# Krikamol **Muandet**

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# **Work Experience**

**CISPA Helmholtz Center for Information Security**, *Tenure-track faculty* To lead the Rational Intelligence (RI) Lab, teach and supervise PhD students.

Saarbrücken, Germany 01.09.2022 – Present

**Max Planck Institute for Intelligent Systems**, *Research Group Leader*To craft and pursue an independent research program and supervise PhD students.

*Tübingen, Germany* 01.04.2018 – 31.08.2022

Department of Mathematics, Mahidol University, Lecturer

To teach at undergraduate and graduate level, to carry out research, and to supervise students' research activities, among others.

Bangkok, Thailand 04.01.2016 – 31.12.2017

Max Planck Institute for Intelligent Systems, Research Scientist

To conduct an independent research

*Tübingen, Germany* 01.06.2015 – 31.12.2015

Sirindhorn International Institute of Technology, Teaching Assistant

To assist the instructor in the programming laboratory (ITS100 and ITS050).

Pathumthani, Thailand 2008, 2010

# **Education**

MAX PLANCK INSTITUTE FOR INTELLIGENT SYSTEMS / UNIVERSITY OF TÜBINGEN

*Tübingen, Germany* 04.04.2011 – 31.05.2015

**Ph.D. in Machine Learning (Summa Cum Laude)** SUPERVISOR: Prof. Bernhard Schölkopf

THESIS: "From Point to Probability Measures: Statistical Learning on Distributions with Kernel Mean Embedding"

University College London / Gatsby Computational Neuroscience Unit **M.Sc. in Machine Learning (Distinction)** 

London, United Kingdom 10,2009 – 10,2010

MASTER THESIS: "Infinite Independent Subspace Analysis"

SUPERVISORS: Prof. Yee Whye Teh (Thesis), Prof. John Shawe-Taylor (M.Sc. Tutor)

SIRINDHORN INTERNATIONAL INSTITUTE OF TECHNOLOGY

**B.Sc. in Computer Science (First Class Honor)** 

SCHOLARSHIP: Young Scientist and Technologist Programme (YSTP)

Rank: 1st out of 441 students | GPA: 3.97/4.00

Pathumthani, Thailand 22.03.2005 – 26.03.2009

COURSERA: Game Theory (Stanford/UBC, Grade: 92.92%, Year: 2021)

# **Research Grants and Funding**

Grassroots project (No. M10334): 17,000 Euro

2019

RESEARCH TOPIC: Kernel methods meet deep learning

Funding agency: Max Planck Institute for Intelligent Systems

OUTPUT: 1 publication at NeurIPS2020 and 1 publication at 3DV2020

Research Grant for New Scholar (MRG Grant No. 6080206): 592,000 THB (~15,000 Euro)

2017

RESEARCH TOPIC: Counterfactual mean embedding with applications in causal inference

FUNDING AGENCY: The Thailand Research Fund (TRF), Thailand

OUTPUT: 1 publication at the Journal of Machine Learning Research (JMLR).

2016

Research Supplement Grant: 200,000 THB (~5,000 Euro)

FUNDING AGENCY: Faculty of Science, Mahidol University, Thailand

## **Awards and Honours**

3DV 2020 Best Paper Award, International Conference on 3D Vision	2020
NeurIPS 2015 Best Reviewer Award, Neural Information Processing Systems Foundation	2015
NeurIPS 2014 Travel Award, Neural Information Processing Systems Foundation	2014
NeurIPS 2012 Travel Award, Neural Information Processing Systems Foundation	2012
Machine Learning Summer School Scholarship, MLSS2011 Singapore	2011
SCG Talent Scholarship, The Siam Cement Foundation	2008
Academic Excellence Award (Gold medal), SIIT, Thammasat University	2008
Academic Excellence Award, SIIT, Thammasat University	2005 – 2007
Academic Excellence Award, Thammasat University	2006 - 2007

