Hsuan-Tien Lin
林軒田

National Taiwan University, Room 314, CSIE Building,   htlin@csie.ntu.edu.tw
#1 Roosevelt Rd. Sec. 4, Taipei 106, Taiwan   http://www.csie.ntu.edu.tw/~htlin
+886(2)33664888x314   Last Updated: January 15, 2025

CURRENT POSITIONS

National Taiwan University, Taipei, Taiwan
Professor, Department of Computer Science and Information Engineering
August 2017–present
Adjunct Professor, Graduate Institute of Networking and Multimedia
August 2017–present

Appier, Taipei, Taiwan
Chief Data Science Consultant   March 2019–present

Taiwan Chip-based Industrial Innovation Program, Taipei, Taiwan
Chief Strategy Officer   August 2024–present

PAST POSITIONS

University of California, Davis, CA, USA
Visiting Research Scholar   July 2022–January 2023

Appier, Taipei, Taiwan
Chief Data Scientist   February 2016–February 2019
Consultant   May 2014–January 2016

National Taiwan University, Taipei, Taiwan
Cyberlink/Perfect Endowed Chair Professor, Department of
     Computer Science and Information Engineering   August 2022–July 2023
Department Mentor, Department of Computer Science and Information Engineering
August 2021–July 2022
Associate Chair, Department of Computer Science and Information Engineering
August 2020–May 2022
Associate Professor, Department of Computer Science and Information Engineering
August 2012–July 2017
Adjunct Associate Professor, Graduate Institute of Networking and Multimedia
August 2012–July 2017
Assistant Professor, Department of Computer Science and Information Engineering
August 2008–July 2012
Adjunct Assistant Professor, Graduate Institute of Networking and Multimedia
August 2008–July 2012

EDUCATION

California Institute of Technology, Pasadena, CA, USA
Ph.D. in Computer Science   June 2008
M.S. in Computer Science   June 2005

National Taiwan University, Taipei, Taiwan
B.S. in Computer Science and Information Engineering   June 2001

RESEARCH INTERESTS

- Machine Learning Theory: analyzing the generalization performance of learning systems

- Machine Learning Algorithms: improving existing algorithms, especially when the machine receives non-standard pieces of data to learn from

- Machine Learning Applications: designing practical machine learning solutions that suit specific application needs, including but not limited to some success stories in meteorology applications

BOOK

[1] Yaser S. Abu-Mostafa, Malik Magdon-Ismail, and **Hsuan-Tien Lin**, *Learning from Data: A Short Course* (AMLBook, March 2012), ISBN: 978-1600490064

REFEREED CONFERENCE PAPERS

[63] Si-An Chen, Lesly Miculicich, Julian Martin Eisenschlos, Zifeng Wang, Zilong Wang, Yanfei Chen, Yasuhisa Fujii, **Hsuan-Tien Lin**, Chen-Yu Lee, and Tomas Pfister, "TableRAG: Million-Token Table Understanding with Language Models," in *Advances in Neural Information Processing Systems: Proceedings of the 2024 Conference (NeurIPS)* (December 2024)

[62] Xiwei Yuan, Ziquan Deng, **Hsuan-Tien Lin**, and Kwan-Liu Ma, "SLIM: Spuriousness Mitigation with Minimal Human Annotations," in *Proceedings of the European Conference on Computer Vision (ECCV)* (October 2024)

[61] Vo Nguyen Le Duy, **Hsuan-Tien Lin**, and Ichiro Takeuchi, "CAD-DA: Controllable Anomaly Detection after Domain Adaptation by Statistical Inference," in *Proceedings of the 27th International Conference on Artificial Intelligence and Statistics (AISTATS)* (May 2024), 1828–1836

[60] Oscar Chew, **Hsuan-Tien Lin**, Kai-Wei Chang, and Kuan-Hao Huang, "Understanding and Mitigating Spurious Correlations in Text Classification with Neighborhood Analysis," in *Findings: European Chapter of the Association for Computational Linguistics (EACL)* (March 2024), 1013–1025

[59] Wei-Chao Cheng, Tan-Ha Mai, and **Hsuan-Tien Lin**, "From SMOTE to Mixup for Deep Imbalanced Classification," in *Proceedings of the Conference on Technologies and Applications for Artificial Intelligence (TAAI)* (December 2023), 75–96

[58] Yu-Chu Yu and **Hsuan-Tien Lin**, "Semi-supervised Domain Adaptation with Source Label Adaptation," in *Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition (CVPR)* (June 2023), 24100–24109

[57] Wei-I Lin, Gang Niu, **Hsuan-Tien Lin**, and Masashi Sugiyama, *Enhancing Label Sharing Efficiency in Complementary-Label Learning with Label Augmentation*, technical report (National Taiwan University and RIKEN Center for Advanced Intelligence Project, May 2023)

[56] Sheng-Feng Wu and **Hsuan-Tien Lin**, "Improving Clustering Uncertainty-weighted Embeddings for Active Domain Adaptation," in *Proceedings of the Conference on Technologies and Applications for Artificial Intelligence (TAAI)* (December 2022)

[55] Si-An Chen, Jie-Jyun Liu, Tsung-Han Yang, **Hsuan-Tien Lin**, and Chih-Jen Lin, "Even the Simplest Baseline Needs Careful Re-investigation: A Case Study on XML-CNN," in *Proceedings of the Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)* (July 2022), 1987–2000

[54] Si-An Chen, Chun-Liang Li, and **Hsuan-Tien Lin**, "A Unified View of cGANs with and without Classifiers," in *Advances in Neural Information Processing Systems: Proceedings of the 2021 Conference (NeurIPS)*, vol. 34 (December 2021), 27566–27579

[53] Ashesh, Chu-Song Chen, and **Hsuan-Tien Lin**, "360-Degree Gaze Estimation in the Wild Using Multiple Zoom Scales," in *Proceedings of the British Machine Vision Conference (BMVC)* (November 2021), 372

[52] Ching-Yuan Bai, **Hsuan-Tien Lin**, Colin Raffel, and Wendy Chih-wen Kan, "On Training Sample Memorization: Lessons from Benchmarking Generative Modeling with a Large-scale Competition," in *Proceedings of the 27th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD)* (August 2021), 2534–2542

[51] Yu-Ying Chou, **Hsuan-Tien Lin**, and Tyng-Luh Liu, "Adaptive and Generative Zero-shot Learning," in *Proceedings of the International Conference on Learning Representations (ICLR)* (May 2021)

[50] Chun-Yi Tu and **Hsuan-Tien Lin**, "Cost Learning Network for Imbalanced Classification," in *Proceedings of the Conference on Technologies and Applications for Artificial Intelligence (TAAI)* (November 2020), 47–51

[49] Yu-An Chung, Shao-Wen Yang, and **Hsuan-Tien Lin**, "Cost-Sensitive Deep Learning with Layer-Wise Cost Estimation," in *Proceedings of the Conference on Technologies and Applications for Artificial Intelligence (TAAI)*, winner of the best paper award (November 2020)

[48] Michelle Yuan, **Hsuan-Tien Lin**, and Jordan Boyd-Graber, "Cold-start Active Learning through Self-supervised Language Modeling," in *Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP)* (November 2020)

[47] Kuen-Han Tsai and **Hsuan-Tien Lin**, "Learning from Label Proportions with Consistency Regularization," in *Proceedings of the Asian Conference on Machine Learning (ACML)* (November 2020)

[46] Chi-Chang Lee, Yu-Chen Lin, **Hsuan-Tien Lin**, Hsin-Min Wang, and Yu Tsao, "SERIL: Noise Adaptive Speech Enhancement using Regularization-based Incremental Learning," in *Proceedings of the Conference of the International Speech Communication Association (INTERSPEECH)* (October 2020)

[45] Ching-Yuan Bai, Buo-Fu Chen, and **Hsuan-Tien Lin**, "Benchmarking Tropical Cyclone Rapid Intensification with Satellite Images and Attention-based Deep

Models," in *Proceedings of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD)* (September 2020)

[44] Yu-Ting Chou, Gang Niu, **Hsuan-Tien Lin**, and Masashi Sugiyama, "Unbiased Risk Estimators Can Mislead: A Case Study of Learning with Complementary Labels," in *Proceedings of the International Conference on Machine Learning (ICML)* (July 2020)

[43] Yao-Yuan Yang, Yi-An Lin, Hong-Min Chu, and **Hsuan-Tien Lin**, "Deep Learning with a Rethinking Structure for Multi-label Classification," in *Proceedings of the Asian Conference on Machine Learning (ACML)* (November 2019)

