

# Shou-De Lin

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## RESEARCH INTERESTS:

Big Data Analytics, Knowledge Discovery and Data Mining, Machine Learning, Natural Language Processing, Internet-of-Things Data Analysis, Social Network Data Analysis

## EDUCATION:

2002 – 2006 Ph.D. in Computer Science, University of Southern California

2004 – 2006 M.S. in Computational Linguistics, University of Southern California

1999 – 2001 M.S. in Electrical Engineering, University of Michigan, Ann Arbor

1992 – 1996 B.S. in Electrical Engineering, National Taiwan University

## AWARDS

- Nov 2015 Champion of WSDM Cup 2016
- Oct 2015 Ta-You Wu Memorial Award (one of the two winners in CS area)
- May 2015 IBM University Shared Research Award
- April 2015 Received 2-year US Aerospace AOARD Research Grant Award
- Aug 2014 Merit Paper Award in 2014 Conference on Technologies and Applications of Artificial Intelligence
- June 2014 The Young Scholars' Creativity Award, Foundation For The Advancement of Outstanding Scholarship (only one from CS area)
- June 2013 Champions in the Both Tracks of ACM KDD Cup 2013 (>500 teams)
- April 2013 Received 2-year US Aerospace AOARD Research Grant Award
- Aug 2012 Champion in the Second Track of ACM KDD Cup 2012 (>100 teams)
- Aug 2011 Champions in both Tracks in ACM KDD Cup 2011 (>1000 teams)
- July 2011 Best Paper Award in International Conference on Advances in

- Social Networks Analysis (ASONAM 2011)
- June 2011 Received 1-year US Aerospace AOARD Research Grant Award
- Aug 2010 Merit Paper Award in 2010 Conference on Technologies and Applications of Artificial Intelligence
- Aug 2010 Champion in ACM KDDCUP 2010 (among >100 teams)
- June 2009 3rd Place in ACM KDDCUP 2009 (among >400 teams)
- May 2008 Receiver of Microsoft Research Award
- Aug, 2008 Champions ACM KDDCUP 2008 (among >200 submissions)
- Dec, 2007 Receiver of Google Research Award 2007
- Aug, 2006 Ph.D. Dissertation Fellowship, University of Southern California
- June, 2006 Decipherment works appear in “How to build a Babel Fish” in The Economist
- Oct, 2003 Best Paper Award in 2003 IEEE/WI International Conference on Web Intelligence
- Aug, 2003 Second place in the open task of ACM KDDCup 2003

## **IMPACT AND NEWS**

- The model proposed in KDD 2015 on Air Quality Inference has been deployed by Microsoft to measure the air quality in Beijing <http://urbanair.msra.cn/>
- The model proposed in TIST 2014 on route recommendation has been deployed into a travel advisor tool by Institute for Information Industry in Taiwan
- The model proposed in KDD Cup 2010 has been deployed in as a recommender system in i-TRUE Communications Inc.
- AIJ 2006 paper on decipherment reported by *The Economist*
- Several papers have been chosen as the course material in universities (including NIPS2014 in UT Austin, KDD2013 in HKUST, KDD 2014 in Chonnam University)

## **EXPERIENCES**

- 2015-now Professor in CSIE department, National Taiwan University
- 2011-2015 Associate Professor in CSIE department, National Taiwan University
- 2007-2011 Assistant Professor in CSIE department, National Taiwan University
- 2005-2007 Research Assistant & Postdoc Researcher in Los Alamos National Lab

## **FUNDING**

- 2007-now Receiving at least one NSC (similar to NSF in the US) grant every year
- 2010-2015 PI for “IoT Data Analysis” project funded by INTEL (NTD20M)

- 2009, 2011, 2013 PI of Microsoft Asia Research Grant Award (NTD 1.8M)
- 2009-2014 PI of 4 Grants from Institute for Information Industry (NTD 2.4M)
- 2011~2016 US Aerospace AOARD Grand Award (USD 150K)
- 2010~2013 co-PI of 3 Grants from 104 Human Resource Corp. (NTD 7.2M)
- 2012, 2014 Technology Transfer to Industrial Technology Research Institute (NTD 1.5M)
- 2014 PI of a grant from Chunghwa Telecom (NTD 1M)