## **List of Publications**

#### **Journal Articles**

- S. Föll\*, A. Dubatovka, E. Ernst, S. L. Chau, M. Maritsch, P. Okanovic, G. Thäter, J. M. Buhmann, F. Wortmann, K. Muandet. **Gated Domain Units for Multi-source Domain Generalization**, *Transactions on Machine Learning Research (TMLR)*, 2023.
- R. Zhang, M. Imaizumi, B. Schölkopf, and <u>K. Muandet</u>, **Instrumental Variable Regression via Kernel Maximum Moment Loss**, *Journal of Causal Inference (JCI)*, vol. 11, no. 1, 2023, pp. 20220073.
- K. Muandet, M. Kanagawa, S. Saengkyongam, and S. Marukatat, Counterfactual Mean Embedding, Journal of Machine Learning Research (JMLR), 22(162):171, 2021.
- S. Klus, I. Schuster, <u>K. Muandet</u>, **Eigendecomposition of Transfer Operators in Reproducing Kernel Hilbert Spaces**, *Journal of Nonlinear Science*, 30, 283–315, 2020.
- J. Kübler, <u>K. Muandet</u>, B. Schölkopf, **Quantum Mean Embedding of Probability Distributions**, *Physical Review Research*, 1. 10.1103/PhysRevResearch.1.033159, 2019.
- N. Shah, B. Tabibian, <u>K. Muandet</u>, I. Guyon, U. von Luxberg. **Design and Analysis of NIPS 2016 Review Process**, *Journal of Machine Learning Research (JMLR)*, 19(49):1–34, 2018.
- I. Tolstikhin, B. Sriperumbudur, and <u>K. Muandet</u>, **Minimax Estimation of Kernel Mean Embeddings**, *Journal of Machine Learning Research (JMLR)*, 18(86):1–47, 2017.
- K. Muandet, B. Sriperumbudur, K. Fukumizu, A. Gretton, and B. Schölkopf, **Kernel Mean Shrinkage Estimators**, *Journal of Machine Learning Research (JMLR)*, 17(48):1–41, 2016.
- B. Schölkopf, <u>K. Muandet</u>, K. Fukumizu, and J. Peters, **Computing Functions of Random Variables via Reproducing Kernel Hilbert Space Representations**, *Statistics and Computing*, Volume 25, Issue 4, pp. 755–766, 2015.
- D. Lopez-Paz, <u>K. Muandet</u>, and B. Recht, **Randomized Causation Coefficient**, *Journal of Machine Learning Research* (*JMLR*), 16(Dec): 2901–2907, 2015.

## **Books**

• <u>K. Muandet</u>, K. Fukumizu, B. Sriperumbudur, and B. Schölkopf, **Kernel Mean Embedding of Distributions: A Review and Beyond**, *Foundations and Trends*<sup>®</sup> *in Machine Learning Series*, Volumn 10: No. 1–2, pp 1–141, 2017 (ISBN: 9781680832884). Now Publishers.

#### **Contributions to Books**

• K. Zhang, B. Schölkopf, <u>K. Muandet</u>, Z. Wang, Z. Zhou, and C. Persello. **Single-Source Domain Adaptation with Target and Conditional Shift**, In *Regularization, Optimization, Kernels, and Support Vector Machines*, (Ed) JAK Suykens, M Signoretto, and A Argyriou, Chapman and Hall/CRC, Boca Raton, USA, 427–456.

# **Conference Proceedings**

- K. Q. H. Vo, M. Aadil, S. L. Chau, <u>K. Muandet</u>. Causal Strategic Learning with Competitive Selection, *The AAAI Conference on Artificial Intelligence (AAAI 2024)*, 2024.
- J. Park, S. Buchholz, B. Schölkopf, <u>K. Muandet</u>. A Measure-Theoretic Axiomatisation of Causality, Neural Information Processing Systems (NeurIPS 2023), 2023. (Oral Presentation, top 0.6%)
- S. L. Chau, <u>K. Muandet</u>\*, Dino Sejdinovic\* (\* equal contribution). **Explaining the Uncertain: Stochastic Shapley Values for Gaussian Process Models**, *Neural Information Processing Systems (NeurIPS 2023)*, 2023. (Spotlight, top 3%)