[42] Yu-Shao Peng, Kai-Fu Tang, Hsuan-Tien Lin, and Edward Y. Chang, "REFUEL: Exploring Sparse Features in Deep Reinforcement Learning for Fast Disease Diagnosis," in *Advances in Neural Information Processing Systems: Proceedings of the 2018 Conference (NeurIPS)* (December 2018), 7322–7331

[41] Hsien-Chun Chiu and **Hsuan-Tien Lin**, "Multi-label Classification with Feature-aware Cost-sensitive Label Embedding," in *Proceedings of the Conference on Technologies and Applications for Artificial Intelligence (TAAI)* (November 2018), 40–45

[40] Boyo Chen, Buo-Fu Chen, and **Hsuan-Tien Lin**, "Rotation-blended CNNs on a New Open Dataset for Tropical Cyclone Image-to-intensity Regression," in *Proceedings of the 24th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD)* (August 2018), 90–99

[39] Yao-Yuan Yang, Kuan-Hao Huang, Chih-Wei Chang, and **Hsuan-Tien Lin**, "Cost-Sensitive Reference Pair Encoding for Multi-Label Learning," in *Proceedings of the Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)* (June 2018), 143–155

[38] Yong-Siang Shih, Kai-Yueh Chang, **Hsuan-Tien Lin**, and Min Sun, "Compatibility Family Learning for Item Recommendation and Generation," in *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)* (February 2018)

[37] Cheng-Yu Hsieh, Yi-An Lin, and **Hsuan-Tien Lin**, "A Deep Model with Local Surrogate Loss for General Cost-sensitive Multi-label Learning," in *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)* (February 2018), 3239–3246

[36] Kuo-Hsuan Lo and **Hsuan-Tien Lin**, "Cost-sensitive Encoding for Label Space Dimension Reduction Algorithms on Multi-label Classification," in *Proceedings of the Conference on Technologies and Applications for Artificial Intelligence (TAAI)* (December 2017)

[35] Yi-An Lin and **Hsuan-Tien Lin**, "Cyclic Classifier Chain for Cost-Sensitive Multilabel Classification," in *Proceedings of the IEEE International Conference on Data Science and Advanced Analytics (DSAA)* (October 2017)

[34] Hong-Min Chu and **Hsuan-Tien Lin**, "Can Active Learning Experience Be Transferred?," in *Proceedings of the IEEE International Conference on Data Mining (ICDM)* (December 2016), 841–846

[33] Kuan-Hao Huang and **Hsuan-Tien Lin**, "A Novel Uncertainty Sampling Algorithm for Cost-sensitive Multiclass Active Learning," in *Proceedings of the IEEE International Conference on Data Mining (ICDM)* (December 2016), 925–930

[32] Chih-Kuan Yeh and **Hsuan-Tien Lin**, "Automatic Bridge Bidding Using Deep Reinforcement Learning," in *Proceedings of the 22nd European Conference on Artificial Intelligence (ECAI)* (September 2016), 1362–1369

[31] Yu-An Chung, **Hsuan-Tien Lin**, and Shao-Wen Yang, "Cost-aware Pre-training for Multiclass Cost-sensitive Deep Learning," in *Proceedings of the 25th International Joint Conference on Artificial Intelligence (IJCAI)* (July 2016), 1411–1417

[30] Chun-Liang Li, **Hsuan-Tien Lin**, and Chi-Jen Lu, "Rivalry of Two Families of Algorithms for Memory-Restricted Streaming PCA," in *Proceedings of the 19th International Conference on Artificial Intelligence and Statistics (AISTATS)* (June 2016), 473–481

[29] Kuan-Hao Huang and **Hsuan-Tien Lin**, "Linear Upper Confidence Bound Algorithm for Contextual Bandit Problem with Piled Rewards," in *Proceedings of the Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)*, vol. 1 (April 2016), 143–155

[28] Sheng-Chi You and **Hsuan-Tien Lin**, "A Simple Unlearning Framework for Online Learning under Concept Drifts," in *Proceedings of the Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)*, vol. 1 (April 2016), 115–126

[27] Han-Jay Yang and **Hsuan-Tien Lin**, "A Practical Divide-and-Conquer Approach for Preference-Based Learning to Rank," in *Proceedings of the Conference on Technologies and Applications for Artificial Intelligence (TAAI)*, winner of the best paper award (October 2015), 554–561

[26] Wei-Ning Hsu and **Hsuan-Tien Lin**, "Active Learning by Learning," in *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)* (January 2015), 2659–2665

[25] Ku-Chun Chou, Chao-Kai Chiang, **Hsuan-Tien Lin**, and Chi-Jen Lu, "Pseudo-reward Algorithms for Contextual Bandits with Linear Payoff Functions," in *Proceedings of the Asian Conference on Machine Learning (ACML)*, vol. 39, JMLR Workshop and Conference Proceedings (November 2014), 344–359

[24] **Hsuan-Tien Lin**, "Reduction from Cost-Sensitive Multiclass Classification to One-versus-One Binary Classification," in *Proceedings of the Asian Conference on Machine Learning (ACML)*, vol. 39, JMLR Workshop and Conference Proceedings (November 2014), 371–386

[23] Chun-Liang Li and **Hsuan-Tien Lin**, "Condensed Filter Tree for Cost-Sensitive Multi-Label Classification," in *Proceedings of the International Conference on Machine Learning (ICML)* (June 2014), 423–431

[22] Shang-Tse Chen, **Hsuan-Tien Lin**, and Chi-Jen Lu, "Boosting with Online Binary Learners for the Multiclass Bandit Problem," in *Proceedings of the International Conference on Machine Learning (ICML)* (June 2014), 342–350

[21] Yu-Cheng Chou and **Hsuan-Tien Lin**, "Machine Learning Approaches for Interactive Verification," in *Proceedings of the Pacific-Asia Conference on Knowledge Discovery*

and Data Mining (PAKDD), Part II, vol. 8444, Lecture Notes in Computer Science (May 2014), 122–133

[20] Ken-Yi Lin, Te-Kang Jan, and **Hsuan-Tien Lin**, "Data Selection Techniques for Large-scale RankSVM," in *Proceedings of the Conference on Technologies and Applications for Artificial Intelligence (TAAI)* (December 2013), 25–30

[19] Ya-Hsuan Chang and **Hsuan-Tien Lin**, "Pairwise Regression with Upper Confidence Bound for Contextual Bandit with Multiple Actions," in *Proceedings of the Conference on Technologies and Applications for Artificial Intelligence (TAAI)* (December 2013), 19–24

[18] Po-Lung Chen and **Hsuan-Tien Lin**, "Active Learning for Multiclass Cost-Sensitive Classification Using Probabilistic Models," in *Proceedings of the Conference on Technologies and Applications for Artificial Intelligence (TAAI)* (December 2013), 13–18

[17] Wei-Yuan Shen and **Hsuan-Tien Lin**, "Active Sampling of Pairs and Points for Large-scale Linear Bipartite Ranking," in *Proceedings of the Asian Conference on Machine Learning (ACML)*, vol. 29, JMLR Workshop and Conference Proceedings (November 2013), 388–403

[16] Yao-Nan Chen and **Hsuan-Tien Lin**, "Feature-aware Label Space Dimension Reduction for Multi-label Classification," in *Advances in Neural Information Processing Systems: Proceedings of the 2012 Conference (NeurIPS)* (December 2012), 1529–1537

[15] Chun-Liang Li, Chun-Sung Ferng, and **Hsuan-Tien Lin**, "Active Learning with Hinted Support Vector Machine," in *Proceedings of the Asian Conference on Machine Learning (ACML)*, vol. 25, JMLR Workshop and Conference Proceedings (November 2012), 221–235

[14] Te-Kang Jan, Da-Wei Wang, Chi-Hung Lin, and **Hsuan-Tien Lin**, "A Simple Methodology of Soft Cost-sensitive Classification," in *Proceedings of the 18th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD)* (August 2012), 141–149

[13] Shang-Tse Chen, **Hsuan-Tien Lin**, and Chi-Jen Lu, "An Online Boosting Algorithm with Theoretical Justifications," in *Proceedings of the International Conference on Machine Learning (ICML)* (June 2012)

[12] Chen-Wei Hung and **Hsuan-Tien Lin**, "Multi-label Active Learning with Auxiliary Learner," in *Proceedings of the Asian Conference on Machine Learning (ACML)*, vol. 20, JMLR Workshop and Conference Proceedings (November 2011), 315–330

