MSc) Oct. 13-15, 2023
In-Place Support of the Cumberland Lodge Student Residential Weekend (BSc) Nov. 11-13, 2022
In-Place Support of the Cumberland Lodge Student Residential Weekend (MSc) Oct. 14-16, 2022

GTA Observing
Di Su: Quantitative Methods (Statistics), ST 107 Feb. 9, 2024
Sze Ming Lee (Arthur): Elementary Statistical Theory I, ST 109 Oct. 24, 2022

(Deputy) Presenter at the Statistics Winter Graduation Ceremony
Deputy Presenter Dec. 17, 2025
Presenter Dec. 13, 2023
Deputy Presenter Dec. 14, 2022

2nd Examiner (ST = Spring Term, AT = Autumn Term)
Artificial Intelligence (ST311) ST, 2026
Artificial Intelligence (ST311) ST, 2025
Artificial Intelligence (ST449) AT, 2024
Artificial Intelligence (ST311) ST, 2024
Artificial Intelligence (ST449) AT, 2023
Artificial Intelligence (ST311) ST, 2023
Artificial Intelligence (ST311) ST, 2022

Professional Activities (École Polytechnique)

Program Chair @ Data Science Summer School
co-organizers: Aldjia Mazari, Bertrand Thirion, Emmanuel Gobet, Erwan Le Pennec, Jasmyn Scaramella. 2020
co-organizers: Aldjia Mazari, Anastasiia Nitavskyi, Aurélie Coen, Bertrand Thirion, Charlotte Renauld, Elena Carvajal, Emmanuel Bacry. 2019
co-organizers: Aldjia Mazari, Charlotte Renauld, Emmanuel Bacry, Erwan Scornet, Maud Cadiz-Pena, Nozha Boujemaa, Viviane Hoang. 2018
co-organizers: Aldjia Mazari, Emmanuel Bacry, Éric Moulines, Erwan Scornet. 2017

Organizing (seminar)
Statistics Seminars (CREST-CMAP) 2020–2021
co-organizers: Cristina Butucea, Alexandre Tsybakov, Karim Lounici.
Machine Learning External Seminars @ CMAP 2017–2021

Organizing (workshop)
StressTest-2020 workshop Nov. 30 – Dec. 1, 2020

– co-organizers: Stefano De Marco, Emmanuel Gobet.
– topics: financial stress-testing, uncertainty quantification, risk and dependence modelling.

Organizing (journal club, group meeting)

SIMPAS Group Meeting @ CMAP 2020–2021
– co-organizers: Aymeric Dieuleveut, Emmanuel Gobet, Erwan Le Pennec.
Machine Learning Journal Club @ CMAP 2017–2021

Recruitment Committee

Data Science for Business (M.Sc., X-HEC) June 28, 2021
Data Science for Business (M.Sc., X-HEC) Apr. 1, 2020
Data Science for Business (M.Sc., X-HEC) May 27, 2019
Data Science for Business (M.Sc., X-HEC) Feb. 8, 2019
Data Science for Business (M.Sc., X-HEC) Nov. 21, 2018

Internship Committee

X-HEC (M.Sc.) Sept. 10, 2018
Statistical Models in Biology and Physics (M.Sc.) Mar. 22, 2018
Data Science (M.Sc.) Sept. 27, 2017
– École Polytechnique (morning) & Télécom ParisTech (afternoon)
Data Science (M.Sc.) Sept. 4–5, 2017

Professional Activities (University College London)

Organizing (seminar)

Machine Learning External Seminars @ Gatsby Unit 2014–2016

Publications

Preprints

[1] Jose Cribeiro-Ramallo, Agnideep Aich, Florian Kalinke, Ashit Baran Aich, and Zoltán Szabó. The minimax lower bound of kernel Stein discrepancy estimation. Technical report, 2025. (`https://arxiv.org/abs/2510.15058`).

[2] Linda Chamakh and Zoltán Szabó. Keep it tighter – a story on analytical mean embeddings. Technical report, 2024. (`https://arxiv.org/abs/2110.09516`).

[3] Tao Ma, Xuzhi Yang, and Zoltán Szabó. To switch or not to switch? Balanced policy switching in offline reinforcement learning. Technical report, 2024. (`https://arxiv.org/abs/2407.01837`).

[4] Meiling Hao, Pingfan Su, Liyuan Hu, Zoltán Szabó, Qingyuan Zhao, and Chengchun Shi. Forward and backward state abstractions for off-policy evaluation. Technical report, 2024. (`http://arxiv.org/abs/2406.19531`).

Referred Journal Articles & Conference Papers

[1] Csaba Tóth, Harald Oberhauser, and Zoltán Szabó. Random Fourier signature features. *SIAM Journal on Mathematics of Data Science*, 7(1):329–354, 2025.

[2] Florian Kalinke, Zoltán Szabó, and Bharath K. Sriperumbudur. Nyström kernel Stein discrepancy. In *International Conference on Artificial Intelligence and Statistics (AISTATS)*, pages 388–396, Mai Khao, Thailand, 3-5 May 2025. (poster presentation; 31.3% acceptance rate).

[3] Florian Kalinke and Zoltán Szabó. The minimax rate of HSIC estimation for translation-invariant kernels. In *Advances in Neural Information Processing Systems (NeurIPS)*, pages 108468–108489, Vancouver, Canada, 10-15 December 2024. (poster presentation; 25.8% acceptance rate).

[4] Patric Bonnier, Harald Oberhauser, and Zoltán Szabó. Kernelized cumulants: Beyond kernel mean embeddings. In *Advances in Neural Information Processing Systems (NeurIPS)*, pages 11049–11074, New Orleans, LA, USA, 10-16 December 2023. (spotlight presentation; 3.06% acceptance rate).

[5] Florian Kalinke and Zoltán Szabó. Nyström M-Hilbert-Schmidt independence criterion. In *Conference on Uncertainty in Artificial Intelligence (UAI)*, pages 1005–1015, Pittsburgh, PA, USA, 31 July – 4 August 2023. (31% acceptance rate).

[6] Pierre-Cyril Aubin-Frankowski and Zoltán Szabó. Handling hard affine SDP shape constraints in RKHSs. *Journal of Machine Learning Research*, 23(297):1–54, 2022.

[7] Antonin Schrab, Wittawat Jitkrittum, Zoltán Szabó, Dino Sejdinovic, and Arthur Gretton. Discussion on multiscale Fisher's independence test for multivariate dependence. *Biometrika*, 109(3):597–603, 2022.

[8] Alex Lambert, Dimitri Bouche, Zoltán Szabó, and Florence d'Alché-Buc. Functional output regression with infimal convolution: Exploring the Huber and ϵ-insensitive losses. In *International Conference on Machine Learning (ICML)*, pages 11844–11867, Baltimore, USA, 17-23 July 2022. (poster presentation; 21.94% acceptance rate).

[9] Pierre-Cyril Aubin-Frankowski and Zoltán Szabó. Hard shape-constrained kernel machines. In *Advances in Neural Information Processing Systems (NeurIPS)*, pages 384–395, Vancouver, Canada, 8-10 December 2020. (poster presentation; 20.1% acceptance rate).

[10] Pierre-Cyril Aubin-Frankowski, Nicolas Petit, and Zoltán Szabó. Kernel regression for vehicle trajectory reconstruction under speed and inter-vehicular distance constraints. In *IFAC World Congress (IFAC WC)*, volume 53, pages 15084–15089, Berlin, Germany, 11-17 July 2020.

