

Tu Bao Ho

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EDUCATION AND CAREER

B.Tech. degree in Applied Mathematics from Hanoi University of Technology (1978), M.S. and Ph.D. degrees in Computer Science from Pierre and Marie Curie University, Paris (1984, 1987), and Habilitation à diriger des recherches from Paris Dauphine University (1998). Ph.D. candidate (1983-1987) at INRIA (the French National Institute for Research in Computer Science and Control, France), visiting fellow (1992) at Wisconsin-Madison University (USA).

Researcher (since 1979) and Associate Professor (1991) at the Institute of Information Technology, Vietnam Academy of Science and Technology (VAST), Visiting Associate Professor (1993-1997) at the School of Information Science, and Professor (1998) at the School of Knowledge Science (JAIST).

Ho Lab: Machine Learning and Data Mining

Japan Advanced Institute of Science and Technology (JAIST)

JAIST office in Vietnam

Knowledge Discovery Nuggets

PROFESSIONAL SERVICES

- In the steering committee of PAKDD (Pacific-Asia Conferences on Knowledge Discovery and Data Mining, Chair), ACML (Asian Conference on Machine Learning, Co-Chair), IEEE RIVF (IEEE Conference on Research, Innovation, and Vision for the Future), PRICAI (Pacific Rim International Conference on Artificial Intelligence, SC member).
- In the program committee of various international conferences, including: PRICAI'90, PC Co-Chair of PRICAI 2008; ICML'05; ICML'06; PC Vice-Chair of ICDM'06, ICDM'09; PAKDD 2000, PAKDD 2005 (PC co-chair), PAKDD 2006, PAKDD 2007, PAKDD 2008 (Area Chair), PAKDD 2009 (PC co-chair), PAKDD 2010; DS 2005, DS 2006, DS 2007; ECML/PKDD 2005, 2007, 2010; IFSR'05; RIVF 2006, PC-Chair of RIVF 2007, PC Co-Chair of RIVF 2008, General Co-chair RIVF 2009, PC Chair RIVF 2010; AI Nectar Track at the 21st AAAI 2006; SIGKDD'08; CIKM'09; Tutorial Chair of ACML'09; Area Chair ECML/PKDD 2010; ICDM 2011, RIVF 2013, ACML 2013, PAKDD 2014, ACML 2014, ACIS 2014 PAKDD 2015, etc.
- Co-organizer of some recent conferences:
 - IEEE-RIVF Research, Innovation, and Vision for the Future (IEEE-RIVF 2016)
 - 6th Asian Conference on Machine Learning (ACML2014)
 - 19th Pacific Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2015)