[11] Chun-Sung Ferng and **Hsuan-Tien Lin**, "Multi-label Classification with Error-correcting Codes," in *Proceedings of the Asian Conference on Machine Learning (ACML)*, vol. 20, JMLR Workshop and Conference Proceedings (November 2011), 281–295

[10] Te-Kang Jan, **Hsuan-Tien Lin**, Hsin-Pai Chen, Tsung-Chen Chern, Chung-Yueh Huang, Bing-Cheng Wen, Chia-Wen Chung, Yung-Jui Li, Ya-Ching Chuang, Li-Li Li, Yu-Jiun Chan, Juen-Kai Wang, Yuh-Lin Wang, Chi-Hung Lin, and Da-Wei

Wang, "Cost-sensitive Classification on Pathogen Species of Bacterial Meningitis by Surface Enhanced Raman Scattering," in *Proceedings of the IEEE International Conference on Bioinformatics and Biomedicine (BIBM)* (November 2011), 390–393

[9] Yin-Hsi Kuo, **Hsuan-Tien Lin**, Wen-Huang Cheng, Yi-Hsuan Yang, and Winston H. Hsu, "Unsupervised Auxiliary Visual Words Discovery for Large-Scale Image Object Retrieval," in *Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition (CVPR)* (June 2011), 905–912

[8] Han-Hsing Tu and **Hsuan-Tien Lin**, "One-sided Support Vector Regression for Multiclass Cost-sensitive Classification," in *Proceedings of the 27th International Conference on Machine Learning (ICML)* (June 2010), 1095–1102

[7] Ling Li and **Hsuan-Tien Lin**, "Optimizing 0/1 Loss for Perceptrons by Random Coordinate Descent," in *Proceedings of the 2007 International Joint Conference on Neural Networks (IJCNN)* (August 2007), 749–754

[6] Ling Li and **Hsuan-Tien Lin**, "Ordinal Regression by Extended Binary Classification," in *Advances in Neural Information Processing Systems : Proceedings of the 2006 Conference (NeurIPS)* (December 2006), 865–872

[5] **Hsuan-Tien Lin** and Ling Li, "Large-Margin Thresholded Ensembles for Ordinal Regression: Theory and Practice," in *Algorithmic Learning Theory (ALT)*, vol. 4264, Lecture Notes in Artificial Intelligence (October 2006), 319–333

[4] **Hsuan-Tien Lin** and Ling Li, "Novel Distance-Based SVM Kernels for Infinite Ensemble Learning," in *Proceedings of the 12th International Conference on Neural Information Processing (ICONIP)* (November 2005), 761–766

[3] Ling Li, Amrit Pratap, **Hsuan-Tien Lin**, and Yaser S. Abu-Mostafa, "Improving Generalization by Data Categorization," in *Knowledge Discovery in Databases (PKDD)*, vol. 3721, Lecture Notes in Computer Science (November 2005), 157–168

[2] **Hsuan-Tien Lin** and Ling Li, "Infinite Ensemble Learning with Support Vector Machines," in *Machine Learning: Proceedings of the 16th European Conference on Machine Learning (ECML)*, vol. 3720, Lecture Notes in Computer Science (October 2005), 242–254

[1] Shuo-Peng Liao, **Hsuan-Tien Lin**, and Chih-Jen Lin, "A Note on the Decomposition Methods for Support Vector Regression," in *Proceedings of the 2001 International Joint Conference on Neural Networks (IJCNN)* (July 2001), 1474–1479

JOURNAL PAPERS

[20] Chien-Min Yu, Ming-Hsin Chen, and **Hsuan-Tien Lin**, "Learning Key Steps to Attack Deep Reinforcement Learning Agents," also presented in the journal track of ECML '23, *Machine Learning* 112 (March 2023): 1499–1522

[19] Ashesh, Chia-Tung Chang, Buo-Fu Chen, **Hsuan-Tien Lin**, Boyo Chen, and Treng-Shi Huang, "Accurate and Clear Quantitative Precipitation Nowcasting Based on a Deep Learning Model with Consecutive Attention and Rainmap Discrimination," *Artificial Intelligence for the Earth Systems* 1, no. 3 (July 2022): 1–19

[18] Si-An Chen, Voot Tangkaratt, **Hsuan-Tien Lin**, and Masashi Sugiyama, "Active Deep Q-learning with Demonstration," also presented in the journal track of ECML '20, *Machine Learning* 109, nos. 9–10 (September 2020): 1699–1725

[17] Tsung-Yi Pan, **Hsuan-Tien Lin**, and Hao-Yu Liao, "A Data-Driven Probabilistic Rainfall-Inundation Model for Flash-Flood Warnings," *Water* 11, no. 12 (November 2019): 2534

[16] Hong-Min Chu, Kuan-Hao Huang, and **Hsuan-Tien Lin**, "Dynamic Principal Projection for Cost-Sensitive Online Multi-Label Classification," also presented in the journal track of ECML '19, *Machine Learning* 108, nos. 8–9 (September 2019): 1193–1230

[15] Yu-Lin Tsou and **Hsuan-Tien Lin**, "Annotation Cost-sensitive Active Learning by Tree Sampling," also presented in the journal track of ACML '18, *Machine Learning* 108, no. 5 (May 2019): 785–807

[14] Chih-Kuan Yeh, Cheng-Yu Hsieh, and **Hsuan-Tien Lin**, "Automatic Bridge Bidding Using Deep Reinforcement Learning," *IEEE Transactions on Games* 10, no. 4 (December 2018): 365–377

[13] Kuan-Hao Huang and **Hsuan-Tien Lin**, "Cost-Sensitive Label Embedding for Multi-Label Classification," also presented in the journal track of ECML '17, *Machine Learning* 106, nos. 9–10 (October 2017): 1725–1746

[12] Yu-Ping Wu and **Hsuan-Tien Lin**, "Progressive k-Labelsets for Cost-Sensitive Multi-Label Classification," also presented in the journal track of ACML '16, *Machine Learning* 106, no. 5 (May 2017): 671–694

[11] Chun-Liang Li, Chun-Sung Ferng, and **Hsuan-Tien Lin**, "Active Learning Using Hint Information," *Neural Computation* 27, no. 8 (August 2015): 1738–1765

[10] Chun-Liang Li, Yu-Chuan Su, Ting-Wei Lin, Cheng-Hao Tsai, Wei-Cheng Chang, Kuan-Hao Huang, Tzu-Ming Kuo, Shan-Wei Lin, Young-San Lin, Yu-Chen Lu, Chun-Pai Yang, Cheng-Xia Chang, Wei-Sheng Chin, Yu-Chin Juan, Hsiao-Yu Tung, Jui-Pin Wang, Cheng-Kuang Wei, Felix Wu, Tu-Chun Yin, Tong Yu, Yong Zhuang, Shou-De Lin, **Hsuan-Tien Lin**, and Chih-Jen Lin, "Combination of Feature Engineering and Ranking Models for Paper-Author Identification in KDD Cup 2013," extended first-place winner report of KDD Cup 2013 track 1, *Journal of Machine Learning Research* 16, no. 12 (December 2015): 2921–2947

[9] Wei-Sheng Chin, Yu-Chin Juan, Yong Zhuang, Felix Wu, Hsiao-Yu Tung, Tong Yu, Jui-Pin Wang, Cheng-Xia Chang, Chun-Pai Yang, Wei-Cheng Chang, Kuan-Hao Huang, Tzu-Ming Kuo, Shan-Wei Lin, Young-San Lin, Yu-Chen Lu, Yu-Chuan Su, Cheng-Kuang Wei, Tu-Chun Yin, Chun-Liang Li, Ting-Wei Lin, Cheng-Hao Tsai, Shou-De Lin, **Hsuan-Tien Lin**, and Chih-Jen Lin, "Effective String Processing and Matching for Author Disambiguation," extended first-place winner report of KDD Cup 2013 track 2, *Journal of Machine Learning Research* 15, no. 10 (October 2014): 3037–3064

[8] Yu-Xun Ruan, **Hsuan-Tien Lin**, and Ming-Feng Tsai, "Improving Ranking Performance with Cost-sensitive Ordinal Classification via Regression," *Information Retrieval* 17, no. 1 (February 2014): 1–20

[7] Chun-Sung Ferng and **Hsuan-Tien Lin**, "Multilabel Classification Using Error-correcting Codes of Hard or Soft Bits," *IEEE Transactions on Neural Networks and Learning Systems* 24, no. 11 (November 2013): 1888–1900

[6] Farbound Tai and **Hsuan-Tien Lin**, "Multilabel Classification with Principal Label Space Transformation," *Neural Computation* 24, no. 9 (September 2012): 2508–2542