## **TUTORIAL AND PANEL SPEAKER**

- KDD Cup 2015 Panel
- “Sampling and Summarization for Social Networks” PAKDD 2013, SDM 2013
- “Panel on Big Data Forum” Academic Sinica, 2013
- “Big Data and Social Computing” TAAI 2013
- “Practical Issues for Machine Learning and Data Mining” NCTU BIG Data school 2012
- “Panel on Big Data Management and Analysis” NTU-INTEL joint workshop, 2012
- “Mining Heterogeneous Social Network”, PAKDD 2009

## **AJOR SERVICES**

- 2016 KDD Cup co-Chair for KDD 2016
- 2015 PC co-Chair for ASE SocialInformations 2015
- 2015 Area co-Chair for ACL 2015
- 2015 Publication co-Chair for ACM SIGKDD
- 2015 Senior TPC in ACM SIGKDD
- 2014 Senior TPC in ACM SIGKDD
- 2013-now AFNLP SIG SocialNLP Founder and President
- 2013 PC co-Chair for Technology and Application for AI conference 2013
- 2012 Video/Demo Co-Chairs for ACM SIGKDD
- 2009-2011 Secretary General for TAAI

## **STUDENTS SUPERVISED**

### *Ph.D. Students*

- Dr. Cheng-Te Li, 2013, thesis topic “Mining Social Networks from the Perspectives of Crowd Simulation and Influence Propagation.”, Assistant Research Fellow, Academic Sinica
- Dr. Hung-Yi Lo, 2013, thesis topic “Cost-Sensitive Multi-Label Classification with Applications”, senior engineer in Foxconn Corp.

- Dr. Tsung-Ting Kuo, 2014, thesis topic “Link Discovery with Unlabeled Data”, postdoctoral research in UCSD
- Dr. Hsun-Ping Hsieh, 2015, thesis topic “Inferring Missing Sensor Values and Recommending Sensor Deployment Locations Based on Urban Big Data: A Case Study on Air Quality

I have also supervised more than 50 master students with dissertation

## **COURSES OFFERED**

- *Probability*
- *Probabilistic Graphical Model*
- *Data Mining and Machine Learning: Theory and Practice*
- *Social Network Analysis*
- *Technical Writing and Research Methods*
- *Statistic Methods for Intelligent Information Processing (SAI)*
- *Machine Discovery*