[11] Linda Chamakh, Emmanuel Gobet, and Zoltán Szabó. Orlicz random Fourier features. *Journal of Machine Learning Research*, 21(145):1–37, 2020.

[12] Matthieu Lerasle, Zoltán Szabó, Timothée Mathieu, and Guillaume Lecué. MONK – outlier-robust mean embedding estimation by median-of-means. In Kamalika Chaudhuri and Ruslan Salakhutdinov, editors, *International Conference on Machine Learning (ICML)*, pages 3782–3793, Long Beach, California, USA, 9-15 June 2019. PMLR. (full oral presentation; 4.56% acceptance rate).

[13] Zoltán Szabó and Bharath K. Sriperumbudur. On kernel derivative approximation with random Fourier features. In *International Conference on Artificial Intelligence and Statistics (AISTATS)*, volume 89, pages 827–836, Naha, Okinawa, Japan, 16-18 April 2019. PMLR. (poster presentation; 32.4% acceptance rate).

[14] Romain Brault[†], Alex Lambert[†], Zoltán Szabó, Maxime Sangnier, and Florence d'Alché-Buc. Infinite-task learning with RKHSs. In *International Conference on Artificial Intelligence and Statistics (AISTATS)*, volume 89, pages 1294–1302, Naha, Okinawa, Japan, 16-18 April 2019. PMLR. ([†]contributed equally; poster presentation; 32.4% acceptance rate).

[15] Zoltán Szabó and Bharath K. Sriperumbudur. Characteristic and universal tensor product kernels. *Journal of Machine Learning Research*, 18(233):1–29, 2018.

[16] Wittawat Jitkrittum, Wenkai Xu, Zoltán Szabó, Kenji Fukumizu, and Arthur Gretton. A linear-time kernel goodness-of-fit test. In I. Guyon, U. V. Luxburg, S. Bengio, H. Wallach, R. Fergus, S. Vishwanathan, and R. Garnett, editors, *Advances in Neural Information Processing Systems (NIPS)*, pages 261–270, Long Beach, CA, U.S., 4-9 December 2017. Curran Associates, Inc. (Best Paper Award = in top 3 out of 3240 submissions).

[17] Wittawat Jitkrittum, Zoltán Szabó, and Arthur Gretton. An adaptive test of independence with analytic kernel embeddings. In Doina Precup and Yee Whye Teh, editors, *International Conference*

on Machine Learning (ICML), volume 70, pages 1742–1751, Sydney, Australia, 6-11 August 2017. PMLR. (25.46% acceptance rate).

[18] Zoltán Szabó, Bharath K. Sriperumbudur, Barnabás Póczos, and Arthur Gretton. Learning theory for distribution regression. *Journal of Machine Learning Research*, 17(152):1–40, 2016.

[19] Wittawat Jitkrittum, Zoltán Szabó, Kacper Chwialkowski, and Arthur Gretton. Interpretable distribution features with maximum testing power. In D. D. Lee, M. Sugiyama, U. V. Luxburg, I. Guyon, and R. Garnett, editors, *Advances in Neural Information Processing Systems (NIPS)*, pages 181–189, Barcelona, Spain, 5-10 December 2016. Curran Associates, Inc. (full oral presentation = top 1.84%).

[20] Bharath K. Sriperumbudur and Zoltán Szabó. Optimal rates for random Fourier features. In C. Cortes, N. D. Lawrence, D. D. Lee, M. Sugiyama, and R. Garnett, editors, *Advances in Neural Information Processing Systems (NIPS)*, pages 1144–1152, Montréal, Canada, 7-12 December 2015. Curran Associates, Inc. (contributed equally; spotlight presentation – 3.65% acceptance rate).

[21] Heiko Strathmann, Dino Sejdinovic, Samuel Livingstone, Zoltán Szabó, and Arthur Gretton. Gradient-free Hamiltonian Monte Carlo with efficient kernel exponential families. In C. Cortes, N. D. Lawrence, D. D. Lee, M. Sugiyama, and R. Garnett, editors, *Advances in Neural Information Processing Systems (NIPS)*, pages 955–963, Montréal, Canada, 7-12 December 2015. Curran Associates, Inc. (poster presentation; 17.46% acceptance rate).

[22] Mijung Park, Wittawat Jitkrittum, Ahmad Qamar, Zoltán Szabó, Lars Buesing, and Maneesh Sahani. Bayesian manifold learning: The locally linear latent variable model. In C. Cortes, N. D. Lawrence, D. D. Lee, M. Sugiyama, and R. Garnett, editors, *Advances in Neural Information Processing Systems (NIPS)*, pages 154–162, Montréal, Canada, 7-12 December 2015. Curran Associates, Inc. (poster presentation; 17.46% acceptance rate).

[23] Wittawat Jitkrittum, Arthur Gretton, Nicolas Heess, Ali Eslami, Balaji Lakshminarayanan, Dino Sejdinovic, and Zoltán Szabó. Kernel-based just-in-time learning for passing expectation propagation messages. In *Conference on Uncertainty in Artificial Intelligence (UAI)*, pages 405–414, Amsterdam, Netherlands, 12-16 July 2015. (34% acceptance rate).

[24] Zoltán Szabó, Arthur Gretton, Barnabás Póczos, and Bharath K. Sriperumbudur. Two-stage sampled learning theory on distributions. In *International Conference on Artificial Intelligence and Statistics (AISTATS)*, pages 948–957, San Diego, California, USA, 9-12 May 2015. (oral presentation; 6.11% acceptance rate).

[25] Balázs Pintér, Gyula Vörös, Zoltán Szabó, and András Lőrincz. Wikifying novel words to mixtures of Wikipedia senses by structured sparse coding. In Ana Fred and Maria De Marsico, editors, *Pattern Recognition Applications and Methods*, volume 318 of *Advances in Intelligent and Soft Computing*, pages 241–255. Springer, 2015.

[26] Zoltán Szabó. Information theoretical estimators toolbox. *Journal of Machine Learning Research*, 15:283–287, 2014.

[27] László Jeni, András Lőrincz, Zoltán Szabó, Jeffrey F. Cohn, and Takeo Kanade. Spatio-temporal event classification using time-series kernel based structured sparsity. In David Fleet, Tomas Pajdla, Bernt Schiele, and Tinne Tuytelaars, editors, *European Conference on Computer Vision (ECCV)*, volume 8692 of *Lecture Notes in Computer Science*, pages 135–150, Zürich, Switzerland, 6-12 September 2014. Springer International Publishing Switzerland. (27.9% acceptance rate).

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Unreferred Conference, Workshop and Symposium Papers

[1] Alex Lambert, Sanjeel Parekh, Zoltán Szabó, and Florence d'Alché-Buc. Continuous emotion transfer using kernels. In *Advances in Neural Information Processing Systems (NeurIPS): Workshop on Controllable Generative Modeling in Language and Vision (CtrlGen)*, 13 December 2021. (acceptance rate $< 50\%$).

[2] Pierre-Cyril Aubin-Frankowski and Zoltán Szabó. Hard shape-constrained kernel regression. In *SMAI-MODE*, 7-9 September 2020.

[3] Pierre-Cyril Aubin-Frankowski and Zoltán Szabó. Hard shape-constrained kernel regression. In *Joint Structures and Common Foundations of Statistical Physics, Information Geometry and Inference for Learning (SPIGL)*, 27-31 July 2020.

[4] Matthieu Lerasle, Zoltán Szabó, Timothée Mathieu, and Guillaume Lecué. Median-of-means for outlier-robust MMD estimation. In *Workshop on Data, Learning and Inference (DALI)*, San Sebastian, Spain, 2-5 September 2019.

