

Wittawat Jitkrittum

Postdoctoral Researcher at Max Planck Institute for Intelligent Systems

🏠 wittawat.com | ✉ wittawat@tuebingen.mpg.de | 🌐 [wittawatj](https://www.wittawatj.com) | 🐦 [@wittawatj](https://twitter.com/wittawatj)

Address Max Planck Institute for Intelligent Systems
Max-Planck-Ring 4
72076 Tübingen
Germany

Education

2013 – 2017 **PhD in Machine Learning**
Gatsby Unit, University College London (UCL)
Supervisor: Arthur Gretton

2010 – 2012 **MEng in Computer Science**
Tokyo Institute of Technology
CGPA: 3.67/4.00 (*honors*)
Supervisor: Masashi Sugiyama

2005 – 2009 **BSc in Computer Science**
Sirindhorn International Institute of Technology (SIIT), Thammasat University
CGPA: 3.93/4.00 (*first class honors, silver medal award*)

2004 – 2005 **Intensive Japanese Language Program**
Waseda Education Thailand (*full scholarship*)

Academic Experience

3/2017, 3/2016 **Visiting Researcher** with Prof. Kenji Fukumizu
The Institute of Statistical Mathematics, Japan

2014, 2016 **Graduate Course Teaching Assistant** at UCL

- Approximate Inference and Learning in Probabilistic Models
- Reproducing Kernel Hilbert Spaces for Machine Learning

2012 – 2013 **Lab Instructor** at SIIT
Prepared class materials and led hands-on programming sessions.

- Basic Programming in C
- Object Oriented Programming in Java
- Database Systems and Web Development (with PHP & MySQL)

Overall teaching evaluation: 4.8/5.0. Class size: 30-50.

2009 – 2010 **Research Assistant** with Prof. Thanaruk Theeramunkong
SIIT, Thammasat University
Research: association rule mining, text retrieval.

2007 – 2008 **Research Assistant** with Dr. Choochart Haruechaiyasak
Human Language Technology Lab, National Electronics and Computer Technology Center (NECTEC), Thailand
Research: offline search engine, automatic news categorization.

Services **Publicity Chair** AISTATS 2016
Journal Reviewer JMLR 2018
Conference Reviewer

- NIPS 2015-2018
- ICML 2016-2019
- AISTATS 2017-2019
- ACML 2017
- ICLR 2017

Workshop Reviewer

- NIPS Workshop on Advances in Approximate Bayesian Inference 2015-2017.
- NIPS Workshop on Machine Learning Open Source Software 2018

2014 – 2017

Machine Learning Journal Club Organizer
Gatsby Unit, University College London

Awards

12/2017

NIPS 2017 Best Paper Award
Awarded to 3 out of 3240 submissions to NIPS 2017.
Media coverage as podcast by TWiML & AI (<https://goo.gl/3nkL7Q>).

2013 – 2017

Gatsby Unit Studentship
Full scholarship with stipend for PhD study. Awarded to 2-4 students per year.

2010 – 2012

Okazaki Kaheita Scholarship
Full scholarship with stipend for master study. Awarded to one Thai student once every three years.

2010

Second Prize at National Software Contest (NSC) 2010
Project: Thai Text Tokenization with a Binary Classifier
Category: Thai Language Processing

2009

Second Prize at National Software Contest (NSC) 2009
Project: Question Answering System for Thai Wikipedia
Category: Software for Scientific Development

2009

Honor Award from His Majesty King Bhumibol Adulyadej
Awarded to one student with the highest GPA in the department

Grants

2017

NIPS Travel Award: \$1200.

2017

ICML Travel Award: \$1800.

2009

Financial support from Young Scientist and Technologist Programme
National Science and Technology Development Agency (NSTDA)
For project “Question answering system for Thai Wikipedia”.

Invited Talks

2018

Machine Learning Fundamentals I
Vidyasirimedhi Institute of Science and Technology (VISTEC)

Introduction to Kernel Methods for Comparing Distributions
Bangkok Machine Learning Meetup

A Linear-Time Kernel Goodness-of-Fit Test
The Workshop on Functional Inference and Machine Intelligence (FIMI).

2017

A Linear-Time Kernel Goodness-of-Fit Test
Department of Computer Science, University of Bristol

Code Demo: A Linear-Time Kernel Goodness-of-Fit Test
MLTrain Workshop: Learn How to Code a Paper at NIPS 2017

An Adaptive Test of Independence with Analytic Kernel Embeddings
The 2nd Probabilistic Graphical Model Workshop, The Institute of Statistical Mathematics

2016 Interpretatable Distribution Features With Maximum Testing Power
Sugiyama-Sato Lab, University of Tokyo

Improving Approximate Bayesian Inference with Kernel Methods
Probabilistic Graphical Model Workshop, The Institute of Statistical Mathematics

Skills

Most Experienced: Python, Matlab, L^AT_EX

Experienced: Java, C, PHP & MySQL, HTML/CSS/Javascript, Pytorch

Some Experience: C# (Infer.NET), Theano, TensorFlow, Mathematica

Languages Thai (native), English (fluent), Japanese (intermediate), Chinese (elementary)

Publications

Source code for most of the following publications is released at <https://github.com/wittawatj>.