## **PUBLICATIONS**

### **Journals**

- J1: Cheng-Te Li, Man-Kwan Shan, and Shou-De Lin. “On Team Formation with Expertise Query in Collaborative Social Networks.” Knowledge and Information Systems Journal. 2015 Volume 42, Issue 2, Pages: 441-463
- J2: 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, Chih-Jen Lin. “Combination of Feature Engineering and Ranking Models for Paper-Author Identification in KDD Cup 2013” Accepted by Journal of Machine Learning Research, 2015
- J3: Hsun-Ping Hsieh, Cheng-Te Li, and Shou-De Lin. “Measuring and Recommending Time-Sensitive Routes from Location-based Data.” ACM Transactions on Intelligent Systems and Technology. Vol.5, No.3, Article 45, Pages: 45-1~45-27. June. 2014.
- J4: Wei-Sheng Chin, Yong Zhuang, Yu-Chin Juan, 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, Chih-Jen Lin. "Effective string processing and matching for author disambiguation." *Journal of Machine Learning Research* 15. Issue 1, Pages: 3037-3064. October. 2014
- J5: Hung-Yi Lo, Shou-De Lin, and Hsin-Min Wang. "Generalized k-Labelsets Ensemble for Multi-Label and Cost-Sensitive Classification." *IEEE Transactions on Knowledge and Data Engineering*. Vol. 26, No. 7, 2014. Pages: 1679 - 1691.
- J6: Jing-Kai Lou, Fu-Min Wang, Chin-Hua Tsai, San-Chuan Hung, Perng-Hwa Kung, Shou-De Lin, Kuan-Ta Chen, and Chin-Laung Lei. "A Social Diffusion Model with an Application on Election Simulation" *The Scientific World Journal*. vol. 2014, Article ID 180590, 14 pages, 2014. doi:10.1155/2014/180590.
- J7: Cheng-Te Li, Hsun-Ping Hsieh, Tsung-Ting Kuo, Shou-De Lin. "Opinion Diffusion and Analysis on Social Networks." *Encyclopedia of Social Network Analysis and Mining* 2014. Pages: 1212-1218. 2014.
- J8: Yu-Chih Chen, Yu-Shi Lin, Yu-Chun Shen, Shou-De Lin. "A Modified Random Walk Framework for Handling Negative Ratings and Generating Explanations." *ACM Transactions on Intelligent Systems and Technology*. Volume 4 No. 1, January 2013. Article No. 12, pages:12-1~12-21. 2013.
- J9: Yi-Chen Lo, Jhao-Yin Li, Mi-Yen Yeh, Shou-De Lin, Jian Pei. "What Distinguish One from Its Peers in Social Networks?" *Data Mining and Knowledge Discovery*. November 2013, Volume 27, Issue 3, Pages: 396-420. 2013.
- J10: Yi-Chen Lo, Hung-Che Lai, Cheng-Te Li, and Shou-De Lin. "Mining and Generating Large-Scaled Social Networks via MapReduce." *Social Network Analysis and Mining*. December 2013, Volume 3, Issue 4, Pages: 1449-1469. 2013.
- J11: Cheng-Te Li, Tsung-Ting Kuo, Chien-Tung Ho, San-Chuan Hong, Wei-Shih Lin, and Shou-De Lin. "Modeling and Evaluating Information Propagation in a Microblogging Social Network." *Social Network Analysis and Mining*. Volume 3, Issue 3, Pages: 341-357. 2013.
- J12: Wan-Chen Lin, Tsung-Ting Kuo, Tung-Jia Chang, Chueh-An Yen, Chao-Ju Chen and Shou-de Lin. "Exploiting Machine Learning Models for Chinese Legal Documents Labeling, Case Classification, and Sentencing Prediction." *International Journal of Computational Linguistics & Chinese Language Processing*, Volume 17, Number 4, pages:49-68, December 2012.
- J13: Yi-Kuang Ko, Jing-Kai Lou, Cheng-Te Li, Shou-de Lin, and Shyh-Kang Jeng. "A Social Network Evolution Model Based on Seniority." *Social Network Analysis and Mining Journal*. June 2012, Volume 2, Issue 2, Pages: 107-119. Online date: 2011/8.