[5] Romain Brault[†], Alex Lambert[†], Zoltán Szabó, Maxime Sangnier, and Florence d'Alché-Buc. Infinite task learning in RKHSs. In *Conference on Machine Learning (CAp)*, Toulouse, France, 3-5 July 2019. ([†]contributed equally).

[6] Alex Lambert[†], Romain Brault[†], Zoltán Szabó, Maxime Sangnier, and Florence d'Alché-Buc. A functional extension of multi-output learning. In *International Conference on Machine Learning (ICML): Adaptive & Multitask Learning (AMTL)*, Long Beach, CA, U.S., 15 June 2019. ([†]contributed equally).

[7] Romain Brault[†], Alex Lambert[†], Zoltán Szabó, Maxime Sangnier, and Florence d'Alché-Buc. Infinite task learning. In *PASADENA Workshop*, Paris, France, 15 February 2019. ([†]contributed equally).

[8] Zoltán Szabó and Bharath K. Sriperumbudur. Random Fourier features on kernel derivatives. In *Data Learning and Inference (DALI)*, George, South Africa, 3-5 January 2019.

[9] Zoltán Szabó and Bharath K. Sriperumbudur. Independence via cross-covariance operators. In *Polish-Italian Mathematical Conference: Challenges and Methods of Modern Statistics*, Wroclaw, Poland, 17-20 September 2018.

[10] Alex Lambert, Romain Brault, Zoltán Szabó, Maxime Sangnier, and Florence d'Alché-Buc. Infinite-task learning with vector-valued reproducing kernel Hilbert spaces. In *Junior Conference on Data Science and Engineering (JDSE)*, 13-14 September 2018.

[11] Zoltán Szabó and Bharath K. Sriperumbudur. Characteristic tensor product kernels. In *Conference of the International Society for Non-Parametric Statistics (ISNPS)*, Salerno, Italy, 11-15 June 2018.

[12] Bharath K. Sriperumbudur and Zoltán Szabó. Kernel dependency measures. In *Conference of the International Society for Non-Parametric Statistics (ISNPS)*, Salerno, Italy, 11-15 June 2018.

[13] Matthieu Lerasle, Zoltán Szabó, Éric Moulines, Guillaume Lecué, Sidonie Lefebvre, and Gaspar Massiot. MOM-based robust nonlinear anomaly detection for multispectral and hyperspectral data. In *50émes Journées de Statistique (JdS)*, Palaiseau, France, 28 May – 1 June 2018.

[14] Zoltán Szabó and Bharath K. Sriperumbudur. Tensor product kernels: Characteristic property, universality. In *Hangzhou International Conference on Frontiers of Data Science*, Hangzhou, China, 18-20 May 2018.

[15] Zoltán Szabó and Bharath K. Sriperumbudur. HSIC, a measure of statistical independence? In *Workshop on Data, Learning and Inference (DALI)*, Lanzarote, Canary Islands, Spain, 3-5 April 2018.

[16] Wittawat Jitkrittum, Wenkai Xu, Zoltán Szabó, Kenji Fukumizu, and Arthur Gretton. A linear-time kernel goodness-of-fit test. In *Workshop on Functional Inference and Machine Intelligence*, Tokyo, Japan, 19-21 February 2018.

[17] Wittawat Jitkrittum, Zoltán Szabó, Kenji Fukumizu, and Arthur Gretton. A fast goodness-of-fit test with analytic kernel embeddings. In *Greek Stochastics Workshop – Model Determination*, Milos, Greece, 14-17 July 2017.

[18] Wittawat Jitkrittum, Zoltán Szabó, and Arthur Gretton. The finite-set independence criterion. In *UCL Workshop on the Theory of Big Data*, London, UK, 28 June 2017.

[19] Zoltán Szabó and Éric Moulines. Locally-adaptive kernel tests. In *Workshop on Data, Learning and Inference (DALI)*, Tenerife, Spain, 17-20 April 2017.

[20] Wittawat Jitkrittum, Zoltán Szabó, and Arthur Gretton. An adaptive test of independence with analytic kernel embeddings. In *Probabilistic Graphical Model Workshop*, Tokyo, Japan, 24 February 2017.

[21] Heiko Strathmann, Dino Sejdinovic, Samuel Livingstone, Ingmar Schuster, Maria Lomeli Garcia, Zoltán Szabó, Christophe Andrieu, and Arthur Gretton. Kernel techniques for adaptive Monte Carlo methods. In *Greek Stochastics Workshop on Big Data and Big Models*, Tinos, Greece, 10-13 July 2016.

[22] Wittawat Jitkrittum, Zoltán Szabó, Kacper Chwialkowski, and Arthur Gretton. Distinguishing distributions with interpretable features. In *International Conference on Machine Learning (ICML): Data-Efficient Machine Learning workshop*, New York, 24 June 2016.

[23] Zoltán Szabó, Bharath K. Sriperumbudur, Barnabás Póczos, and Arthur Gretton. Minimax-optimal distribution regression. In *Conference of the International Society for Non-Parametric Statistics (ISNPS)*, Avignon, France, 11-16 June 2016.

[24] Bharath K. Sriperumbudur and Zoltán Szabó. Optimal uniform and L^p rates for random Fourier features. In *Theory of Big Data Workshop*, London, UK, 6-8 January 2016. (contributed equally).

[25] Bharath K. Sriperumbudur and Zoltán Szabó. Optimal uniform and L^p rates for random Fourier features. Quinquennial Review Symposium of the Gatsby Unit, 23 September 2015. (contributed equally).

[26] Mijung Park, Wittawat Jitkrittum, Ahmad Qamar, Zoltán Szabó, Lars Buesing, and Maneesh Sahani. Bayesian manifold learning: Locally linear latent variable model (LL-LVM). Quinquennial Review Symposium of the Gatsby Unit, 23 September 2015.

[27] Wittawat Jitkrittum, Arthur Gretton, Nicolas Heess, Ali Eslami, Balaji Lakshminarayanan, Dino Sejdinovic, and Zoltán Szabó. Just-in-time kernel regression for expectation propagation. In *International Conference on Machine Learning (ICML) – Large-Scale Kernel Learning: Challenges and New Opportunities workshop*, Lille, France, 10-11 July 2015.

[28] Zoltán Szabó, Bharath K. Sriperumbudur, Barnabás Póczos, and Arthur Gretton. Distribution regression - make it simple and consistent. In *Workshop on Data, Learning and Inference (DALI)*, La Palma, Canaries, Spain, 10-12 April 2015.

[29] Wittawat Jitkrittum, Arthur Gretton, Nicolas Heess, Ali Eslami, Balaji Lakshminarayanan, Dino Sejdinovic, and Zoltán Szabó. Kernel-based just-in-time learning for passing expectation propagation messages. In *Workshop on Data, Learning and Inference (DALI)*, La Palma, Canaries, Spain, 10-12 April 2015.

[30] Zoltán Szabó, Arthur Gretton, Barnabás Póczos, and Bharath K. Sriperumbudur. Consistent vector-valued distribution regression. In *UCL Workshop on the Theory of Big Data*, London, UK, 7-9 January 2015.

[31] Zoltán Szabó, Arthur Gretton, Barnabás Póczos, and Bharath K. Sriperumbudur. Simple consistent distribution regression on compact metric domains. In *UCL-Duke Workshop on Sensing and Analysis of High-Dimensional Data (SAHD)*, London, UK, 4-5 September 2014.