[5] Yin-Hsi Kuo, Wen-Huang Cheng, **Hsuan-Tien Lin**, and Winston H. Hsu, "Unsupervised Semantic Feature Discovery for Image Object Retrieval and Tag Refinement," *IEEE Transactions on Multimedia* 14, no. 4 (August 2012): 1079–1090

[4] **Hsuan-Tien Lin** and Ling Li, "Reduction from Cost-sensitive Ordinal Ranking to Weighted Binary Classification," *Neural Computation* 24, no. 5 (May 2012): 1329–1367

[3] **Hsuan-Tien Lin** and Ling Li, "Support Vector Machinery for Infinite Ensemble Learning," *Journal of Machine Learning Research* 9, no. 2 (February 2008): 285–312

[2] **Hsuan-Tien Lin**, Chih-Jen Lin, and Ruby C. Weng, "A Note on Platt's Probabilistic Outputs for Support Vector Machines," *Machine Learning* 68, no. 3 (August 2007): 267–276

[1] Shuo-Peng Liao, **Hsuan-Tien Lin**, and Chih-Jen Lin, "A Note on the Decomposition Methods for Support Vector Regression," *Neural Computation* 14, no. 6 (June 2002): 1267–1281

WORKSHOP PAPERS

[18] Xiwei Yuan, Ziquan Deng, **Hsuan-Tien Lin**, Zhaodan Kong, and Kwan-Liu Ma, "SUNY: A Visual Interpretation Framework for Convolutional Neural Networks from a Necessary and Sufficient Perspective," in *Proceedings of the third Explainable AI for Computer Vision Workshop @ CVPR* (2024), 8371–8376

[17] Ming-Hsin Chen, Si-An Chen, and **Hsuan-Tien Lin**, *Active Reinforcement Learning from Demonstration in Continuous Action Spaces*, presented in the AI and HCI Workshop @ ICML, July 2023

[16] Po-Yi Lu, Chun-Liang Li, and **Hsuan-Tien Lin**, *A More Robust Baseline for Active Learning by Injecting Randomness to Uncertainty Sampling*, presented in the AI and HCI Workshop @ ICML, July 2023

[15] Paul Kuo-Ming Huang, Si-An Chen, and **Hsuan-Tien Lin**, *Improving Conditional Score-based Generation with Calibrated Classification and Joint Training*, presented in the Workshop on Score-Based Methods @ NeurIPS, December 2022

[14] Si-An Chen, Chun-Liang Li, and **Hsuan-Tien Lin**, *Improving Model Compatibility of Generative Adversarial Networks by Boundary Calibration*, presented in the Workshop on Deep Generative Models and Downstream Applications @ NeurIPS, December 2021

[13] Chia-You Chen, **Hsuan-Tien Lin**, Gang Niu, and Masashi Sugiyama, *On the Role of Pre-training for Meta Few-Shot Learning*, presented in the 5th Workshop on Meta-Learning @ NeurIPS, December 2021

[12] I-Ting Chen and **Hsuan-Tien Lin**, *Improving Unsupervised Domain Adaptation with Representative Selection Techniques*, presented in the Workshop on Interactive Adaptive Learning @ ECML/PKDD, September 2020, 5–21

[11] Ching-Yuan Bai, Buo-Fu Chen, and **Hsuan-Tien Lin**, *Attention-based Deep Tropical Cyclone Rapid Intensification Prediction*, presented in the Workshop on Machine Learning for Earth Observation @ ECML/PKDD, September 2019

[10] Cheng-Yu Hsieh, Miao Xu, Gang Niu, **Hsuan-Tien Lin**, and Masashi Sugiyama, "A Pseudo-Label Method for Coarse-to-Fine Multi-Label Learning with Limited Supervision," presented in the Workshop on Learning from Limited Labeled Data @ ICLR (May 2019)

[9] Yao-Yuan Yang, Yi-An Lin, Hong-Min Chu, and **Hsuan-Tien Lin**, "Deep Learning with a Rethinking Structure for Multi-label Classification," presented in the Workshop on Multi-output Learning @ ACML (November 2018)

[8] Chun-Yen Ho and **Hsuan-Tien Lin**, "Contract Bridge Bidding by Learning," in *Proceedings of the Workshop on Computer Poker and Imperfect Information @ AAAI* (January 2015), 30–36

[7] Todd G. McKenzie, Chun-Sung Ferng, Yao-Nan Chen, Chun-Liang Li, Cheng-Hao Tsai, Kuan-Wei Wu, Ya-Hsuan Chang, Chung-Yi Li, Wei-Shih Lin, Shu-Hao Yu, Chieh-Yen Lin, Po-Wei Wang, Chia-Mau Ni, Wei-Lun Su, Tsung-Ting Kuo, Chen-Tse Tsai, Po-Lung Chen, Rong-Bing Chiu, Ku-Chun Chou, Yu-Cheng Chou, Chien-Chih Wang, Chen-Hung Wu, **Hsuan-Tien Lin**, Chih-Jen Lin, and Shou-De Lin, "Novel Models and Ensemble Techniques to Discriminate Favorite Items from Unrated Ones for Personalized Music Recommendation," in *Proceedings of the KDD Cup 2011 Workshop*, vol. 18, JMLR Workshop and Conference Proceedings, First-place winner report of KDD Cup 2011 track 2 (May 2012), 101–135

[6] Po-Lung Chen, Chen-Tse Tsai, Yao-Nan Chen, Ku-Chun Chou, Chun-Liang Li, Cheng-Hao Tsai, Kuan-Wei Wu, Yu-Cheng Chou, Chung-Yi Li, Wei-Shih Lin, Shu-Hao Yu, Rong-Bing Chiu, Chieh-Yen Lin, Chien-Chih Wang, Po-Wei Wang, Wei-Lun Su, Chen-Hung Wu, Tsung-Ting Kuo, Todd G. McKenzie, Ya-Hsuan Chang, Chun-Sung Ferng, Chia-Mau Ni, **Hsuan-Tien Lin**, Chih-Jen Lin, and Shou-De Lin, "A Linear Ensemble of Individual and Blended Models for Music Rating Prediction," in *Proceedings of the KDD Cup 2011 Workshop*, vol. 18, JMLR Workshop and Conference Proceedings, First-place winner report of KDD Cup 2011 track 1 (May 2012), 21–60

[5] Hsiang-Fu Yu, Hung-Yi Lo, Hsun-Ping Hsieh, Jing-Kai Lou, Todd G. McKenzie, Jung-Wei Chou, Po-Han Chung, Chia-Hua Ho, Chun-Fu Chang, Yin-Hsuan Wei, Jui-Yu Weng, En-Syu Yan, Che-Wei Chang, Tsung-Ting Kuo, Yi-Chen Lo, Po Tzu Chang, Chieh Po, Chien-Yuan Wang, Yi-Hung Huang, Chen-Wei Hung, Yu-Xun Ruan, Yu-Shi Lin, Shou-De Lin, **Hsuan-Tien Lin**, and Chih-Jen Lin, "Feature Engineering and Classifier Ensemble for KDD Cup 2010," in *Proceedings of the KDD Cup 2010 Workshop*, First-place winner report of KDD Cup 2010 (July 2010)

[4] Farbound Tai and **Hsuan-Tien Lin**, "Multi-label Classification with Principle Label Space Transformation," in *Proceedings of the 2nd International Workshop on learning from Multi-Label Data @ ICML '10* (June 2010)

[3] Hung-Yi Lo, Kai-Wei Chang, Shang-Tse Chen, Tsung-Hsien Chiang, Chun-Sung Ferng, Cho-Jui Hsieh, Yi-Kuang Ko, Tsung-Ting Kuo, Hung-Che Lai, Ken-Yi Lin, Chia-Hsuan Wang, Hsiang-Fu Yu, Chih-Jen Lin, **Hsuan-Tien Lin**, and Shou-De Lin, "An Ensemble of Three Classifiers for KDD Cup 2009: Expanded Linear Model, Heterogeneous Boosting, and Selective Naïve Bayes," in *Proceedings of KDD-Cup 2009 competition*, vol. 7, JMLR Workshop and Conference Proceedings, Third-place winner report of KDD Cup 2009 slow track (June 2009), 57–64

[2] **Hsuan-Tien Lin** and Ling Li, "Combining Ordinal Preferences by Boosting," in *Proceedings of the Preference Learning Workshop in ECML/PKDD '09* (September 2009), 69–83