- J. Park and <u>K. Muandet</u>. **Towards Empirical Process Theory for Vector-Valued Functions: Metric Entropy of Smooth Function Classes**, *Proceedings of The 34th International Conference on Algorithmic Learning Theory (ALT 2023)*, PMLR 201:1216-1260, 2023.
- A. Karimi, <u>K. Muandet</u>, S. Kornblith, B. Schölkopf, B. Kim. **On the Relationship Between Explanation and Prediction: A Causal View**, *Proceedings of the 40th International Conference on Machine Learning (ICML 2023)*, PMLR 202:15861-15883, 2023.
- H. Kremer, J-J Zhu, <u>K. Muandet</u>, and B. Schölkopf. **Functional Generalized Empirical Likelihood Estimation for Conditional Moment Restrictions**, *Proceedings of the 39th International Conference on Machine Learning (ICML 2022)*, PMLR 162:11665-11682, 2022.
- J. Kübler, W. Jitkrittum, B. Schölkopf, <u>K. Muandet</u>. **A Witness Two-Sample Test**, *Proceedings of the 25th International Conference on Artificial Intelligence and Statistics (AISTATS 2022)*, PMLR 151:1403-1419, 2022.
- J. Park, U. Shalit, B. Schölkopf, <u>K. Muandet</u>, **Conditional Distributional Treatment Effect with Kernel Conditional Mean Embeddings and U-Statistic Regression**, *The 38th International Conference on Machine Learning (ICML 2021)*, PMLR 139:8401-8412, 2021.
- A. Mastouri, Y. Zhu, L. Gultchin, A. Korba, R. Silva, M. Kusner, A. Gretton, <u>K. Muandet</u>, **Proximal Causal Learning with Kernels: Two-Stage Estimation and Moment Restriction**, *The 38th International Conference on Machine Learning (ICML 2021)*, PMLR 139:7512-7523, 2021.
- J. Kübler, W. Jitkrittum, B. Schölkopf, and <u>K. Muandet</u>. **Learning Kernel Tests Without Data Splitting**, *Neural Information Processing Systems (NeurIPS 2020)*, pages 6245–6255, Curran Associates, Inc., 2020.
- X. Chen, Z. Wang, S. Tang, and <u>K. Muandet</u>. **MATE: Plugging in Model Awareness to Task Embedding for Meta Learning**, *Neural Information Processing Systems (NeurIPS 2020)*, pages 11865–11877, Curran Associates, Inc., 2020.
- K. Muandet, A. Mehrjou, S. K. Lee, and A. Raj. **Dual Instrumental Variable Regression**, *Neural Information Processing Systems (NeurIPS 2020)*, pages 2710–2721, Curran Associates, Inc., 2020.
- J. Park and <u>K. Muandet</u>. **A Measure-Theoretic Approach to Kernel Conditional Mean Embeddings**, *Neural Information Processing Systems (NeurIPS 2020)*, pages 21247–21259, Curran Associates, Inc., 2020. [7]
- K. Karunratanakul, J. Yang, Y. Zhang, M. Black, <u>K. Muandet</u>, and S. Tang. **Grasping Field: Learning Implicit Representations for Human Grasps**, *International Conference on 3D Vision (3DV)*, 2020. (Oral Presentation, Best Paper Award)
- <u>K. Muandet</u>, W. Jitkrittum, and J. Kübler. **Kernel Conditional Moment Test via Maximum Moment Restriction**, *Proceedings of the 36th Conference on Uncertainty in Artificial Intelligence (UAI 2020)*, PMLR 124:41–50, 2020.
- N. Kilbertus, M. Gomez-Rodriguez, B. Schölkopf, <u>K. Muandet</u>, and I. Valera. **Fair Decision Despite Imperfect Predictions**, *Proceedings of the 23rd International Conference on Artificial Intelligence and Statistics (AISTATS 2020)*, PMLR 108:277–287, 2020.
- I. Schuster, M. Mollenhauer, S. Klus, and <u>K. Muandet</u>. **Kernel Conditional Density Operators**, *Proceedings of the 23rd International Conference on Artificial Intelligence and Statistics (AISTATS 2020)*, PMLR 108:993–1004, 2020.
- J.J. Zhu, K. Muandet, M. Diehl, B. Schölkopf. A New Distribution-Free Concept for Representing, Comparing, and Propagating Uncertainty in Dynamical Systems with Kernel Probabilistic Programming, the 21st International Federation of Automatic Control (IFAC) World Congress. 2020.
- Y. Zhang, S. Tang, K. Muandet, C. Jarvers, and H. Neumann. Local Temporal Bilinear Pooling for Fine-grained Action Parsing, Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR 2019), pp. 12005–12015, 2019.
- R. Babber, <u>K. Muandet</u>, and B. Schölkopf, **A Scalable Mixed-norm Approach for Learning Lightweight Models in Large-Scale Classification**, *SIAM International Conference on Data Mining (SDM 2016)*, pages 234–242, Miami, Florida, USA.
- D. Lopez-Paz, <u>K. Muandet</u>, B. Schölkopf, and Ilya Tolstikhin, **Towards a Learning Theory of Cause-Effect Inference**, *The 32nd International Conference on Machine Learning (ICML 2015)*, PMLR 37:1452–1461, 2015.
- <u>K. Muandet</u>, B. Sriperumbudur, and B. Schölkopf, **Kernel Mean Estimation via Spectral Filtering**, *The 28th Annual Conference on Neural Information Processing Systems (NeurIPS 2014)*, pages 1–9. MIT Press, 2014.
- G. Doran, K. Muandet, K. Zhang, B. Schölkopf, A Permutation-Based Kernel Conditional Independence Test. the 30th Conference on Uncertainty in Artificial Intelligence (UAI 2014), pages 132–141. AUAI Press Corvallis, Oregon.
- <u>K. Muandet</u>, K. Fukumizu, B. Sriperumbudur, A. Gretton, and B. Schölkopf, **Kernel Mean Estimation and Stein Effect**. *The 31st International Conference on Machine Learning (ICML 2014)*, PMLR 32(1):10–18, 2014.