[32] Zoltán Szabó, Arthur Gretton, Barnabás Póczos, and Bharath K. Sriperumbudur. Learning on distributions. In *Kernel methods for big data workshop*, Lille, France, 2 April 2014.

[33] Zoltán Szabó. Information theoretical estimators toolbox. In *Advances in Neural Information Processing Systems (NIPS) – Workshop on Machine Learning Open Source Software 2013: Towards Open Workflows*, Harrahs and Harveys, Lake Tahoe, Nevada, United States, 10 December 2013.

[34] András Lőrincz, László A. Jeni, Zoltán Szabó, Jeffrey Cohn, and Takeo Kanade. Emotional expression classification using time-series kernels. In *IEEE Conference on Computer Vision and Pattern Recognition Workshops (CVPRW): IEEE International Workshop on Analysis and Modeling of Faces and Gestures (AMFG)*, pages 889–895, Portland, Oregon, USA, 23-28 June 2013.

[35] Balázs Pintér, Gyula Vörös, Zoltán Szabó, and András Lőrincz. Automated word puzzle generation via topic dictionaries. In *International Conference on Machine Learning (ICML) – Sparsity, Dictionaries and Projections in Machine Learning and Signal Processing workshop*, Edinburgh, Scotland, 30 June 2012.

[36] Balázs Pintér, Gyula Vörös, Zoltán Szabó, and András Lőrincz. Automated word puzzle generation using topic models and semantic relatedness measures. In Zoltán Csörnyei, editor, *Joint Conference on Mathematics and Computer Science (MaCS)*, Siófok, Hungary, 9-12 February 2012.

[37] Zoltán Szabó, Barnabás Póczos, and András Lőrincz. Online dictionary learning with group structure inducing norms. In *International Conference on Machine Learning (ICML) – Structured Sparsity: Learning and Inference workshop*, Bellevue, Washington, USA, 2 July 2011.

[38] Zoltán Szabó. Independent subspace analysis in case of missing observations. In *Symposium of Intelligent Systems*, 20 November 2009.

[39] Zoltán Szabó and András Lőrincz. Towards independent subspace analysis in controlled dynamical systems. In *ICA Research Network International Workshop (ICARN)*, pages 9–12, 25-26 September 2008.

[40] Zoltán Szabó and András Lőrincz. Post nonlinear hidden infomax identification. In *Joint Conference of Hungarian PhD students*, pages 52–58, 2008.

[41] Zoltán Szabó and András Lőrincz. Real and complex independent subspace analysis by generalized variance. In *ICA Research Network International Workshop (ICARN)*, pages 85–88, 18-19 September 2006.

Habilitation

[1] Zoltán Szabó. Contributions to kernel techniques, 2019. (HDR, with distinction).

Patent

[1] Zoltán Szabó, László Jeni, and Dániel Takács. Method and apparatus with deformable model fitting using high-precision approximation. European Patent (EP2672425A1), 2013.

Theses

[1] Zoltán Szabó. *Group-Structured and Independent Subspace Based Dictionary Learning*. PhD thesis, Eötvös Loránd University, Budapest, 2012. (PhD in Applied Mathematics).

[2] Zoltán Szabó. *Separation Principles in Independent Process Analysis*. PhD thesis, Eötvös Loránd University, Budapest, 2009. (PhD in Computer Science).

[3] Zoltán Szabó. Retina based sampling in face component recognition. Master's thesis, Eötvös Loránd University, Budapest, 2003.

Technical Reports (Older)

[1] Alex Lambert†, Sanjeel Parekh†, Zoltán Szabó, and Florence d'Alché-Buc. Emotion transfer using vector-valued infinite task learning. Technical report, 2021. (†contributed equally; https://arxiv.org/abs/2102.05075).

[2] András Lőrincz, Viktor Gyenes, Zsolt Palotai, Balázs Pintér, Zoltán Szabó, and Gyula Vörös. Innovation engine for blogspaces (EOARD - US Air Force Research Laboratories). Technical report, Eötvös Loránd University, Budapest, 2011. (http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA550367).

[3] Zoltán Szabó. Towards nonstationary, nonparametric independent process analysis with unknown source component dimensions. Technical report, Eötvös Loránd University, Budapest, 2010. (http://arxiv.org/abs/1008.1393).

[4] Zoltán Szabó, Barnabás Póczos, and András Lőrincz. Separation theorem for $\mathbb{K}$-independent subspace analysis with sufficient conditions. Technical report, Eötvös Loránd University, Budapest, 2006. (http://arxiv.org/abs/math.ST/0608100).

[5] Zoltán Szabó, Barnabás Póczos, and András Lőrincz. Separation theorem for independent subspace analysis with sufficient conditions. Technical report, Eötvös Loránd University, Budapest, 2006. (http://arxiv.org/abs/math.ST/0603535).

[6] Zoltán Szabó, Barnabás Póczos, and András Lőrincz. Separation theorem for independent subspace analysis. Technical report, Eötvös Loránd University, Budapest, 2005. (https://zoltansz.github.io/publications/szabo05separation_TR.pdf).

[7] Zoltán Szabó and András Lőrincz. L_1 regularization is better than L_2 for learning and predicting chaotic systems. Technical report, Eötvös Loránd University, Budapest, 2004. (http://arxiv.org/abs/cs/0410015).

Invited Talks (Global)

[1] Minimax lower bound for kernel Stein discrepancy estimation. Numerical Mathematics and Data Science Seminar, School of Mathematics, University of Edinburgh, presentation (1 hour), 12 November 2026.

[2] The minimax lower bound of kernel Stein discrepancy estimation. UCL JumpTrading/ELLIS CSML Seminar Series, Gatsby Unit, University College London, presentation (1 hour), 5 November 2026.

[3] Kernel cumulants. Data Science Seminar, University of York, presentation (1 hour), 30 April 2025.

[4] The power of cumulants in reproducing kernel Hilbert spaces. Computer Science Colloquium, Department of Computer Science, University of Warwick, UK, presentation (1 hour), 12 February 2024.

[5] Nyström M-HSIC. CMStatistics, Economic Data Analysis and Statistical Inference to Unfold Uncertainty session, Berlin, Germany, presentation (25 minutes), 18 December 2023.

[6] Beyond mean embedding: Cumulants in RKHSs. CMStatistics, Statistical Machine Learning with Kernels and Non-linear Transformations session, Berlin, Germany, presentation (25 minutes), 17 December 2023.

[7] Kernel cumulants. CMStatistics, Advances in kernel methods and Gaussian processes session, Berlin, Germany, presentation (25 minutes), 16 December 2023.

[8] Kernel cumulant embedding. Lifting Inference with Kernel Embeddings (LIKE23), Bern, Switzerland, presentation (45 minutes), 28 June 2023.

[9] Beyond mean embedding: The power of cumulants in RKHSs. Advanced Course on Data Science and Machine Learning (ACDL), Tuscany, Italy, plenary talk (45 minutes), 11 June 2023.

[10] Shape-constrained kernel machines and their applications. Advanced Course on Data Science and Machine Learning (ACDL), Tuscany, Italy, plenary talk (45 minutes), 11 June 2023.

[11] Kernel machines with shape constraints. BIRS workshop on New Interfaces of Stochastic Analysis and Rough Paths, presentation (25 minutes), 8 September 2022.

[12] When shape constraints meet kernel machines. International Conference on Econometrics and Statistics (EcoSta): Recent Advances in Machine Learning session, presentation (25 minutes), 4 June 2022.