[1] **Hsuan-Tien Lin** and Ling Li, "Analysis of SAGE Results with Combined Learning Techniques," in *Proceedings of the ECML/PKDD 2005 Discovery Challenge* (November 2005), 102–113

OTHER PUBLICATIONS

[13] Vu Nguyen and **Hsuan-Tien Lin**, eds., *Proceedings of the 16th Asian Conference on Machine Learning*, vol. 260, Proceedings of Machine Learning Research (Asian Conference on Machine Learning, December 2024)

[12] Wei-I Lin and **Hsuan-Tien Lin**, "Reduction from Complementary-Label Learning to Probability Estimates," in *Proceedings of the Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)*, winner of the best paper runner-up award (May 2023)

[11] Andrew Bai, Cho-Jui Hsieh, Wendy Kan, and **Hsuan-Tien Lin**, *Reducing Training Sample Memorization in GANs by Training with Memorization Rejection*, technical report (National Taiwan University and University of California, Los Angeles, October 2022)

[10] Cheng-Yu Hsieh, Wei-I Lin, Miao Xu, Gang Niu, **Hsuan-Tien Lin**, and Masashi Sugiyama, *Active Refinement for Multi-Label Learning: A Pseudo-Label Approach*, technical report (National Taiwan University and RIKEN Center for Advanced Intelligence Project, September 2021)

[9] Te-Kang Jan, Da-Wei Wang, Chi-Hung Lin, and **Hsuan-Tien Lin**, *Soft Methodology for Cost-and-error Sensitive Classification*, technical report (National Taiwan University and Academia Sinica, October 2017)

[8] Wei-Yuan Shen and **Hsuan-Tien Lin**, *Active Sampling of Pairs and Points for Large-scale Linear Bipartite Ranking*, technical report (National Taiwan University, August 2017)

[7] Kuan-Wei Wu, Chun-Sung Ferng, Chia-Hua Ho, An-Chun Liang, Chun-Heng Huang, Wei-Yuan Shen, Jyun-Yu Jiang, Ming-Hao Yang, Ting-Wei Lin, Ching-Pei Lee, Perng-Hwa Kung, Chin-En Wang, Ting-Wei Ku, Chun-Yen Ho, Yi-Shu Tai, I-Kuei Chen, Wei-Lun Huang, Che-Ping Chou, Tse-Ju Lin, Han-Jay Yang, Yen-Kai Wang, Cheng-Te Li, Shou-De Lin, and **Hsuan-Tien Lin**, *A Two-Stage Ensemble of Diverse Models for Advertisement Ranking in KDD Cup 2012*, technical report, First-place winner report of KDD Cup 2012 track 2 (National Taiwan University, August

2012)

[6] Ku-Chun Chou and **Hsuan-Tien Lin**, *Balancing between Estimated Reward and Uncertainty during News Article Recommendation for ICML 2012 Exploration and Exploitation Challenge*, technical report, First-place winner report of the Exploration and Exploitation Challenge @ ICML 2012 phase 1 (National Taiwan University, June 2012)

[5] **Hsuan-Tien Lin**, Malik Madgon-Ismail, and Yaser S. Abu-Mostafa, *Teaching Machine Learning to a Diverse Audience: the Foundation-based Approach*, technical report, presented in the Teaching Machine Learning Workshop @ ICML '12 (National Taiwan Unversity, June 2012)

[4] Ming-Feng Tsai, Shang-Tse Chen, Yao-Nan Chen, Chun-Sung Ferng, Chia-Hsuan Wang, Tzay-Yeu Wen, and **Hsuan-Tien Lin**, *An Ensemble Ranking Solution to the Yahoo! Learning to Rank Challenge*, technical report, presented in the Workshop of Yahoo! Learning to Rank Challenge @ ICML '10 (National Taiwan University, June 2010)

[3] **Hsuan-Tien Lin**, "From Ordinal Ranking to Binary Classification" (PhD diss., California Institute of Technology, June 2008)

[2] **Hsuan-Tien Lin**, "Infinite Ensemble Learning with Support Vector Machines" (master's thesis, California Institute of Technology, June 2005)

[1] **Hsuan-Tien Lin** and Chih-Jen Lin, *A Study on Sigmoid Kernels for SVM and the Training of non-PSD Kernels by SMO-type methods*, technical report (National Taiwan University, March 2003)

SOFTWARE

[1] Yao-Yuan Yang, Shao-Chuan Lee, Yu-An Chung, Tung-En Wu, Si-An Chen, and **Hsuan-Tien Lin**, *libact: Pool-based Active Learning in Python*, technical report (National Taiwan University, October 2017)

TALKS

Attempts Towards Robust and Controllable Generation
Cloud Computing and IoT Association in Taiwan, Taipei, Taiwan   August 2024

Attempts Towards Controllable Generation
NTUILO x MITILP Consortia, Taipei (virtual), Taiwan   August 2023

Developing the Learning Potential of Machines
Taipei District Court, Taipei, Taiwan   May 2023
National Taiwan University Center for the Advancement of Science Education,
     Taipei, Taiwan   October 2018

Machine Learning for Modern Artificial Intelligence
Digital Law Center, National Taiwan University, Taipei, Taiwan   September 2024
Fubond Securities, Taipei, Taiwan   April 2023
Taiwanese American Industrial Technology Association-Silicon Valley (TAITA-SV)
          Annual Conference (keynote talk), Fremont, CA, USA   September 2022

Artificial Intelligence and Data Science Workshop, Hualien, Taiwan	January 2022
Winbond Corporation, Hsinchu (virtual), Taiwan	July 2021
International Computer Symposium, Tainan, Taiwan	December 2020
Wistron NeWeb Corporation, Hsinchu, Taiwan	December 2019
Speech Signal Processing Workshop, Taipei, Taiwan	June 2019
Institute of Information Science, Academia Sinica, Taipei, Taiwan	November 2018

Learning for Big Data

Taiwan Association on Cancer Research, New Taipei, Taiwan	July 2022
Department of Information Management, National Taiwan University, Taipei, Taiwan	April 2016
Annual Meeting of Data Science Enthusiasts in Taiwan, Taipei, Taiwan	August 2015
IEEE BigData 2015 Taipei Satellite Session (keynote talk), Taipei, Taiwan	May 2015

Active Learning by Learning

Institute of Information Systems and Applications, National Tsing Hua University, Hsinchu (virtual), Taiwan	March 2022
IEEE Computational Intelligence Society, International Webinar	April 2021
The University of British Columbia (UBC) Centre for Artificial Intelligence Decision-making and Action, International Webinar	January 2021
Information Retrieval Workshop, Taipei, Taiwan	December 2015
Artificial Intelligence Forum, Kaohsiung, Taiwan	June 2015

Learning with Limited Labeled Data

Artificial Intelligence and Data Science Workshop, Hualien, Taiwan	January 2022

Unbiased Risk Estimators Can Mislead:
                              A Case Study of Learning with Complementary Labels

South Taiwan Statistics Conference, Kaohsiung, Taiwan	October 2021
Artificial Intelligence Forum, Taipei (virtual), Taiwan	October 2021

Cost-sensitive Classification: Techniques and Stories

Machine Learning Summer School, Taipei (virtual), Taiwan	August 2021

MUSE Teaching

Artificial Intelligence Course Program of Ministry of Education, Hsinchu, Taiwan	September 2020

Making Active Learning Realistic

Weakly-supervised Learning Workshop at Asian Conference on Machine Learning (keynote talk), Nagoya, Japan	November 2019

Machine Learning Overviews and Applications

Department of Biomechatronics Engineering, National Taiwan University, Taipei, Taiwan	October 2019
Industrial Technology Research Institute, Hsinchu, Taiwan	January 2016
Department of Information Management, Chang Jung Christian University, Tainan, Taiwan	November 2015
Mediatek, Hsinchu, Taiwan	April 2015
Marvell Taiwan, Hsinchu, Taiwan	May 2014

Label Space Coding for Multi-label Classification

RIKEN Center for Advanced Intelligence Project, Tokyo, Japan	August 2019
Taiwan Society for Industrial and Applied Mathematics Annual Meeting, Taipei, Taiwan	May 2018
Institute of Statistics, National University of Kaohsiung, Kaohsiung, Taiwan	December 2017
Institute of Statistical Science, Academia Sinica, Taipei, Taiwan	September 2015
Taiwan Society for Industrial and Applied Mathematics Annual Meeting, Kaohsiung, Taiwan	May 2015
Intel Web Seminar, Taipei, Taiwan	February 2015
Institute of Communications Engineering, National Tsing Hua University, Hsinchu, Taiwan	April 2014
Department of Computer Science, National Chiao Tung University, Hsinchu, Taiwan	May 2013
Institute of Information Science, Academia Sinica, Taipei, Taiwan	April 2012