- K. Zhang, B. Schölkopf, <u>K. Muandet</u>, and Z. Wang. **Domain Adaptation under Target and Conditional Shift**. *The 30th International Conference on Machine Learning (ICML 2013)*, PMLR 28(3):819–827, 2013.
- <u>K. Muandet</u> and B. Schölkopf, **One-Class Support Measure Machines for Group Anomaly Detection**. *The 29th Conference on Uncertainty in Artificial Intelligence (UAI 2013)*, pages 449–458, AUAI Press, Corvallis, Oregon.
- <u>K. Muandet</u>, D. Balduzzi, and B. Schölkopf, **Domain Generalization via Invariant Feature Representation**. *The 30th International Conference on Machine Learning (ICML 2013)*, PMLR 28(1):10-18, 2013.
- K. Muandet, K. Fukumizu, F. Dinuzzo, and B. Schölkopf, Learning on Distributions via Support Measure Machines, 2012. The 26th Annual Conference on Neural Information Processing Systems (NeurIPS 2012), pages 10-18. MIT Press, 2012. (Spotlight Talk)
- <u>K. Muandet</u>, S. Marukatat, and C. Nattee. **Query Selection via Weighted Entropy for Graph-based Semi-Supervised Classification**. In *Proceedings of the 1st Asian Conference on Machine Learning (ACML 2009)*, pages 278–292, Nanjing, China, 2009.
- K. Muandet, S. Marukatat, and C. Nattee. Robust Graph Hyperparameter Learning for Graph-based Semi-Supervised Classification. In *Proceedings of the 13th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2009)*, pages 98-109, Bangkok, Thailand, 2009.
- N. Patanachai, B. Uyyanonvara, C. Sinthanayothin, W. Tharanon, P. Sompot, and <u>K. Muandet</u>. **PACS (Picture Archiving Communication System) for Dentistry**. *The 5th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology, 2008. (ECTI-CON 2008)*, 1:77-80, May 2008.
- C. Sinthanayothin, <u>K. Muandet</u>, B. Uyyanonvara, and W. Tharanon. **Development of Dental Software: Introducing ADTEC Dicom Viewer**. In *Bone and Dental Technology Symposium*, 2007.