[13] Tensor product kernels for independence. DataSig Seminar, Mathematical Institute, University of Oxford, presentation (45 minutes), 26 May 2022.

[14] When kernel machines meet shape constraints. Machine Learning External Seminar at the Gatsby Unit, UCL, presentation (50 minutes), 26 January 2022.

[15] Continuous emotion transfer using RKHSs. Lifting Inference with Kernel Embeddings winter school and workshop (LIKE22; Bern, Switzerland), presentation (45 minutes), 12 January 2022.

[16] Vector-valued infinite task learning in style transfer. CMStatistics, Advanced Statistical Methods for High Dimensional Data session, presentation (25 minutes), 19 December 2021.

[17] Shape constraints meet kernel machines. Data Science Seminar at Eurecom, presentation (50 minutes), 4 November 2021.

[18] Kernel regression with hard shape constraints. Workshop on Advances in Convex Optimization (EUROPT), presentation (25 minutes), 8 July 2021.

[19] Vector-valued prediction with RKHSs and hard shape constraints. Computer Science and Systems Laboratory, Aix-Marseille University, presentation (1 hour), 20 May 2021.

[20] Information theory, kernels and applications. Department of Statistics, LSE, presentation (50 minutes), 4 March 2021.

[21] Shape-constrained kernel machines. Department of Statistics, Texas A&M University, presentation (1 hour), 12 February 2021.

[22] Kernel machines with hard shape constraints. Meeting on Mathematical Statistics (MMS): Robustness and Computational Efficiency of Algorithms in Statistical Learning, presentation (40 minutes), 15 December 2020.

[23] Kernel information theory and finance. D. E. Shaw Group, New York, U.S., presentation (30 minutes), 21 January 2020.

[24] Towards large-scale approximation of tasks with derivatives – a kernel perspective. International Conference on Modern Mathematical Methods and High Performance Computing in Science & Technology (M3HPCST), Ghaziabad, India, presentation (30 minutes), 9-11 January 2020.

[25] Orlicz Fourier features. International Indian Statistical Association Conference (IISA), IIT Bombay, India, presentation (20 minutes), 26-30 December 2019.

[26] Consistency of Orlicz random Fourier features. EPFL, presentation (45 minutes), 23 September 2019.

[27] Orlicz random Fourier features. Gatsby 21st Birthday Symposium, London, UK, presentation (20 minutes), 11-13 July 2019.

[28] Outlier-robust divergence estimation on kernel-endowed domains with median of means. Third International Conference on Mathematics of Data Science (MathoDS 3), City University of Hong Kong (CityU), Hong Kong, China, presentation (30 minutes), 19-23 June 2019.

[29] Towards outlier-robust statistical inference on kernel-enriched domains. RIKEN AIP Workshop, Tokyo, Japan, presentation (30 minutes), 15 April 2019.

[30] From distance covariance to Hilbert-Schmidt independence criterion. Statistical Seminar in Rennes, presentation (1 hour), 26 October 2018.

[31] HSIC, a measure of independence? Laboratory for Information and Inference Systems (LIONS), EPFL, presentation (40 minutes), 28 February 2018.

[32] HSIC, an independence measure? Machine Learning & Computational Biology Lab, Department of Biosystems Science and Engineering (D-BSSE), ETH Zürich, presentation (1 hour), 26 February 2018.

[33] Linear-time divergence measures with applications in hypothesis testing. Tao Seminar, INRIA Saclay, presentation (45 minutes), 13 February 2018.

[34] Characterizing independence with tensor product kernels. Department of Statistics, Pennsylvania State University, presentation (1 hour), 13 December 2017.

[35] Tensor product kernels: Independence and beyond. Google Brain, Mountain View, presentation (1 hour), 1 December 2017.

[36] Tensor product kernels: Characteristic property and beyond. Advanced Methods Group, Cubist Systematic Strategies, New York, presentation (90 minutes), 28 November 2017.

[37] Independence with tensor product kernels. Yahoo Research, New York, presentation (1 hour), 28 November 2017.

[38] Tensor product kernels: Characteristic property and universality. Research Seminar, SfS, ETH Zürich, presentation (45 minutes), 3 November 2017.

[39] Characteristic tensor kernels. CREST Statistics Seminar, ENSAE, presentation (75 minutes), 9 October 2017.

[40] Data-efficient independence testing with analytic kernel embeddings. PASADENA Seminar, Télécom ParisTech, presentation (1 hour), 17 May 2017.

[41] Distribution regression: A simple technique with minimax-optimal guarantee. Parisian Statistics Seminar, Henri Poincaré Institute, presentation (1 hour), 27 March 2017.

[42] A linear-time adaptive nonparametric two-sample test. Signal Processing and Machine Learning Seminar, Marseilles, presentation (1 hour), 24 March 2017.

[43] Minimax-optimal distribution regression. Probability and Statistics Seminar, Orsay, presentation (1 hour), 16 March 2017.

[44] T-testing: A linear-time adaptive nonparametric technique. Machine Learning Seminar, Télécom ParisTech, presentation (1 hour), 2 February 2017.

[45] Distribution regression. New Directions for Learning with Kernels and Gaussian Processes Dagstuhl Seminar, presentation (30 minutes), 1 December 2016.

[46] Adaptive linear-time nonparametric t-test. Facebook AI Research, Paris, France, presentation (45 minutes), 21 November 2016.

[47] Distinguishing distributions with maximum testing power. Realeyes, Budapest, Hungary, presentation (1 hour), 24 August 2016.

[48] Hypothesis testing with kernels. International Workshop on Pattern Recognition in Neuroimaging (PRNI), Trento, Italy, presentation (1 hour), 22-24 June 2016.

[49] Kernel-based learning on probability distributions. University of California, San Diego, presentation (30 minutes), 25 April 2016.

[50] Distribution regression with minimax-optimal guarantee. MASCOT-NUM, presentation (45 minutes), 25 March 2016.

[51] Performance guarantees for kernel-based learning on probability distributions. Special Symposium on Intelligent Systems, MPI, Tübingen, presentation (20 minutes), 16 March 2016.

[52] Optimal rates for the random Fourier feature technique. École Polytechnique, presentation (2 hours), 14 March 2016.

[53] Learning theory for vector-valued distribution regression. CMStatistics 2015, presentation (35 minutes), 12 December 2015.

[54] Optimal uniform and L^p rates for random Fourier features. Pennsylvania State University, presentation (1 hour), 4 December 2015.

[55] Optimal rates for the random Fourier feature method. Statistical ML Reading Group, Carnegie Mellon University, presentation (1 hour), 1 December 2015.

[56] Distribution regression: Computational and statistical tradeoffs. ML Lunch Seminar, Carnegie Mellon University, presentation (50 minutes), 30 November 2015.

[57] Distribution regression: Computational and statistical tradeoffs. Princeton University, presentation (1 hour), 26 November 2015.

[58] Optimal rates for random Fourier feature approximations. University of Alberta, presentation (1 hour), 24 November 2015.

[59] Optimal rates for random Fourier feature kernel approximations. AMPLab, UC Berkeley, presentation (1 hour), 20 November 2015.

[60] Performance guarantees for random Fourier features - limitations and merits. Neil Lawrence's lab, University of Sheffield, presentation (1 hour), 25 June 2015.

[61] Regression on probability measures: A simple and consistent algorithm. Centre for Research in Statistical Methodology Seminars, Department of Statistics, University of Warwick, presentation (1 hour), 29 May 2015.

[62] Vector-valued distribution regression - keep it simple and consistent. Computational Statistics and Machine Learning reading group, Department of Statistics, University of Oxford, presentation (50 minutes), 1 May 2015.