- J14: Hung-Yi Lo, Ju-Chiang Wang, Hsin-Min Wang, and Shou-De Lin. "Cost-sensitive Multi-label Learning for Audio Tag Annotation and Retrieval", *IEEE Transaction on Multimedia*, 18(3), pp. 518-529, June 2011.
- J15: Tsung-Ting Kuo, and Shou-De Lin. "Learning-Based Concept-Hierarchy Refinement through Exploiting Topology, Content and Social Information", *Information Sciences*, 2011.
- J16: Anta Huang, Tsung-Ting Kuo, Ying-Chun Lai, Shou-De Lin. "Discovering Correction Rules for Auto Editing", *IJCLCLP*, 2010.
- J17: Shou-de Lin and Hans Chalupsky. "Discovering and Explaining Abnormal Nodes in Semantic Graphs." *IEEE Transactions on Knowledge and Data Engineering TKDE*, Vol.20, No.8, 2008.
- J18: Hung-Yi Lo, Chun-Min Chang, Tsung-Hsien Chiang, Cho-Yi Hsiao, Anta Huang, Tsung-Ting Kuo, Wei-Chi Lai, Ming-Han Yang, Jung-Jung Yeh, Chun-Chao Yen, Shou-De Lin, "Learning to Improve Area-Under-FROC for Imbalanced Medical Data Classification Using an Ensemble Method" invited paper for *ACM SIGKDD Explorations Vol10, Issue 2*, 2008.
- J19: Shou-de Lin and Kevin Knight. "Discovering the linear writing order of a two-dimensional ancient hieroglyphic script", in *Artificial Intelligence v.170/4-5*, Elsevier, 2006. One of the Top 25 hottest papers in *Artificial Intelligence* in 2006.
- J20: Shou-de Lin and Craig Knoblock. "SERGEANT: A Framework for Building More Flexible Web Agents by Exploiting a Search Engine", in *Journal of Web Intelligence and Agent Systems*, v3(1), 2005.
- J21: Shou-de Lin and Hans Chalupsky. "Using Unsupervised Link Discovery Methods to Find Interesting Facts and Connections in a Bibliography Dataset", selected to be the 2nd place for the open task in *ACM KDDCup 2003*, in *KDD Explorations V5 Issue 2*.
- J22: Michael P. Wellman, Peter R. Wurman, Kevin O'Malley, Roshan Bangera, Shou-de Lin, Daniel Reeves, and William E. Walsh. "Designing the Market Game for a Trading Agent Competition". *IEEE Internet Computing*, 2001.

## **Conferences**

- C1: Ian E.H.Yen, Shan-Wei Lin, Shou-De Lin. "A Dual-Augmented Block Minimization Framework for Learning with Limited Memory." In *Advances in Neural Information Processing Systems (NIPS)*, 2015.
- C2: Guang-He Lee, Shou-De Lin, "LambdaMF: Learning Nonsmooth Ranking Functions in Matrix Factorization Using Lambda" In *IEEE International Conference on Data Mining (ICDM) 2015*

- C3: Yen-Kai Wang, Wei-Ming Chen, Cheng-Te Li, and Shou-De Lin. "Identifying Smallest Unique Subgraphs in a Heterogeneous Social Network." IEEE International Conference on Big Data 2015.
- C4: Chung-Yi Li, Wei-Lun Su, Todd G. McKenzie, Fu-Chun Hsu, Shou-De Lin, Phillip B. Gibbons, and Jane Yung-jen Hsu." Recommending Missing Sensor Values." IEEE International Conference on Big Data 2015.
- C5: Chin-Chi Hsu, Perng-Hwa Kung, Mi-Yen Yeh, Shou-De Lin, and Phillip B. Gibbons. "Bandwidth-Efficient Distributed k-Nearest-Neighbor Search with Dynamic Time Warping." IEEE International Conference on Big Data 2015.
- C6: Han Xiao, Shou-De Lin, Mi-Yen Yeh, Phillip Gibbons, and Claudia Eckert, "Learning Better while Sending Less: Communication-Efficient Online Semi-Supervised Learning in Client-Server Settings," the 2015 IEEE International Conference on Data Science and Advanced Analytics (IEEE DSAA'2015), October 2015.
- C7: Hsun-Ping Hsieh, Shou-De Lin and Yu Zheng. "Inferring Air Quality for Station Location Recommendation Based on Urban Big Data." ACM SIGKDD 2015.
- C8: Su-Chene Lin, Shou-De Lin, and Ming-Syan Chen "A Learning-based Framework to handle Multi-round Multi-party influence maximization on social networks" ACM SIGKDD 2015.
- C9: Hsun-Ping Hsieh, Cheng-Te Li and Shou-De Lin. "Estimating Potential Customers Anywhere and Anytime on Location-based Social Networks." ECML/PKDD 2015.
- C10: En-Hsu Yen, Ting-Wei Lin, Shou-De Lin, Pradeep Ravikumar and Inderjit Dhillon. "Sparse Random Feature Algorithm as Coordinate Descent in Hilbert Space." NIPS 2014.
- C11: Chung-Yi Li and Shou-De Lin. "Matching Users and Items across Domains to Improve the Recommendation Quality." Proceedings of the 20th ACM SIGKDD international conference on Knowledge discovery and data mining. Pages: 801-810. August. 2014.
- C12: Jun-Kun Wang and Shou-De Lin. "Robust Inverse Covariance Estimation under Noisy Measurements." Proceedings of the 31st International Conference on Machine Learning (ICML-14). JMLR : W&CP Volume32. Pages: 928-936. June. 2014.
- C13: Ian En-Hsu Yen, Ting-Wei Lin, Shou-De Lin, Pradeep Ravikumar and Inderjit S. Dhillon. "Sparse Random Features Algorithm as Coordinate Descent in Hilbert Space." Advances in Neural Information Processing Systems. Pages: 2456-2464. December. 2014.
- C14: How Jing and Shou-De Lin. "Neural Conditional Energy Models for Multi-Label