## **Workshop Contributions**

- N. Kilbertus, M. Gomez Rodriguez, B Schölkopf, <u>K. Muandet</u>, I. Valera, **Improving Consequential Decision Making under Imperfect Predictions**, *The KDD 2019 Workshop on Data Collection, Curation, and Labeling for Mining and Learning*, Anchorage, Alaska USA, 2019.
- <u>K. Muandet</u>, M. Kanagawa, S. Saengkyongam, and S. Marukatat, **Counterfactual Mean Embedding: A Kernel Method for Nonparametric Causal Inference**, *The ICML 2018 Workshop on Machine Learning for Causal Inference, Counterfactual Prediction, and Autonomous Action (CausalML)*, Stockholm, Sweden, 2018.
- D. Lopez-Paz, <u>K. Muandet</u>, and B. Recht, **The Randomized Causation Coefficient**, *NeurIPS 2014 Workshop on Modern Nonparametrics 3: Automating the Learning Pipeline (oral presentation)*, Montreal, Canada, 2014.
- <u>K. Muandet</u>, **Hilbert Space Embedding for Dirichlet Process Mixtures**. *The NeurIPS 2012 Workshop on Confluence Between Kernel Methods and Graphical Models (oral presentation)*, Lake Tahoe, Nevada, USA, 2012.

#### Master/PhD Thesis

- K. Muandet. From Points to Probability Measures: Statistical Learning on Distributions with Kernel Mean Embedding, Doctoral Thesis, University of Tübingen, 2015.
- K. Muandet. Infinite Independent Subspace Analysis, M.Sc. Thesis, University College London, 2010.

### **Unpublished Works**

• K. Muandet and B. Schölkopf. A Unifying View of Support Measure Machines, Support Vector Machines, and Parzen Window Classifiers.

http://krikamol.org/research/papers/smm-unifying.pdf.

## **Preprints**

- M. Adachi, B. Planden, D. A. Howey, <u>K. Maundet</u>, M. A. Osborne, S. L. Chau. **Looping in the Human: Collaborative and** Explainable Bayesian Optimization, arXiv:2310.17273 [cs.LG], 2023.
- F. Quinzan, C. Casolo, <u>K. Muandet</u>, Y. Luo, N. Kilbertus. **Learning Counterfactually Invariant Predictors**, arXiv: 2207.09768 [cs.LG], 2022. 🔼
- K. Muandet. (Im)possibility of Collective Intelligence, arXiv: 2206.02786 [cs.LG], 2022.
- R. Zhang, K. Muandet, B. Schölkopf, and M. Imaizumi. Instrument Space Selection for Kernel Maximum Moment Restriction, arXiv:2106.03340 [cs.LG], 2021.

- Y. Zhang, K. Muandet, Q. Ma, H. Neumann, and S. Tang. Frontal Low-rank Random Tensors for Fine-grained Action Segmentation, arXiv:1906.01004 [cs.LG], 2020.
- A. Mehrjou, W. Jitkrittum, K. Muandet, and B. Schölkopf. Kernel-Guided Training of Implicit Generative Models with Stability Guarantees, arXiv:1901.09206 [cs.LG], 2019.
- S. K. Lee, L. Gresele, M. Park, and K. Muandet. Privacy-Preserving Causal Inference via Inverse Probability Weighting, arXiv:1905.12592 [cs.LG],2019.

# **Teaching/Supervision Experience**

## **Taught Courses**

SAARLAND UNIVERSITY, SAARBRÜCKEN, GERMANY

ELEMENTS OF MACHINE LEARNING, Undergrad & Master, (466 students) Winter Semester/2023 TOPICS IN OUT-OF-DISTRIBUTION GENERALIZATION, Master (12 students) Winter Semester/2022

MAHIDOL UNIVERSITY, BANGKOK, THAILAND

**SCMA181**: STATISTICS FOR MEDICAL SCIENCE, Undergrad, (914 students) 2nd Semester/2016

SCMA446: MACHINE LEARNING, Undergrad (12 students)

SCMA241: COMPUTER PROGRAMMING, Undergrad (30 students) 1st Semester/2016

SCIM301: NUMERICAL ANALYSIS, Undergrad (1 student)