[63] A simple and consistent technique for vector-valued distribution regression. Artificial Intelligence and Natural Computation seminars, University of Birmingham, presentation (50 minutes), 26 January 2015.

[64] Consistent vector-valued regression on probability measures. Bernhard Schölkopf's Lab, MPI for Intelligent Systems, Tübingen, presentation (1 hour), 15 January 2015.

[65] Consistent distribution regression via mean embedding. University of Hertfordshire, presentation (1 hour), 5 March 2014.

[66] Dictionary learning: Independence, structured sparsity and beyond. Gatsby Unit, UCL, presentation (45 minutes), 23 April 2013.

[67] Beyond independent subspace analysis. INRIA, SIERRA project-team, presentation (90 minutes), 17 January 2012.

[68] Hedging with Lasso. Morgan Stanley, presentation (25 minutes), 9 September 2011.

[69] Structured sparsity and non-convex sparsity-inducing methods. Morgan Stanley, presentation (25 minutes), 9 May 2011.

[70] Online group-structured dictionary learning. Machine Learning at Budapest, presentation (45 minutes), 22 November 2010.

[71] Analysis and prediction of time series with missing data. Morgan Stanley, Speaker Series Event, presentation (30 minutes), 9 October 2009.

[72] Analysis and prediction of time series with missing data. Morgan Stanley - BME Financial Innovation Centre Kick-off & Workshop, presentation (25 minutes), 15 June 2009.

[73] Exploration of behavioral patterns and its applications in human-computer interaction. Info Savaria, Szombathely, presentation (30 minutes), 14-16 April 2005.

[74] Recognition of behavioral patterns and its potentials of human-computer interaction. Info ÉRA, Békéscsaba, presentation (30 minutes), 14-16 April 2004.

Invited Talks & Posters (Local)

[1] The minimax rate of HSIC estimation. LSE Statistics Research Showcase, Department of Statistics, LSE, presentation (25 minutes), 20 June 2024.

[2] Kernelized cumulants: Beyond mean embeddings. LSE Statistics Research Showcase, Department of Statistics, LSE, presentation (25 minutes), 5 June 2023.

[3] Kernel machines with shape constraints. PhD Open Day, Department of Statistics, LSE, poster, 28 November 2022.

[4] Support vector machines with hard shape constraints. Combinatorics, Game Theory, and Optimisation (CGO) Seminar, Department of Mathematics, LSE, presentation (50 minutes), 29 September 2022.

[5] Shape-constrained kernel machines. Data Science Research Lightning Talks event, Data Science Institute, LSE, presentation (3 minutes), 21 September 2022.

[6] Continuous emotion transfer. LSE Statistics Research Showcase, Department of Statistics, LSE, presentation (25 minutes), 15 June 2022.

[7] Information theory, kernels & applications. Research Showcase at Data Science Institute, LSE, presentation (5 minutes), 13 December 2021.

[8] Distribution regression and beyond. LSE Statistics Open House, Department of Statistics, LSE, presentation (20 minutes), 14 October 2021.

[9] Applications of kernel-based information theoretical measures. LSE Statistics Open House, Department of Statistics, LSE, presentation (15 minutes), 14 October 2021.

[10] Optimal regression on sets. UCL eResearch Domain launch event, UCL, London, UK, poster, 29 June 2016.

[11] Vector-valued distribution regression: A simple and consistent approach. Statistical Science Seminars, UCL, presentation (1 hour), 9 October 2014.

[12] Distribution regression - the set kernel heuristic is consistent. CSML Lunch Talk Series, UCL, presentation (1 hour), 2 May 2014.

[13] Dictionary optimization problems and their applications. Eötvös Loránd University, Day of Science, presentation (40 minutes), 22 November 2012.

[14] Recommender systems, applications in education. Child's Play with Adult's Mind, Conference, Budapest University of Technology and Economics, presentation (20 minutes), 22 March 2012.

[15] Collaborative filtering via group-structured dictionary learning. Eötvös Loránd University, Innovation Day, poster, 23 February 2012.

[16] Interpreting natural language: applications of group-structured dictionary learning. Eötvös Loránd University, Faculty of Informatics, Neumann's Day, poster, 12 May 2011.

[17] Interpreting words: an application of (structured) sparse coding. Eötvös Loránd University, Faculty of Informatics, Neumann's Day, poster, 12 May 2011.

[18] Online group-structured dictionary learning. Eötvös Loránd University, Faculty of Informatics, Neumann's Day, poster, 12 May 2011.

[19] Online group-structured dictionary learning. Eötvös Loránd University, TÁMOP Research Seminar, presentation (45 minutes), 28 January 2011.

[20] Online structured dictionary learning and its applications. Eötvös Loránd University, Problem Solving Seminar for Applied Mathematicians, presentation (45 minutes), 5 November 2010.

[21] Nonparametric regression, Lasso. Eötvös Loránd University, Problem Solving Seminar for Applied Mathematicians, presentation (45 minutes), 12 November 2009.

[22] Independent subspace analysis; tensor-SVD, tensorfaces; blind subspace deconvolution. Eötvös Loránd University, Problem Solving Seminar for Applied Mathematicians, presentation (45 minutes), 19 October 2007.

[23] Adaptive human-computer interaction via face and gaze tracking. Eötvös Loránd University, Faculty of Informatics, Neumann's Day, presentation (20 minutes), 6 November 2003.

Software

`https://zoltansz.github.io/software.html`

Lecturing (**p** – PhD, **g** – graduate, **u** – undergradute, **f** – for fun)

LSE (UK; WT = Winter Term, AT = Autumn Term)

Foundations of Machine Learning (ST510): Kernel Methods (**p**) WT (Feb. 9, Feb. 12), 2025/26
– lecture (2h; Feb. 9) and practice session (1.5h; Feb. 12).

Graph Data Analytics and Representation Learning (ST457; **g**) WT, 2025/26
– lecturing and practical sessions.

Machine Learning (ST310; **u**) AT, 2025/26
– practical sessions: Phil Chan (3 seminar groups),
Seyedpouya Mirrezaeiroudaki (3), Erhan Xu (1),
– 142 students.

Getting Started with Linux (**f**) Sept. 26, 2025
– mini-course (2.5 hours),

– 42 registered participants (BSc, MSc, PhD).

Foundations of Machine Learning (ST510): Kernel Methods (**p**) WT (Feb. 10), 2024/25

Graph Data Analytics and Representation Learning (ST457; **g**) WT, 2024/25
– 22 students,
– practical sessions: Shakeel Gavioli-Akilagun.

Linux – The Operating System of Freedom (**f**) Sept. 27, 2024
– mini-course (2.5 hours),
– 58 registered participants (BSc, MSc, PhD, Staff).

Foundations of Machine Learning (ST510): Support Vector Machines (**p**) WT (Feb. 5), 2023/24

Graph Data Analytics and Representation Learning (ST457; **g**) WT, 2023/24
– 17 students,
– practical sessions: Shakeel Gavioli-Akilagun.

Linux – The Operating System of Freedom (**f**) Sept. 22, 2023
– mini-course (2.5 hours),
– 36 registered participants (MSc).

Linux – The Operating System of Freedom (**f**) May 23, 2023
– mini-course (2.5 hours),
– 15 registered participants (PhD, PostDoc, Staff).

Graph Data Analytics and Representation Learning (ST457; **g**) WT, 2022/23
– 30 students,
– lecturing and practical sessions.