Advances in Cost-sensitive Multiclass and Multilabel Classification

ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD) 2019 Tutorial, Anchorage, AK, USA	August 2019

Machine Learning for Artificial Intelligence in Medicine Applications

Information Technology Office, National Taiwan University Hospital, Taipei, Taiwan	July 2019
Division of Hematology and Oncology, Chang Gung Memorial Hospital, New Taipei, Taiwan	March 2019

Mathematical Machine Learning for Modern Artificial Intelligence

Taiwan Society for Industrial and Applied Mathematics Annual Meeting (plenary talk), Hsinchu, Taiwan	May 2019

Teaching Machine Learning: Foundations, Techniques and Project

Seed AI Instructor Training Camp, Hsinchu, Taiwan	September 2018

Active Learning by Bandit Learning

National Center for Theoretical Sciences at National Taiwan University, Taipei, Taiwan	March 2018
A Symposium on Complex Data Analysis, Hsinchu, Taiwan	May 2017

From Big Data to Artificial Intelligence

National Taiwan University EiMBA Program Guest Lecture, Taipei, Taiwan	March 2018

From Cloud to Artificial Intelligence

CIO Value Institute, Taipei, Taiwan	March 2018

Cost-sensitive Classification: Algorithm and Application

NSYSU AI in Data Science Forum, Kaohsiung, Taiwan	December 2017

Choices for Smarter AI

PyCon Taiwan (keynote talk), Taipei, Taiwan	June 2017

Quick Tour of Machine Learning
Lecture Series of Data Science Enthusiasts in Taiwan, Taipei, Taiwan   March 2017
Lecture Series of Data Science Enthusiasts in Taiwan, Taipei, Taiwan   December 2015

From Big Data to Artificial Intelligence
IEEE BigData 2016 Taipei Satellite Session (keynote talk), Taipei, Taiwan   May 2016

My RIGHT-O Lab
National Taiwan University New Faculty Orientation, Hsitou, Taiwan,   September 2015

Competition-Based Final Projects for Enhancing Students' Motivations
National Taiwan University Teaching Series, Taipei, Taiwan,   June 2015

Cost-sensitive Multiclass Classification Using One-versus-one Comparisons
Institute of Statistics, National Tsing Hua University, Hsinchu, Taiwan   December 2014
The 2nd International Conference on the Interface between Statistics and Engineering,
Tainan, Taiwan   June 2012
Institute of Information Science, Academia Sinica, Taipei, Taiwan   August 2010
Department of EE, National Tsing Hua University, Hsinchu, Taiwan   April 2010

Basics of Machine Learning
Big Data and Machine Learning Summer School, Hsinchu, Taiwan,   July 2014
Chien-Kuo Senior High School Talented Class, Taipei, Taiwan,   November 2013

My Semi-Flipped Machine Learning Class
National Taiwan University Teaching Series, Taipei, Taiwan,   December 2013

Cost-sensitive Classification: Algorithms and Advances
Asian Conference on Machine Learning 2013 Tutorial, Canberra, Australia
                                                                 November 2013

Cost-sensitive Multiclass Classification via Regression
Department of Civil Engineering, National Taiwan University, Taipei, Taiwan

                                                                   October 2013
Department of Computer Science and Information Engineering, National Central
University, Taoyuan, Taiwan   October 2013
Department of Computer Science, National Cheng Chi University, Taipei, Taiwan
                                                                 November 2011
Department of Computer Science and Information Engineering, National Taiwan
Normal University, Taipei, Taiwan   December 2010
Research Center for Information Technology Innovation, Academia Sinica, Taipei,
Taiwan   May 2010

Feature-aware Label Space Dimension Reduction for Multi-label Classification
AI Forum, Taipei, Taiwan,   May 2013
Taiwan-Israel Joint Workshop on Artificial Intelligence, Tainan, Taiwan November 2012

Deepening Learning Starts after Class
National Taiwan University Teaching Series, Taipei, Taiwan,   March 2013

Improving Ranking Performance with Cost-sensitive Ordinal Classification via Regression
Preference Learning Stream @ EURO 2012, Vilnius, Lithuania,   July 2012

Research in the Computational Learning Laboratory: Ordinal Ranking, Cost-sensitive Classification and KDDCup 2011
Plaxie, Taipei, Taiwan   November 2011

Solutions and Experiences from KDD Cup 2011: A Linear Ensemble of Individual and Blended Models for Music Rating Prediction
Research Center for Information Technology Innovation, Academia Sinica, Taipei, Taiwan   October 2011

A Simple Algorithm for Cost-sensitive Classification
Department of CSIE, National Taiwan University, Taipei, Taiwan   September 2008

From Ordinal Ranking to Binary Classification
Department of Applied Math, National Dong Hwa University, Hualian, Taiwan
                                                                                        February 2010
Department of CSIE, National Taiwan University of Science and Technology, Taipei, Taiwan   March 2009
Microsoft Research Asia, Beijing, China   February 2009
Department of CS, National Tsing Hua University, Hsinchu, Taiwan   March 2008
Department of CS, National Chiao Tung University, Hsinchu, Taiwan   March 2008
Department of CSIE, National Taiwan University, Taipei, Taiwan   March 2008
CS Department, California Institute of Technology, Pasadena, CA, USA   March 2008

Automatic Ranking by Extended Binary Classification
Institute of Information Science, Academia Sinica, Taipei, Taiwan   March 2007
EE Department, California Institute of Technology, Pasadena, CA, USA November 2006

Large-margin Thresholded Ensembles for Ordinal Regression
Machine Learning Summer School Workshop, Taipei, Taiwan
                                                                                        July 2006

Introduction to Support Vector Machines
Speech Processing Laboratory, National Taiwan University, Taipei, Taiwan
                                                                                        November 2005

Infinite Ensemble Learning with Support Vector Machinery
Caltech 2nd Symposium on Vision and Learning,
California Institute of Technology, Pasadena, CA, USA   September 2005

Introduction to Boosting and Joint Boosting
Guest Lecture for EE148 Class: "Machine Learning for Computer Vision",
California Institute of Technology, Pasadena, CA, USA   April 2005

TEACHING EXPERIENCE

National Taiwan University on Coursera, Internet
   —*Mandarin-teaching Massive Open Online Courses*

Instructor: Machine Learning Techniques

November 2015, December 2014, March 2020–present

Instructor: Machine Learning Foundations—Algorithmic Foundations

November 2017–present

Instructor: Machine Learning Foundations—Mathematical Foundations

June 2017–present

Instructor: Machine Learning Foundations

September 2015, September 2014, November 2013

National Taiwan University, Taipei, Taiwan
—with performance recognized by winning the outstanding teaching award of the university in 2011 and 2021, see Selected Honors
Instructor: Machine Learning   Fall 24-25 (English),
Fall 23-24 (Mandarin), Spring 22-23 (English), Fall 21-22 (English),
Spring 18-19 (Mandarin), Fall 15-16 (Mandarin), Fall 14-15 (Mandarin),
Fall 13-14 (Mandarin), Fall 12-13 (English), Fall 11-12 (English),
Fall 10-11 (English), Fall 09-10 (English), Fall 08-09 (English)

Instructor: Data Structures and Algorithms
Spring 23-24 (co-instructor, classes 01 & 02), Spring 22-23 (co-instructor, classes 01 & 02),
Spring 21-22 (co-instructor, classes 01 & 02), Spring 20-21 (co-instructor, classes 01 & 02),
Spring 19-20 (class 01), Spring 15-16 (guest lecturer, classes 01 & 02),
Spring 14-15 (class 01), Spring 13-14 (classes 01 & 02),
Spring 12-13 (class 01), Spring 11-12 (class 01), Spring 10-11 (classes 01 & 02)

Instructor: Introduction to Foundations of Artificial Intelligence
Spring 21-22 (co-instructor)

Instructor: Fundamendal Object-Oriented Programming   Spring 20-21, Fall 15-16
Instructor: Machine Learning Foundations
Fall 20-21, Fall 19-20, Fall 18-19, Fall 17-18, Fall 16-17, Fall 17-18

Instructor: Machine Learning Techniques
Fall 20-21, Spring 19-20, Spring 17-18, Spring 16-17