**SCMA481**: TIME SERIES ANALYSIS, Undergrad (12 students)

**SCMA115**: CALCULUS, Undergrad (117 students)

Summer Semester/2015 SCMA165: ORDINARY DIFFERENTIAL EQUATION, Undergrad (457 students) 2nd Semester/2015

**SCMA351**: LINEAR ALGEBRA, Undergrad (27 students)

**SCMA292**: MATH MODELLING: MACHINE LEARNING, Undergrad (5 students)

SCMA695: APPLIED MATHEMATICS SEMINAR 2, Grad (10 students)

## **Supervised Students/Postdocs**

Chau Siu Lun (Postdoc, previously at University of Oxford)	04.2023-Present
Anurag Singh (PhD student, previously at Technical University of Munich (TUM))	04.2023-Present
Huynh Quang Kiet Vo (PhD student, previously at Saarland University (UdS))	11.2023-Present
Junhyung Park (PhD student, previously at ETH Zürich/Cambridge)	11.2019-Present
Masha Naslidnyk (HIDA Intern, PhD student at University College London (UCL))	09.2023-11.2023
Jake Fawkes (HIDA Intern, PhD student at University of Oxford)	09.2023-12.2023
Renan Gadoni Canaan (HIDA Intern, PhD student at University of Ottawa)	10.2023-12.2023
Shahine Bouabid (HIDA Intern, PhD student at University of Oxford)	10.2023-01.2024
Muneeb Aadil (Research Assistant, previously at Saarland University (UdS))	04.2023-12.2023
Jonas Kübler (PhD student, previously at University of Tübingen)	05.2019-07.2023
Chau Siu Lun (Intern, PhD student at University of Oxford)	10.2021-12.2021
Purin Klunklar (Undergrad student, Mahidol University)	06.2016-05.2017
Weerapatra Charoenkitsupat (Undergrad student, Mahidol University)	06.2016-05.2017
Siraporn Tongurai (Undergrad student, Mahidol University)	06.2016-05.2017
Chirag Gupta (Undergraduate Intern, now PhD student at CMU)	06.2015-08.2015
Uzair Akbar (Master student, Technical University of Munich (TUM))	04.2020-12.2020
Si Kai Lee (Master student, now PhD student at Yale)	06.2019-12.2019
Korrawe Karunratanakul (Intern, now PhD student at ETH Zurich)	06.2019-12.2019
Xiaohan Chen (Intern, PhD student at UT Austin)	06.2019-12.2019
Prabhu Pradhan (Undergrad, IISc Bangalore)	04.2020-11.2020
Hamed Shirzad (Undergrad, now master student at Simon Fraser University)	07.2018-09.2018

## **Editorial Reviews**

### Area Chair (AC)

NeurIPS (2022, 2021, 2020, 2019), AISTATS2022, ICLR (2022, 2023), ICML2019, ACML2017

#### **Peer Reviewer**

Regulatable ML Workshop @ NeurIPS 2023 Workshop on Multimodal Representation Learning @ ICLR 2023 NeurIPS (2013 - 2015, 2018), ICML (2015, 2017), COLT2018, IJCAI2015

### AISTATS (2016, 2020), ICLR (2018), FAcct2022

CZECH SCIENCE FOUNDATION, Grant Proposal	2017
JOURNAL OF MACHINE LEARNING RESEARCH (JMLR)	2015–2021, 2023
JOURNAL OF CAUSAL INFERENCE (JCI)	2018
Neurocomputing	2014
IEEE Transaction on Information Theory	2017
IEEE Transaction on Knowledge and Data Engineering	2013
IEEE Transaction on Pattern Analysis and Machine Intelligence	2013, 2016
DATA MINING AND KNOWLEDGE DISCOVERY	2013

# **Research Visit**

Israel Institute of Technology (Technion), Faculty of Data and Decision Sciences	Haifa, Israel
University of Chicago, Booth School of Business	Chicago, USA
The Mohamed bin Zayed University of Artificial Intelligence (MBZUAI)	Abu Dhabi, UAE
EUROCOME, Data Science Department	Sophia Antipolis, France
The Institute of Statistical Mathematics, Center for Statistical Machine Learning	Tokyo, Japan
RIKEN, Center for Advanced Intelligence Project (AIP)	Tokyo, Japan
University of Oxford, Department of Statistics	Oxford, United Kingdom
New York University, Center for Cosmology and Particle Physics	New York, USA
American Museum of Natural History	New York, USA
Palomar Observatory, California Institute of Technology (Caltech)	San Diego, USA