Artificial Intelligence (**g**) AT, 2022/23
– ca. 50 students,
– practical sessions: Francesca Panero, Marcos Barreto.

Artificial Intelligence (**g**) AT, 2021/22
– ca. 25 students,
– practical sessions: Marcos Barreto.

École Polytechnique (France)

Independence Measures and Testing (**g**) Spring, 2021
– mini-course (4 hours).

Structured Data: Learning, Prediction, Dependency, Testing (**g**, M2 MDA) Spring, 2019
– ca. 60 students,
– with Prof. Florence d'Alché-Buc, Prof. Slim Essid.

Advanced Machine Learning (**g**, X-HEC) Spring, 2019
– ca. 60 students,
– with Prof. Stéphane Canu, Prof. Erwan Le Pennec, Thomas Kerdeux,
– tutoring: Jaouad Mourtada, Nicolas Prost.

Statistics (**g**, X-HEC) Fall, 2018
– ca. 60 students,
– with Prof. Stéphanie Allassoniére, Prof. Elodie Vernet, Geneviéve Robin, Wei Jiang.

Introduction to Machine Learning (**g**, X-HEC) Fall, 2018
– ca. 60 students,
– with Prof. Julie Josse, Prof. Erwan Scornet, Prof. Sylvain Le Corff, Florian Bourgey.

Structured Data: Learning, Prediction, Dependency, Testing (**g**, M2 MDA) Spring, 2018
– ca. 70 students,
– with Prof. Florence d'Alché-Buc, Prof. Slim Essid, Prof. Arthur Tenenhaus, Alexandre Garcia (Datalab).

Advanced Machine Learning (**g**, X-HEC) Spring, 2018
– ca. 60 students,
– with Prof. Stéphane Canu, Prof. Erwan Le Pennec, Anne Auger.

Structured Data: Learning, Prediction, Dependency, Testing (**g**, M2 MDA) Spring, 2017

– ca. 95 students,
– with Prof. Florence d'Alché-Buc, Prof. Slim Essid, Prof. Arthur Tenenhaus.

Functional Data Analysis (**g**) Fall, 2016
– special course.

INRIA (France)

Kernel Methods, Divergence and Independence Measures, Hypothesis Testing (**g**) July 15–17, 2019
– @ Summer School on Data Science for Document Analysis and Understanding, July 18 & 20, 2018
– 6-hour long course / year.

Manifold Learning and Classification for EEG Analysis (**g**) July 27, 2017
– @ Summer School on Mathematical and Computational Methods, for Life Sciences,
– 3-hour long course.

HEC Paris (France)

Data for Management Certificate (**g**) May 7 & 10, 2019
– with Prof. Karim Lounici, Prof. Sylvain Le Corff,
– 8 hours / day.

Carnegie Mellon University (US)

Kernel-based Dependency Measures and Hypothesis Testing (**g**) Nov. 27, 2017
– Guest Lecture @ School of Computer Science,
– 80 minutes.

University College London (UK)

Advanced Topics in Machine Learning - Theory of RKHS (**g**) Spring, 2015–2016
– ca. 60 students,
– with Prof. Arthur Gretton, Kacper Chwialkowski.

Adaptive Modelling, Introduction to Kernel Methods (**g**) Spring, 2015–2016
– ca. 20 students,
– with Prof. Arthur Gretton, Heiko Strathmann, Wittawat Jitkrittum.

Eötvös Loránd University (Hungary)

Reinforcement Learning (**g**) Spring, 2009–2013
– ca. 45 students in each semester,
– with Prof. András Lőrincz.

Artificial Neural Networks (**g**) Fall, 2008–2012
– ca. 45 students in each semester,
– with Prof. András Lőrincz.

Image Processing, Speech Recognition, Applications of Artificial Intelligence (**g**) 2007–2008
– ca. 25 students in each semester.

Introduction to Mathematics (**u**) 2006–2007
– ca. 25 students in each semester.

Symbolic Programming (**u**) 2004–2006
– ca. 25 students in each semester.

Supervision

Hanqi Wang (Ph.D.) Sept., 2025–
– Department of Statistics, LSE, UK,
– co-supervised with Prof. Tengyao Wang.

Tao Ma (Ph.D.) Jan., 2024–Sept., 2025
– Department of Statistics, LSE, UK,
– topic: Trustworthy Decision Making with Sustainability,

– co-supervised with Prof. Milan Vojnovic.

Xiaoyi Wen (Ph.D.) Sept., 2023–Aug., 2024
– Renmin University of China, China,
– Ph.D. visitor awarded by CSC (China Scholarship Council),
– topic: Joint Independence Testing for Latent Position Random Graphs.

Florian Kalinke (Ph.D.) Sept. – Dec., 2022
– Karlsruhe Institute of Technology, Germany,
– Ph.D. visitor,
– topic: Accelerated Information Theoretical Estimators.

Pingfan Su (Ph.D.) Sept., 2022–
– Department of Statistics, LSE, UK,
– co-supervised with Prof. Chengchun Shi,
– topic: Reinforcement Learning in Nonstationary Environment.

Sakina Hansen (Ph.D.) Sept., 2022 – Aug., 2023
– Department of Statistics, LSE, UK,
– co-supervised with Prof. Joshua Loftus,
– topic: Causality, Counterfactuals and Meta-learning to Address the Complexity of Fairness in Data Science and Machine Learning.

Linda Chamakh (Ph.D.) Apr., 2018 – May, 2021
– CMAP, École Polytechnique & BNP Paribas, France,
– co-supervised with Prof. Emmanuel Gobet, Jean-Philippe Lemor,
– topic: Uncertainty Quantification, Robustness of Systematic Strategies.

Alex Lambert (Ph.D.) Oct., 2017 – May, 2021
– CMAP, École Polytechnique & LTCI, Télécom ParisTech, France,
– co-supervised with Prof. Florence d'Alché-Buc,
– topic: Statistical Learning of Vector-Valued Functions with Operator Random Fourier Features.

Gaspar Massiot (PostDoc) Oct., 2017 – Aug., 2018
– French Aerospace Lab ONERA, France,
– co-supervised with Prof. Éric Moulines, Sidonie Lefebvre,
– topic: Kernel Methods in Hyperspectral Imaging.

Romain Brault (PostDoc) Oct., 2017 – Oct., 2018
– CMAP, École Polytechnique & LTCI, Télécom ParisTech, France,
– co-supervised with Prof. Florence d'Alché-Buc, Prof. Arthur Tenenhaus,
– topic: Prediction of Functional Outputs by Kernels.

Zoltán Milacski (M.Sc.) 2012–2013
– School of Computer Science, Eötvös Loránd University (ELU), Hungary,
– co-supervised with Prof. András Lőrincz of the national student competitor (2^{nd} prize),
– topic: Recurrent Reinforcement Learning in High-Frequency Algorithmic Trading.

Gabriella Merész (M.Sc.) 2012
– Department of Applied Mathematics, ELU, Hungary,
– topic: Prediction of Financial Time Series via ARMA-GARCH Methods.

Mentoring

Capstone project (M.Sc.) Nov., 2025 – Aug, 2026
– Department of Statistics, LSE, UK,
– team members: Anastasiia Prokhorova, Keshni Shah, Sofia Jain,
– topic: Early Indicators of Gentrification,
– joint mentoring with Anton Boychenko (Transport for London).

Capstone project (M.Sc.) Nov., 2025 – Aug, 2026
– Department of Statistics, LSE, UK,

– team members: Jaey Tay, Norah Kuduk, Ritika Annapareddy,
– topic: Delivering Elite European Football (Soccer) Analytics,
– joint mentoring with Mohammad Ashkani and Mateusz Faltyn (Trilemma Foundation).