PUBLICATIONS

2016

1. Ho, T.B., Le, L., Dang, T.T., Siriwon, T. (2016). Data-driven Approach to Detect and Predict Adverse Drug Reactions, *Current Pharmaceutical Design Journal*, Vol. 22, No. 23, 3498-3526 [PDF, draft].
2. Luo, W., Phung, D., Tran, T., Gupta, S., Rana, S., Karmakar C., Dimitrova S.N., Ho, T.B., Venkatesh, S., Berk, M. (2016). Guidelines for Developing and Reporting Machine Learning Predictive Models in Biomedical Research: A Multidisciplinary View. *Journal of Medical Internet Research*, Vol. 22, No. 23, 3498-3526 [PDF].
Ho, T.B. (2016). Science and Technology Innovation is the key for Vietnam's Development, *VNU Journal of Science*, Vol 32(1S), 165-178.
3. Matsuo, R., Ho, T.B. (2016). Semantic Term Weighting for Clinical Texts, submitted to AIM.
4. Nguyen, D.K., Ho, T.B. (2016). Accelerated Parallel and Distributed Algorithm Using Limited Internal Memory for Nonnegative Matrix Factorization, *Journal of Global Optimization* (accepted) [PDF].
5. Nguyen, D.K., Ho, T.B. (2016). Anti-lopsided Algorithm for Large-scale Nonnegative Least Square Problems, *International Journal of Data Science and Analytics*, Springer (accepted) [PDF].
6. Dang, T.T., , Ouankhamchan, P., Ho, T.B. (2016). Detection of New Drug Indications from Electronic Medical Records, *IEEE International Conference on Research, Innovation and Vision for Future, RIVF 2016*, Hanoi, November 7-9 [PDF].
7. Moharasan, G., Ho, T.B. (2016). A semi-supervised approach for temporal information extraction from clinical text, *IEEE International Conference on Research, Innovation and Vision for Future, RIVF 2016*, Hanoi, November 7-9.
8. Pham, D., Le, B.K., Le, L., Ho, T.B. (2016). System pharmacology: application of network theory in predicting potential adverse drug eaction based on gene expression data, *IEEE International Conference on Research, Innovation and Vision for Future, RIVF 2016*, Hanoi, November 7-9.
9. Nguyen, D.K., Tran, Q.D., Ho, T.B. (2016). Simplicial Nonnegative Matrix Tri-Factorization: Fast Guaranteed Parallel Algorithm, *The 23rd International Conference on Neural Information Processing, ICONIP2016*, Kyoto 16-21, 2016 [PDF].
10. Nguyen, D.K., Ho, T.B. (2016). Fast Parallel Randomized Algorithm for Nonnegative Matrix Factorization with KL Divergence for Large Sparse Datasets, *International Journal of Machine Learning and Computing*, Vol 6(2), 111-116.
11. Nguyen, D.P., Vo, T.N.C., Ho, T.B. (2016). A Hybrid Semi-Supervised Learning Approach to Identifying Protected Health Information in Electronic Medical

Records, 10th International Conference on Ubiquitous Information Management and Communication (ACM IMCOM 2016), January 4-6, 2016.

12. Vo, T.N.C., Cao, T., Ho, T.B. (2016). Abbreviation Identification in Clinical Notes with Level-wise Feature Engineering and Supervised Learning, The 2016 Pacific Rim Knowledge Acquisition Workshop (PKAW 2016), August 22-23, 2016.

Matsuo, R., Ho, T.B. (2016). Mortality Prediction Using a Semantic Term Weighting Method Based on Severity of Patients, The 30th Annual Conference of the Japanese Society for Artificial Intelligence (JSAI 2016), June 6-9, 2016.

13. Matsuo, R., Ho, T.B. (2016). An Analysis of Four Medical Term Weighting Methods on Medical Information Retrieval, The 20th Spring Conference of the Japan Association for Medical Informatics (JAMI 2016), June 2-4, 2016.

Dang, T.T., Ho, T.B. (2016). Mixture of language models utilization in score-based sentiment classification on clinical narratives, IEA/AIE 2016 2-4 August 2016, Morioka, Japan [PDF].

2015

14. Tru Cao, Ee-Peng Lim, Zhi-Hua Zhou, Tu-Bao Ho, David Cheung, Hiroshi Motoda (2015). Advances in Knowledge Discovery and Data Mining (Eds.), Proceedings of the 19th Pacific-Asia Conference on Knowledge Discovery and Data Mining, Lecture Notes in Artificial Intelligence LNAI 9077, LNAI 9078, Springer.

15. Bui, N.T., Ho, T.B., Kanda, T. (2015). A semi-supervised tensor regression model for siRNA efficacy prediction, BMC Bioinformatics, 16:80, 2015 [PDF].

16. Nguyen, P.T., Le, A.C., Ho, T.B., Nguyen, V.H. (2015). Vietnamese Treebank Construction with Entropy-based Error Detection, Language Resource Evaluation, Springer, Vol. 49, Issues 3, 487-519 [PDF].

17. Bui, N.T., Le, S.V., Ho, T.B. (2015). MVRM: A hybrid approach to predict siRNA efficacy, International Conference on Knowledge and Systems Engineering KSE 2015 (Best Paper Award).

2014

18. Tseng, V.S., Ho, T.B., Zhou, Z.-H., Chen, A.L.P., Kao, H.-Y. (2014). Advances in Knowledge Discovery and Data Mining (Eds.), Proceedings of the 18th Pacific-Asia Conference on Knowledge Discovery and Data Mining, Lecture Notes in Artificial Intelligence LNAI 8443, LNAI 8444, Springer.