# **Professional Affiliations/Activities**

Professional Affiliations/Activities	
The 3rd Conference on Causal Learning and Reasoning (CLeaR)  Logistics and Conference Planning Team with Chi Zhang (UCLA)	Los Angeles, California 01-03.04.2024
<b>Dagstuhl Seminar</b> , <i>Invited participant</i> AI for Social Good	<i>Wadern, Germany</i> 18-23.02.2024
The 3rd Bellairs Workshop on Causality, Invited participant Inference and Representation Learning	<b>Barbados</b> 09-16.02.2024
MLRS 2023 - Machine Learning Research School, Co-organizer with Wittawat Jitkrittum (Google Research), Seksan Kiatsupaibul (Chulalongkorn University), Sarana Nutanong (VISTEC), Supasorn Suwajanakorn (VISTEC), and Ekapol Chuangsuwanich (Chulalongkorn University), Titipat Achakulvisut (Mahidol University), Sorawit Saengkyongam, Jayakorn Vongkulbhisal, Patsorn Sangkloy, and Rachata Ausavarungnirun	Bangkok, Thailand 02-09.08.2023
The 2nd Bellairs Workshop on Causality, Invited participant Inference and Representation Learning	<b>Barbados</b> 06-13.01.2023
NeurIPS 2021 Workshop on Machine Learning meets Econometrics, Co-organizer	Virtual

NeurIPS 2021 Workshop on Machine Learning meets Econometrics, Co-organizer
with David Bruns-Smith (UC Berkeley), Arthur Gretton (Gatsby Unit, UCL), Limor
Gultchin (University of Oxford), Niki Kilbertus (Helmholtz AI), Evan Munro (Stanford University), and Angela Zhou (Cornell University)

ACML 2020 Workshop on Machine Learning in Thailand, Co-organizer

with Pattarawat Chormai (TU Berlin), Wittawat Jitkrittum (Google Research), Sanparith Marukatat (NECTEC), Kobkaew Opasjumruskit (German Aerospace Center)

Bangkok, Thailand
18.11.2020

International Conference on Artificial Intelligence and Statistics (AISTATS) 2021San Diego, USAPublication Chair13-15.04.2021

MLRS 2019 - Machine Learning Research School, *Co-organizer* with Wittawat Jitkrittum (Google Research), Seksan Kiatsupaibul (Chulalongkorn University), Sarana Nutanong (VISTEC), Supasorn Suwajanakorn (VISTEC), and Ekapol Chuangsuwanich (Chulalongkorn University)

(DLR), and Titipat Achakulvisut (University of Pennsylvania)

DALI 2019 - Data, Learning and Inference, Co-chair

with Arthur Gretton (Gatsby Unit, UCL) and Shakir Mohamed (Google DeepMind)

03-05.01.2019

California, USA

George, South Africa

The NeurIPS 2017 Workshop on Learning on Distributions, Functions, Graphs and Croups. Co. organizar

and Groups, Co-organizer

with Florence d'Alché-Buc (Télécom ParisTech), Bharath Sriperumbudur (Penn State), and Zoltán Szabó (École Polytechnique)

Co-located with the 31st Neural Information Processing Systems (NeurIPS 2017)

08.12.2017

The 9th Asian Conference on Machine Learning (ACML 2017), Workshop co-chair

with Jihun Hamm (Ohio State University)

Seoul, Korea 15.11.2017 – 17.12.2017

27.11.2016 - 02.12.2016

Dagstuhl Seminar, Invited participant

New Directions for Learning with Kernels and Gaussian Processes

Wadern, Germany

Special Seminar: "Unravel the Mystery of AlphaGo, Deep Learning, and the Future of Artificial Intelligence", Co-organizer