Alessandro De Palma (Assistant Professor) Nov., 2025 –
– Department of Statistics, LSE, UK,
– academic mentoring of our junior colleague.

Capstone project (M.Sc.) Nov., 2024 – Aug, 2025
– Department of Statistics, LSE, UK,
– team members: Shiyu Wu, Yikun Jiang, Zoe He,
– topic: Hierarchical optimization methods comparison for Causal AutoML,
– joint mentoring with Egor Kraev (Wise).

Capstone project (M.Sc.) Nov., 2023 – July, 2024
– Department of Statistics, LSE, UK,
– team members: Maciej Kuczek, Reuben Mathew, Tweshaa Dewan,
– topic: Statistical Methods in AB Testing,
– joint mentoring with Egor Kraev and Julian Teichgraber (Wise).

Christine Yuen, Francesca Panero, Marcos Barreto (Assistant Professors) Sept., 2023 – Aug. 2024
– Department of Statistics, LSE, UK,
– academic mentoring of our junior colleagues,
– joint mentoring with Prof. Milan Vojnovic.

Capstone project (M.Sc.) Nov., 2022 – Aug., 2023
– Department of Statistics, LSE, UK,
– team members: Jingyan Lu, Sizhe Li, Yujie Zhang, Zhendong Wang,
– topic: Food Recognition and Nutritional Analysis from Food Images,
– joint mentoring with Wittawat Jitkrittum (Google Research, New York).

Mentoring (B.Sc.) 2022–2023
– 20 B.Sc. students in Actuarial Science, Mathematics, Statistics and Business,
– academic mentoring.

Mentoring (B.Sc.) 2021–2022
– 12 B.Sc. students in Actuarial Science, Mathematics, Statistics and Business,
– academic mentoring.

Capstone project (M.Sc.) Dec., 2021 – Aug., 2022
– Department of Statistics, LSE, UK,
– team members: Deelan Gopaul, Josiah Suartono,
– topic: Forecasting sea water transparency,
– joint mentoring with Dima Karamshuk (Facebook).

Jonathan Cardoso-Silva (Research Officer) Oct. – Dec., 2021
– Department of Methodology, LSE, UK.

Bechir Trabelsi (M.Sc.) May – Aug., 2020
– intern from ESTA, France,
– topic: Shape-Constrained Risk Measures.

Michaël Allouche (M.Sc.) Oct., 2019 – Jan., 2020
– CMAP, École Polytechnique, France,
– co-supervised with Prof. Emmanuel Gobet,
– topic: Structured Dictionary Learning of Migration Matrices. GANs on Time Series

Meyer Scetbon (M.Sc.) Apr. – Sept., 2018
– intern from INRIA, France,
– co-supervised with Gaël Varoquaux,
– topic: Fast Kernel-based Hypothesis Testing.

Flore Martin, Roulier Lorraine (M.Sc.) Jan. – Mar., 2018

– Sciences for Environmental Challenges, École Polytechnique, France,
– topic: Low-Dimensional Embedding of Environmental Variables.

Moussab Djerrab (Ph.D.) Fall, 2017
– LTCI, Télécom ParisTech, France,
– topic: Structured Prediction with Surrogate Losses.

Wittawat Jitkrittum (Ph.D.) 2013–2016
– Gatsby Unit, University College London, UK,
– topic: Kernel Techniques, Statistics.

Máté Csákvári, Zoltán Tősér (M.Sc.) 2012–2013
– School of Computer Science, ELU, Hungary,
– topic: Information Theory, Dictionary Learning.

László Jeni (PostDoc) 2011–2013
– Robotics Institute, Carnegie Mellon University, US,
– topic: Extensions of Constrained Local Models, Facial Expression Recognition.

Balázs Pintér, Gyula Vörös (Ph.D.) 2011–2013
– School of Computer Science, ELU, Hungary,
– topic: Structured-Sparse Coding and Dictionary Learning in Natural Language Processing.

András Sárkány (M.Sc.) 2011–2013
– School of Computer Science, ELU, Hungary,
– topic: Hedging via Sparse Coding.

Gergő Hammer (M.Sc.) 2011 Autumn – 2012 Spring
– Department of Applied Mathematics, ELU, Hungary,
– topic: Self-Similar Structures for Financial Prediction.

Dávid Retek, Mária Mészáros (M.Sc.) 2009 Autumn – 2010 Spring
– Department of Applied Mathematics, ELU, Hungary,
– topic: Online Structured Dictionary Learning and Its Applications.

Gabriella Merész, Kitti Korbács, Nóra Villányi (M.Sc.) 2007 Autumn – 2008 Spring
– Department of Applied Mathematics, ELU, Hungary,
– topic: Tensor Textures.

Anikó Márton, Kata Péter (M.Sc.) 2007 Autumn – 2008 Spring
– Department of Applied Mathematics, ELU, Hungary,
– topic: Temporal Independent Subspace Analysis of Facial Features.

Referent Professor

Nicolas Bonnet's internship (M.Sc.) Mar. – July, 2019
– École Polytechnique & HEC Paris, France,
– internship @ Atos (India),
– title: Vertical Integration of Supply and Delivery Chain from India to France.

Camille Jandot's internship (M.Sc.) Apr. – Sept., 2017
– Télécom ParisTech, France,
– title: Modelling Space Time Series with Operator-Valued Kernels – Application to Detection of Epidemics.

Grants

LSE Global Research Fund 2023-2024
topic: Computational vs. Statistical Analysis of Kernel Stein Discrepancy,
joint work with:
Prof. Bharath K. Sriperumbudur (Pennsylvania State University),
Florian Kalinke (Karlsruhe Institute of Technology),
amount: 5,000 GBP.

Europlace Institute of Finance (EIF) 2020–2021

topic: Machine Learning for Risk Management: Kernels with Shape Constraints,
joint work with:
Prof. Dino Sejdinovic (University of Oxford),
Olivier Derollez (BNP Paribas),
amount: 10,000 EUR.

Labex DigiCosme 2017–2018
keywords: operator-valued kernels, prediction of function-valued functions,
joint work with:
Prof. Florence d'Alché-Buc (Télécom Paris),
Prof. Arthur Tenenhaus (CentraleSupélec),
amount: 50,000 EUR.

Academic Awards and Research Scholarships

Winston Prize for the best Capstone Project 2023
– topic: Forecasting sea water transparency
– team: Deelan Gopaul, Josiah Suartono,
– joint supervision with Dima Karamshuk (Facebook).
Best Paper Award at NeurIPS (awarded to 3 papers out of the 3240 submissions) 2017
Research Scholarship of the John von Neumann Computer Society 2005–2012
Bronze Medal of the Pro Patria et Scientia Award of Hungarian Ph.D. Students 2008
Scientist of the Year Award of the School of Computer Science 2007
Research Scholarship of the Bliss Foundation 2004
Outstanding Student Award of the Faculty of Natural Sciences 2003
Research Scholarship of the Eötvös Loránd University 2003
National Scientific Student Competition and Conference (2^{nd} prize) 2002

Interview

HCI study on AI assistance for ICLR ACs Aug. 30, 2023
Memory (film; topic: AI & Brain) Dec., 2018
At TWiML & AI on our work winning best paper award at NIPS-2017 Dec., 2017

Languages

∘ English (fluent), Spanish (basic), Hungarian (native).
∘ Computer languages: Python, Matlab/Octave, Maple, LaTeX, HTML.