Journal Articles

1. Kiyohito Iigaya, Aurelie Jolivald, **Wittawat Jitkrittum**, Iain Gilchrist, Peter Dayan, Elizabeth Paul, and Mike Mendl. Cognitive bias in ambiguity judgements: Using computational models to dissect the effects of mild mood manipulation in humans. *Plos One*, 2016
2. Makoto Yamada, **Wittawat Jitkrittum**, Leonid Sigal, Eric P. Xing, and Masashi Sugiyama. High-dimensional feature selection by feature-wise kernelized lasso. *Neural Computation*, 26(1), 2014
3. **Wittawat Jitkrittum**, Hirotaka Hachiya, and Masashi Sugiyama. Feature selection via ℓ_1 -penalized squared-loss mutual information. *IEICE Transactions*, 96-D(7):1513–1524, 2013

Peer-Reviewed Conference Papers

1. **Wittawat Jitkrittum**, Heishiro Kanagawa, Patsorn Sangkloy, James Hays, Bernhard Schölkopf, and Arthur Gretton. Informative features for model comparison. In *NIPS (to appear)*, 2018
2. **Wittawat Jitkrittum**, Wenkai Xu, Zoltán Szabó, Kenji Fukumizu, and Arthur Gretton. A linear-time kernel goodness-of-fit test. In *NIPS*, 2017. (Best paper award, 3 out of 3240 submissions)
3. **Wittawat Jitkrittum**, Zoltán Szabó, and Arthur Gretton. An adaptive test of independence with analytic kernel embeddings. In *ICML*, 2017
4. **Wittawat Jitkrittum**, Zoltán Szabó, Kacper Chwialkowski, and Arthur Gretton. Interpretatable distribution features with maximum testing power. In *NIPS*, 2016. (Oral presentation, 1.8%)
5. Mijung Park*, **Wittawat Jitkrittum***, and Dino Sejdinovic. K2-ABC: Approximate Bayesian computation with kernel embeddings. In *AISTATS*, 2016. (*The first two authors contributed equally. Oral presentation, 6.5%*)
6. Mijung Park, **Wittawat Jitkrittum**, Ahmad Qamar, Zoltán Szabó, Lars Buesing, and Maneesh Sahani. Bayesian manifold learning: The locally linear latent variable model. In *NIPS*, 2015. (Acceptance rate: 21.8%)
7. **Wittawat Jitkrittum**, Arthur Gretton, Nicolas Heess, S. M. Ali Eslami, Balaji Lakshminarayanan, Dino Sejdinovic, and Zoltán Szabó. Kernel-based just-in-time learning for passing expectation propagation messages. In *UAI*, 2015
8. Gang Niu, **Wittawat Jitkrittum**, Bo Dai, Hirotaka Hachiya, and Masashi Sugiyama. Squared-loss mutual information regularization: A novel information-theoretic approach to semi-supervised learning. In *ICML*, 2013

9. **Wittawat Jitkrittum**, Thanaruk Theeramunkong, and Choochart Haruechaiyasak. Proximity-based semantic relatedness measurement on Thai Wikipedia. In *International Conference on Knowledge, Information and Creativity Support Systems (KICSS)*, 2008
10. Choochart Haruechaiyasak, Chatchawal Sangkeettrakarn, and **Wittawat Jitkrittum**. Managing offline educational web contents with search engine tools. In *International Conference on Asia-Pacific Digital Libraries*, 2007

Workshop Papers

1. Vincent Adam, Joana Soldado-Magraner, **Wittawat Jitkrittum**, Heiko Strathmann, Balaji Lakshminarayanan, Alessandro Davide Ialongo, Gergo Bohner, Ben Dongsung Huh, Lea Goetz, Shaun Dowling, Julian Vlad Serban, and Matthieu Louis. Performance of synchrony and spectral-based features in early seizure detection: exploring feature combinations and effect of latency. *International Workshop on Seizure Prediction (IWSP) 2015: Epilepsy Mechanisms, Models, Prediction and Control*, 2015
2. **Wittawat Jitkrittum**, Choochart Haruechaiyasak, and Thanaruk Theeramunkong. QAST: question answering system for Thai wikipedia. In *Proceedings of the 2009 Workshop on Knowledge and Reasoning for Answering Questions, KRAQ '09*. ACL, 2009
3. Choochart Haruechaiyasak, **Wittawat Jitkrittum**, Chatchawal Sangkeettrakarn, and Chaianun Damrongrat. Implementing news article category browsing based on text categorization technique. In *Web Intelligence/IAT Workshops*, 2008

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