Including invited speaker, distinguished panelists, and nearly 300 participants

Bangkok, Thailand

including invited speaker, distinguished patiensis, and hearly 300 participants

**Neural Information Processing Systems (NeurIPS 2016)**, *Program Manager* Serve as the program manager for NeurIPS 2016 with Ulrike von Luxburg (University of Tübingen), Isabelle Guyon (ClopiNet), and Behzad Tabibian (MPI-IS)

22.03.2016

2015-2016

Barcelona, Spain

Machine Learning Summer School (MLSS 2015), Speaker

Co-taught a practical course on kernel methods

MAX PLANCK INSTITUTE FOR INTELLIGENT SYSTEMS

Tübingen, Germany

13-24.07.2015

Machine Learning Summer School (MLSS 2013), Student Volunteer

MAX PLANCK INSTITUTE FOR INTELLIGENT SYSTEMS

*Tübingen, Germany* 26.8-06.09.2013

**Empirical Inference Symposium**, Co-organizer

In honor of the 75th birthday of Professor Vladimir V. Vapnik.

MAX PLANCK INSTITUTE FOR INTELLIGENT SYSTEMS

Tübingen, Germany 8-10.12.2011

Machine Learning Journal Club, Participant

GATSBY COMPUTATIONAL NEUROSCIENCE UNIT, UCL

London, United Kingdom

01.2010 - 10.2010

#### **Invited Talks**

Artificial Intelligence, Causality and Personalised Medicine Symposium (AICPM)

When Causal Inference meets Statistical Analysis

Korea Institute for Advanced Study (KIAS)

Data, Environments, and Learners: Theory and Algorithms (DELTA) @ UCL

University of Bern (Biased Data, Models, and Algorithms)

Basque Center for Applied Mathematics (BCAM), The Mathematics of Machine

Learning Workshop

IBM Thomas J. Watson Research Center

Hi! PARIS Summer School 2022 (Invited Tutorial on Causal Inference)

The 5th International Conference on Econometrics and Statistics (EcoSta 2022)

Nathan Kallus's Research Group at Cornell Tech, Cornell University

Lifting Inference with Kernel Embeddings (LIKE22)-1.5-Hour Tutorial

The Econometrics and Statistics Seminar at Chicago Booth

Data Science Program, Department of Statistics, Chulalongkorn University

REGML 2020: Regularization Methods for Machine Learning (virtual)

Workshop on Functional Inference and Machine Intelligence (FIMI), EURECOM

Graduate School and Research Center in Digital Science, EURECOM

The Second Korea-Japan Machine Learning Workshop

Workshop on Functional Inference and Machine Intelligence (FIMI), ISM

"Ola Bratteli" Seminar, Thammasat University

Facebook Artificial Intelligence Research (FAIR)

A\*STAR Artificial Intelligence Programme (A\*AI)

Hannover, Germany Paris, France

Virtual Virtual

Bern, Switzerland

Bilbao, Spain

Virtual

Paris, France Kyoto, Japan

Virtual

Virtual

Chicago, USA Bangkok, Thailand

Genova, Italy

Sophia Antipolis, France Sophia Antipolis, France

Jeju Island, South Korea

Tokyo, Japan

Pathumthani, Thailand New York, USA

Singapore

Department of Computer Science, University of Toronto
RIKEN Center for Advanced Intelligence Project (AIP)
Faculty of Commerce and Accountancy, Chulalongkorn University
Department of ICT, Mahidol University
Department of Computer Science, Thammasat University
Department of Statistics, University of Oxford
Center for Cosmology and Particle Physics, New York University
Astro Imaging Workshop
Occam's Razor Seminar
Asian Conference on Machine Learning
The Pacific-Asia Conference on Knowledge Discovery and Data Mining,
National Science and Technology Development Agency
Gatsby Computational Neuroscience Unit, UCL,
Bone and Dental Technology Symposium

Toronto , Canada
Tokyo, Japan
Bangkok, Thailand
Bangkok, Thailand
Bangkok, Thailand
Oxford, UK
New York, USA
Val Müstair, Switzerland
Tübingen, Germany
Nanjing, China
Bangkok, Thailand
Pathumthani, Thailand
London, United Kingdom
Bangkok, Thailand

# Languages

THAI: Fluent – First Language, English: Fluent, German: B1