19. Nguyen, H., Le, L., Ho T.B. (2014). Computational study on ice growth inhibition of Antarctic bacterium antifreeze protein using coarse grained simulation, The Journal of Chemical Physics, June 2014, 140(22):225101. [PDF].

20. Nguyen, Q.D., Pham, T.H., Ho, T.B. (2014). Conditional multivariate mutual information measures, Journal of Computer Science and Cybernetics, Vol 30, No 2, 117-126.

21. Than, K., Ho, T.B. (2014). Modeling the diversity and log-normal of data, Intelligent Data Analysis, Volume 18(6), 1067-1088. [PDF].

Dam, H.C., Pham, T.L., Ho, T.B., Nguyen, T.A., Nguyen, V.C. (2014). Data

mining for materials design: A computational study of single molecule magnet, *The journal of Chemical Physics* [PDF]. *The Journal of Chemical Physics*, Vol. 140, Issue 4.

22. Than, K., Ho, T.B., Nguyen, D.K. (2014). An effective framework for supervised dimension reduction, *Neurocomputing*, Vol. 139, 397-407. [PDF]
 23. Hoang, C., Le, A.C., Pham, B.S., Ho, T.B. (2014). An Efficient Framework for Exploiting Parallel Sentences from Non-Parallel Corpora, *Fundamenta Informaticae*, Vol. 130, 179-199 [draft, PDF].
 24. Ho, V.T., Nakamori, Y., Ho, T.B., Lim, C.P. (2014). Blended Learning Model on Hands-on Approach for In-service Secondary School Teachers: Combination of E-learning and face-to-face Discussion; *Journal of Education and Information Technologies*, Vol 21, Issue 1, 185-208, Springer.
 25. Le, N.T, Ho, T.B., Ho, B.H., Tran, D.H. (2014). A nucleosomal approach to inferring causal relationships of histone modifications, *Asia-Pacific Bioinformatics Conference APBC 2014*, 17-19 January, Shanghai.
 26. Bui N.T. (2014). A novel framework to improve siRNA efficacy prediction, *Pacific-Asia Conference on Knowledge Discovery and Data Mining PAKDD'04*, 13-16 May, 2014, Tainan, Taiwan.
 27. Ho T.B., Hoang K.H., Huynh T.A., Nguyen D.K. (2014). An initial study of drug-disease relationships using EMRs, *Asia Conference on Information Systems ACIS 2014*, 1-3 December, Nha Trang.
 28. Matsuo R., Ho T.B. (2014). An Ontology Based Term Weighting Method for Exploiting EMR, *Asia Conference on Information Systems ACIS 2014*, 1-3 December, Nha Trang.
 29. Moharasan G., Ho T.B. (2014). Challenges and Opportunities of Temporal Information Extraction from Electronic Medical Records, *Asia Conference on Information Systems ACIS 2014*, 1-3 December, Nha Trang.
 30. Nguyen V.L., Ho T.B. (2014). Temporal Link Prediction Using CP-Decomposition, *Asia Conference on Information Systems ACIS 2014*, 1-3 December, Nha Trang.
 31. Ho T.B., Hoang K.H., Huynh T.A., Nguyen D.K. (2014). An initial study of drug-disease relationships using EMRs, *Asia Conference on Information Systems ACIS 2014*, 1-3 December, Nha Trang.
 32. Matsuo R., Ho T.B. (2014). An Ontology Based Term Weighting Method for Exploiting EMR, *Asia Conference on Information Systems ACIS 2014*, 1-3 December, Nha Trang.
- Moharasan G., Ho T.B. (2014). Challenges and Opportunities of Temporal Information Extraction from Electronic Medical Records, *Asia Conference on Information Systems ACIS 2014*, 1-3 December, Nha Trang.
- Nguyen V.L., Ho T.B. (2014). Temporal Link Prediction Using CP-Decomposition, *Asia Conference on Information Systems ACIS 2014*, 1-3 December, Nha Trang.