- Classification." 2014 IEEE International Conference on Data Mining (ICDM), Pages: 240-249, December. 2014
- C15: How Jing, An-Chun Liang, Shou-De Lin and Yu Tsao. "A Transfer Probabilistic Collective Factorization Model to Handle Sparse Data in Collaborative Filtering." 2014 IEEE International Conference on Data Mining (ICDM), Pages: 250-259, December. 2014.
- C16: Yu-Yang Huang, Rui Yan, Tsung-Ting Kuo and Shou-De Lin. "Enriching Cold Start Personalized Language Model Using Social Network Information." Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics. Pages: 611-617. June. 2014.
- C17: Jui-Pin Wang, Yu-Chen Lu, Mi-Yen Yeh, Shou-De Lin, and Phillip B. Gibbons. "Communication-Efficient Distributed Multiple Reference Pattern Matching for M2M Systems." 2013 IEEE International Conference on Data Mining (ICDM), Pages: 787-796, December. 2013.
- C18: Cheng-Lun Yang, Perng-Hwa Kung, Cheng-Te Li, Chun-An Chen, and Shou-De Lin. "Sampling Heterogeneous Networks." 2013 IEEE International Conference on Data Mining (ICDM), Pages: 1247-1252, December. 2013.
- C19: Ian E.H. Yen, Chun-Fu Chang, Ting-Wei Lin, Shan-Wei Lin, Shou-De Lin. "Indexed Block Coordinate Descent for Large-Scale Linear Classification with Limited Memory." Proceedings of the 19th ACM SIGKDD international conference on Knowledge discovery and data mining. Pages: 248-256. August, 2013.
- C20: Tsung-Ting Kuo, Rui Yan, Yu-Yang Huang, Perng-Hwa Kung, Shou-De Lin. "Unsupervised Link Prediction Using Aggregative Statistics on Heterogeneous Social Networks." Proceedings of the 19th ACM SIGKDD international conference on Knowledge discovery and data mining. Pages: 775-783. August, 2013.
- C21: Jing-Kai Lou, Fu-Min Wang, Chin-Hua Tsai, San-Chuan Hung, Perng-Hwa Kung, and Shou-De Lin. "Modeling the Diffusion of Preferences on Social Networks." Proceedings of the 2013 SIAM International Conference on Data Mining. Pages:605-613. May, 2013.
- C22: Rui Yan, Han Jiang, Mirella Lapata, Shou-De Lin, Xueqiang Lv, Xiaoming Li. "i, Poet: Automatic Chinese Poetry Composition through a Generative Summarization Framework under Constrained Optimization. " Proceedings of the Twenty-Third international joint conference on Artificial Intelligence. Pages: 2197- 2203. August. 2013.
- C23: Chin-Hua Tsai, Jing-Kai Lou, Wan-Chen Lu, and Shou-De Lin. "Exploiting Rank-Learning Models to Predict the Diffusion of Preferences on Social