Instructor: Introduction to Information Theory   Fall 19-20

Co-instructor: Computer Science and Information Technology
Spring 14-15 (Machine Learning session), Spring 13-14 (Machine Learning session),
Fall 12-13 (Machine Learning session), Fall 09-10 (Machine Learning session)
Instructor: Object-Oriented Software Design
Spring 12-13, Spring 09-10 (classes 01 & 02), Spring 08-09 (class 02)
Co-instructor: Data Mining and Machine Learning: Theory and Practice
Spring 12-13, Spring 11-12, Spring 10-11, Spring 09-10

Academia Sinica, Taipei, Taiwan
Invited Lecturer on Kernel Machines (TIGP program)
Spring 13-14, Spring 12-13, Spring 11-12, Spring 10-11, Spring 09-10, Spring 08-09

OTHER EXPERIENCE

California Institute of Technology, Pasadena, CA, USA
Research Assistant to Professor Yaser S. Abu-Mostafa   July 2003–July 2008

California Institute of Technology, Pasadena, CA, USA
Teaching Assistant to Professor Yaser S. Abu-Mostafa: Learning Systems (CS156b)

Winter 07-08

California Institute of Technology, Pasadena, CA, USA
Teaching Assistant to Professor Erik Winfree: Information and Complexity (CS129b)
Winter 06-07

California Institute of Technology, Pasadena, CA, USA
Teaching Assistant to Professor Yaser S. Abu-Mostafa: Information and Complexity (CS129a)   Fall 04-05, Fall 06-07

National Taiwan University, Taipei, Taiwan
Research Assistant to Professor Chih-Jen Lin   March 2003–June 2003

Defense Office, Kinmen, Taiwan
Personnel Officer (Second Lieutenant)   July 2001–March 2003

National Taiwan University, Taipei, Taiwan
Research Assistant to Professor Chih-Jen Lin   September 2000–June 2001

Websurf Company, Taipei, Taiwan
Project Manager   June 2000–May 2001

Professional Technology Temple BBS System (PTT), Taipei, Taiwan
Root and Core Administrator   January 1998–May 2001

Attila Company, Taipei, Taiwan
Chief Technology Officer   December 1999–October 2000

SELECTED HONORS

Best Paper Runner-up Award, PAKDD 2023   2023
(with W.-I. Lin)

Distinguished Teaching Award, National Taiwan University   2011, 2021
(the most prestigious teaching award given to only 1% of the total faculty members in the university with a duration of five years)

Academic Contribution Award,
EECS College of National Taiwan University   2016, 2021

Outstanding Teaching Award, National Taiwan University 2016, 2017, 2018, 2019, 2020

Creative Young Scholar Award,
Foundation for the Advancement of Outstanding Scholarship in Taiwan   2017

Best Paper Award, TAAI 2015   2015
(with H.-J. Yang)

T.-Y. Wu Memorial Award, National Science Council of Taiwan   2013

Outstanding Mentoring Award, National Taiwan University   2013
(the most prestigious mentoring award in the university)

First Place, Track 2 of KDD Cup 2013   2013
(with C.-L. Li, Y.-C. Su, T.-W. Lin, C.-H. Tsai, W.-C. Chang, K.-H. Huang, T.-M. Kuo, S.-W. Lin, Y.-S. Lin, Y.-C. Lu, C.-P. Yang, C.-X. Chang, W.-S. Chin, Y.-C. Juan, H.-Y. Tung, J.-P. Wang, C.-K. Wei, F. Wu, T.-C. Yin, T. Yu, Y. Zhuang, S.-D. Lin and C.-J. Lin)

First Place, Track 1 of KDD Cup 2013   2013
(with W.-S. Chin, Y.-C. Juan, Y. Zhuang, F. Wu, H.-Y. Tung, T. Yu, J.-P. Wang, C.-X. Chang, C.-P. Yang, W.-C. Chang, K.-H. Huang, T.-M. Kuo, S.-W. Lin, Y.-S. Lin, Y.-C. Lu, Y.-C. Su, C.-K. Wei, T.-C. Yin, C.-L. Li, T.-W. Lin, C.-H. Tsai, S.-D. Lin and C.-J. Lin)

First Place, Track 2 of KDD Cup 2012   2012
(with K.-W. Wu, C.-S. Ferng, C.-H. Ho, A.-C. Liang, C.-H. Huang, W.-Y. Shen, J.-Y. Jiang, M.-H. Yang, T.-W. Lin, C.-P. Lee, P.-H. Kung, C.-E. Wang, T.-W. Ku, C.-Y. Ho, Y.-S. Tai, I-K. Chen, W.-L. Huang, C.-P. Chou, T.-J. Lin, H.-J. Yang, Y.-K. Wang, C.-T. Li and S.-D. Lin)

K.-T. Li Young Researcher Award, ACM Taipei Chapter and IICM   2012

First Place, Track 2 of KDD Cup 2011   2011
(with T. G. McKenzie, C.-S. Ferng, Y.-N. Chen, C.-L. Li, C.-H. Tsai, K.-W. Wu, Y.-H. Chang, C.-Y. Li, W.-S. Lin, S.-H. Yu, C.-Y. Lin, P.-W. Wang, C.-M. Ni, W.-L. Su, T.-T. Kuo, C.-T. Tsai, P.-L. Chen, R.-B. Chiu, K.-C. Chou, Y.-C. Chou, C.-C. Wang, C.-H. Wu, C.-J. Lin and S.-D. Lin)

First Place, Track 1 of KDD Cup 2011   2011
(with P.-L. Chen, C.-T. Tsai, Y.-N. Chen, K.-C. Chou, C.-L. Li, C.-H. Tsai, K.-W. Wu, Y.-C. Chou, C.-Y. Li, W.-S. Lin, S.-H. Yu, R.-B. Chiu, C.-Y. Lin, C.-C. Wang, P.-W. Wang, W.-L. Su, C.-H. Wu, T.-T. Kuo, T. G. McKenzie, Y.-H. Chang, C.-S. Ferng, C.-M. Ni, C.-J. Lin and S.-D. Lin)

First Place, KDD Cup 2010   2010
(with H.-F. Yu, H.-Y. Lo, H.-P. Hsieh, J.-K. Lou, T. G. McKenzie, J.-W. Chou, P.-H. Chung, C.-H. Ho, C.-F. Chang, Y.-H. Wei, J.-Y. Weng, E.-S. Yan, C.-W. Chang, T.-T. Kuo, Y.-C. Lo, P.-T Chang, C. Po, C.-Y. Wang, Y.-H. Huang, C.-W. Hung, Y.-X. Ruan, Y.-S. Lin, S.-D. Lin and C.-J. Lin; also first place of all student teams)

Third Place, Slow Track of KDD Cup 2009   2009
(with H.-Y. Lo, K.-W. Chang, S.-T. Chen, T.-H. Chiang, C.-S. Ferng, C.-J. Hsieh, Y.-K. Ko, T.-T. Kuo, H.-C. Lai, K.-Y. Lin, C.-H. Wang, H.-F. Yu, C.-J. Lin and S.-D. Lin)

President's Award, National Taiwan University   1997–2001
(7 times, i.e., within the top 5% of the class consecutively in all 7 semesters)

Second Prize, Trend Million-Dollar Internet Programming Contest   2000
(with L.-C. Kung, K.-P. Chen, G.-W. Liu, C.-Y. Wu, and J. Lin)

Asia Champion, ACM International Collegiate Programming Contest   1999
(also worldwide 10th prize, with L.-C. Kung and K.-P. Chen)

PROFESSIONAL ACTIVITIES

Journal Paper Reviewer
- ACM Transactions on Intelligent Systems and Technology

- ACM Transactions on Knowledge Discovery from Data
- Advances in Artificial Neural Systems
- Advances in Operations Research
- Applied Stochastic Models in Business and Industry
- Artificial Intelligence
- Cognitive Computation
- Computational Statistics and Data Analysis
- Data Mining and Knowledge Discovery
- IEEE Computational Intelligence Magazine
- IEEE Internet of Things Journal
- IEEE Transactions on Cybernetics
- IEEE Transactions on Image Processing
- IEEE Transactions on Information Forensics and Security
- IEEE Transactions on Information Technology in Biomedicine
- IEEE Transactions on Knowledge and Data Engineering
- IEEE Transactions on Neural Networks and Learning Systems
- IEEE Transactions on Pattern Analysis and Machine Intelligence
- IEEE Transactions on Systems, Man and Cybernetics—Part B
- Journal of Artificial Intelligence Research
- Journal of Information Fusion
- Journal of Information Science and Engineering
- Journal of Machine Learning Research
- Knowledge and Information Systems
- Knowledge-Based Systems
- Machine Learning
- Neural Networks
- Neurocomputing Journal
- International Journal of Business Intelligence and Data Mining
- International Journal of Computational Intelligence Research
- International Journal of Computational Vision and Robotics
- International Journal of Electrical Engineering
- International Journal of Remote Sensing
- Information Processing Letters
- Information Sciences
- Science China—Information Sciences
- Sensors