- Networks." IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), 2014, Pages: 265-272, 17-20 August. 2014.
- C24: Wei-Shih Lin, Tsung-Ting Kuo, Yu-Yang Huang, Wan-Chen Lu and Shou-De Lin. "A Transfer-Learning Approach to Exploit Noisy Information for Classification and Its Application on Sentiment Detection." Technologies and Applications of Artificial Intelligence. Volume 8916, 2014, Pages: 262-273. November. 2014.
- C25: Yu-Yang Huang, Yu-An Yen, Ting-Wei Ku, Shou-De Lin, Wen-Tai Hsieh and Tsun Ku. "A Weight-Sharing Gaussian Process Model Using Web-Based Information for Audience Rating Prediction." Technologies and Applications of Artificial Intelligence. Volume 8916, 2014, Pages: 198-208. November. 2014.
- C26: Chia-Jen Lin, Tsung-Ting Kuo, and Shou-De Lin. "A Content-based Matrix Factorization Model for Recipe Recommendation." PAKDD 2014, Part II, LNAI 8444, Pages: 560-571, 2014. May. 2014.
- C27: Cho-Yi Hsiao, Hung-Yi Lo, Tu-Chun Yin, and Shou-De Lin. "Optimizing Specificity under Perfect Sensitivity for Medical Data Classification." 2014 International Conference on Data Science and Advanced Analytics (DSAA). Pages: 163-169 November. 2014.
- C28: Jung-Jung Yeh, Tsung-Ting Kuo, William Chen, and Shou-De Lin. "Minimizing Expected Loss for Risk-Avoiding Reinforcement Learning." 2014 International Conference on Data Science and Advanced Analytics (DSAA). Pages: 11-17 November. 2014.
- C29: Shun-Hsing Ou, Yu-Chen Lu, Jui-Pin Wang, Shao-Yi Chien, Shou-De Lin, Mi-Yen Yeh, Chia-Han Lee, Phillip Gibbons, V. Srinivasa Somayazulu and Yen-Kuang Chen. "Communication-Efficient Multi-view Keyframe Extraction in Distributed Video Sensors." 2014 IEEE Visual Communications and Image Processing Conference. Pages: 13-16. December. 2014.
- C30: Cheng-Lun Yang, Perng-Hwa Kung, Chun-An Chen, Shou-De Lin. "Semantically Sampling in Heterogeneous Social Networks." Proceedings of the 22nd international conference on World Wide Web companion. Pages: 181-182. May, 2013.
- C31: Yu-Chun Shen, Tsung-Ting Kuo, I-Ning Yeh, Tzu-Ting Chen, Shou-De Lin. "Exploiting Temporal Information in a Two-stage Classification Framework for Content-based Depression Detection." Advances in Knowledge Discovery and Data Mining. Lecture Notes in Computer Science Volume 7818, 2013, Pages: 276-288. May. 2013.
- C32: Jung-Wei Chou, Min-Huang Chu, Yi-Lin Tsai, Yun Jin, Chen-Mou Cheng,