- The Computer Journal

Conference Paper Senior Reviewer:

Senior Program Committee (SPC) or Area Chair (AC) or Senior Area Chair (SAC)

- International Conference on Machine Learning (ICML)

  AC 2020, AC 2021, AC 2022, SAC 2025

- International Conference on Learning Representations (ICLR)

  AC 2021, AC 2022, SAC & Outstanding Paper Committee Member 2023,
  SAC 2024, SAC 2025

- AAAI Conference on Artificial Intelligence (AAAI)

  AC 2019, SPC 2021, AC 2022, AC 2023, AC 2024, AC 2025

- Conference on Neural Information Processing Systems (NeurIPS)

  AC 2015, AC 2018, AC 2019, AC 2021, AC 2023, SAC 2024

- International Joint Conferences on Artificial Intelligence (IJCAI)

  SPC 2018, SPC 2019, SPC 2020, AC 2021, SPC 2022

  - Distinguished Area Chair   2021

- Asian Conference on Machine Learning (ACML)

  SPC 2014, SPC 2015, SPC 2016, SPC 2017, SPC 2018, SPC 2019

Conference Paper Reviewer

- Interactive Adaptive Learning Workshop (IAL)   2023

- IEEE Conference on Computer Vision and Pattern Recognition (CVPR)

  2006, 2021, 2023

- Conference on Uncertainty in Artificial Intelligence (UAI)   2021, 2022

  - Top Reviewer   2022
  - Top Reviewer   2021

- Artificial Intelligence and Statistics Conference (AISTATS)

  2017, 2018, 2019, 2020, 2022

  - Top Reviewer   2022

- British Machine Vision Conference (BMVC)   2021

- European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD)   2011, 2014, 2015, 2021, (Journal Track) 2022, (Journal Track) 2023

- Conference on Technologies and Applications of Artificial Intelligence (TAAI)

  2004, 2010, 2011, 2013, 2015-2022

- Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)

  2014, 2015, 2016, 2017, 2018, 2019, 2020

- International Conference on Learning Representations (ICLR)   2018, 2019, 2020

- Workshop on Multi-output Learning (MoL)   2019

- ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)

  2014, 2015, 2016, 2017, 2018, 2019

- International Conference on Machine Learning (ICML)   2015, 2016, 2017, 2018, 2019

- AAAI Conference on Artificial Intelligence (AAAI) 2016, 2017, 2018, 2020
- International Conference on Data Mining (ICDM) 2015, 2018
- IEEE International Conference on Data Science and Advanced Analytics (DSAA)
  2015, 2016, 2017, 2018
- Conference on Neural Information Processing Systems (NeurIPS)
  2007, 2008, 2009, 2010, 2011, 2013, 2014, 2016, 2017
- ACM International Conference on Information and Knowledge Management (CIKM)
  2017
- International Joint Conferences on Artificial Intelligence (IJCAI)
  2011, 2013, 2015, 2016
- International Conference on Big Data and Smart Computing (BigComp)
  2014, 2015, 2016
- International Joint Conferences on Neural Networks (IJCNN) 2016
- ASE International Conference on Social Informatics 2015
- International Workshop on Machine Learning, Optimization and Big Data (MOD)
  2015
- International Conference on Neural Information Processing (ICONIP)
  2006, 2011, 2013, 2014
- Asian Conference on Machine Learning (ACML) 2011, 2012, 2013
- International Computer Symposium (ICS) 2012
- Annual Data Mining and Knowledge Discovery Competition (KDDCup) 2011
- Symposium on Cloud and Services Computing (SC2) 2011
- International Symposium on Information Theory and its Applications (ISITA) 2010
- Conference on Empirical Methods in Natural Language Processing (EMNLP) 2009
- IEEE World Congress on Computational Intelligence (WCCI) 2008
- International Conference on Intelligent Sensors, Sensor Network and Information Processing (ISSNIP) 2005

Editor

- Associate Editor, IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) 2024–present
- Action Editor, Transactions on Machine Learning Research (TMLR) 2022–present
- Guest Editor, Towards More Reliable and Sustainable Machine Learning Services, Frontiers in Big Data 2022-present
- Associate Editor, IEEE Computational Intelligence Magazine (CIM) 2020–2022
- Associate Editor, Journal of Information Science and Engineering (JISE) 2013–2015

Proposal Reviewer

- Workshops of International Conference on Machine Learning (ICML) 2023
- Research Projects of Ministry of Science and Technology of Taiwan (MOST)

- – Meta Reviewer   2019, 2020, 2021, 2022
- – Reviewer   2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022
- Academia Collaboration Projects of Industrial Technology Research Institute of Taiwan (ITRI)
                                                                                                 2017
- Research Projects of National Science Council of Taiwan (NSC)
                                                                                 2010, 2011, 2013, 2014
- Undergraduate Research Projects of National Science Council of Taiwan (NSC)
                                                                                            2013, 2014

Conference Organizer

- Workshop Chair, Conference on Neural Information Processing Systems (NeurIPS)
                                                                                                 2023
- Workshop Co-Chair, Conference on Neural Information Processing Systems (NeurIPS)
                                                                                                 2022
- EXPO Co-Chair, International Conference on Machine Learning (ICML)   2021
- Program Co-Chair, Conference on Neural Information Processing Systems (NeurIPS)
                                                                                                 2020
- Publicity Co-Chair, Asian Conference on Machine Learning (ACML)   2017
- Program Co-Chair, Conference on Technologies and Applications of Artificial Intelligence (TAAI)   2014
- Tutorial Co-Chair, Asian Conference on Machine Learning (ACML)   2014
- Registration Co-Chair, Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)   2014
- Registration Chair, Conference on Technologies and Applications of Artificial Intelligence (TAAI)   2013
- Local Arrangement Co-Chair, Symposium on Cloud and Services Computing (SC2)
                                                                                                 2011

Workshop/Meetup Organizer

- NeurIPS Meetup Taipei Site   2021
  (with Frank Yu-Chiang Wang and Hung-Yi Lee)
- Machine Learning Research in Taiwan: Challenges and Directions @ TAAI   2010
  (with Jane Hsu)

Services for Asian Conference on Machine Learning

- Steering Committee Co-Chair   2022–present
- Steering Committee Member   2021–present
- Advisory Committee, Online Asian Machine Learning School (OAMLS) 2021, 2022

Services for Taiwanese Association for Artificial Intelligence

- Board Member   (11th, 12th, 13th, 14th, 15th) 2015–present
- Thesis Award Reviewer   2009, 2012, 2013, 2015, 2021, 2022

- Secretary General   (10th) 2013–2014

Services for Alumni Association of NTU Computer Science and Information Engineering

- Board Member   (1st, 2nd, 3rd) 2018–present

Services Related to Programming Contests

- Host Scientific Committee Member,
  International Olympiad in Informatics (IOI)   2014

- Program Committee Member,
  National Contest of High School Students on Informatics   2013

- Invited Lecturer,
  Training Camp of International Olympiad in Informatics (TOI) 2009, 2010, 2011, 2012

- Program Committee Member,
  National Contest for Private Universities (NCPU)   2012

- Program Committee Member,
  Cross-strait Programming Contest at NTHU   2009, 2012

- Program Committee Member,
  Project of Collegiate Programming: Practice, Training, Contest (PTC2),
  Ministry of Education of Taiwan (MOE)   2011-2012

- Program Committee Member,
  Asian Regional Site of International Collegiate Programming Contest (ICPC),
  National Sun Yat-Sen University   2010
  Natioanl Chiao-Tung University   2009
  National Taiwan University   2008

- Problem Designer and Reviewer,
  Project of Collegiate Programming: Practice, Training, Contest (PTC),
  Ministry of Education of Taiwan (MOE)   2009-2010

Other Services

- Course Advisory Committee, Taiwan Artificial Intelligence Academy   2021–2022

- Organizing Committee Member, National Computer Science Forum   2012

- White Paper Co-author, AI sub-area, National Science Council of Taiwan 2010

MEMBERSHIPS

The Institute of Electrical and Electronics Engineers (IEEE) and **Computational Intelligence Society**

Association for Computing Machinery (ACM) and **Special Interest Group on Knowledge Discovery in Data (SIGKDD)**

Taiwanese Association for Artificial Intelligence (TAAI)

Alumni Association of NTU Computer Science and Information Engineering