- Shou-De Lin. "An Unsupervised Learning Model to Perform Side Channel Attack" *Advances in Knowledge Discovery and Data Mining. Lecture Notes in Computer Science Volume 7818*, 2013, Pages: 414-425. May, 2013.
- C33: 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, Chih-Jen Lin. "Combination of Feature Engineering and Ranking Models for Paper-Author Identification in KDD Cup 2013." *Proceedings of the 2013 KDD Cup 2013 Workshop Article No. 2*. August, 2013.
- C34: Hsun-Ping Hsieh, Cheng-Te Li, Shou-De Lin. "Time-Sensitive Route Planning Using Location-Based Data." *2013 IEEE 13th International Conference on Data Mining Workshops (ICDMW)*. Pages: 1121-1128. Dec. 2013.
- C35: Rui Yan, Han Jiang, Mirella Lapata, Shou-De Lin, Xueqiang Lv, Xiaoming Li. "Semantic v.s. Positions: Utilizing Balanced Proximity in Language Model Smoothing for Information Retrieval." *International Joint Conference on Natural Language Processing*, pages: 507-515. October. 2013.
- C36: Ian.E.H Yen, Nanyun Peng, Po-Wei Wang, Shou-de Lin. "On Convergence Rate of Concave-Convex Procedure." *Advances in Neural Information Processing Systems. Optimization for Machine Learning Workshop*. Pages: 1-5. December. 2012.
- C37: Tsung-Hsien Chiang, Hung-Yi Lo, and Shou-de Lin. "A Ranking-based KNN Approach for Multi-Label Classification." *Asian Conference on Machine Learning, JMLR Workshop & Conference Proceedings*, pages: 81-96. November, 2012.
- C38: Jung-Wei Chou, Shou-De Lin and Chen-Mou Cheng. "On the Effectiveness of using State-of-the-art Machine Learning Techniques to Launch Cryptographic Distinguishing Attacks." *Proceedings of the 5th ACM workshop on Security and artificial intelligence*. Pages: 105-109. October, 2012.
- C39: Min-Huang Chu, Wen-Yu Chen, Shou-De Lin. "A Learning-based Framework to Utilize E-HowNet Ontology and Wikipedia Sources to Generate Multiple-Choice Factual Questions." *2012 Conference on Technologies and Applications of Artificial Intelligence (TAAI)*. Pages: 125-130. November, 2012.
- C40: Wan-Chen Lin, Tsung-Ting Kuo, Tung-Jia Chang, Chueh-An Yen, Chao-Ju Chen and Shou-de Lin. "Exploiting Machine Learning Models for Chinese Legal Documents Labeling, Case Classification, and Sentencing Prediction." *Conference on computational linguistics, natural language processing, and*

- speech processing XXIV. Pages: 140-141. September, 2012.
- C41: Po-Tzu Chang, Yen-Chieh Huang, Cheng-Lun Yang, Shou-De Lin, Pu-Jen Cheng. "Learning-Based Time-Sensitive Re-Ranking for Web Search." Proceedings of the 35th international ACM SIGIR conference on Research and development in information retrieval. Pages: 1101-1102. August, 2012.
- C42: Hung-Hsuan Chen, Yan-Bin Ciou, Shou-De Lin. "Information Propagation Game: a Tool to Acquire Human Playing Data for Multi-Player Influence Maximization on Social Networks." Proceedings of the 18th ACM SIGKDD international conference on Knowledge discovery and data mining. Pages: 1524-1527. August, 2012.
- C43: Hung-Che Lai, Cheng-Te Li, Yi-Chen Lo, and Shou-De Lin. "Exploiting and Evaluating MapReduce for Large-Scale Graph Mining." 2012 IEEE/ACM International Conference on Advances in Social Network Analysis and Mining. Pages: 434-441. August, 2012.
- C44: Hsun-Ping Hsieh, Cheng-Te Li, and Shou-De Lin. "Exploiting Large-Scale Check-in Data to Recommend Time-Sensitive Routes." Proceedings of the ACM SIGKDD International Workshop on Urban Computing. Pages: 55-62. August, 2012.
- C45: Hsun-Ping Hsieh, Cheng-Te Li, and Shou-De Lin. "TripRec: Recommending Trip Routes from Large Scale Check-in Data." ACM Proceedings of the 21st international conference companion on World Wide Web. Pages: 529-530. April, 2012.
- C46: Hsun-Ping Hsieh, Cheng-Te Li, and Shou-De Lin. "Frequent temporal social behavior search in information networks." ACM Proceedings of the 21st international conference companion on World Wide Web. Pages: 527-528. April, 2012.
- C47: Cheng-Te Li, Man-Kwan Shan, and Shou-De Lin. "Dynamic Selection of Activation Targets to Boost the Influence Spread in Social Networks." ACM Proceedings of the 21st international conference companion on World Wide Web. Pages: 561-562. April, 2012.
- C48: Cheng-Te Li, Hsun-Ping Hsieh, Shou-De Lin, and Man-Kwan Shan. "Finding Influential Seed Successors in Social Networks." ACM Proceedings of the 21st international conference companion on World Wide Web. Pages: 557-558. April, 2012.
- C49: Cheng-Te Li, Man-Kwan Shan, and Shou-De Lin. "Regional Subgraph Discovery in Social Networks." ACM Proceedings of the 21st international conference companion on World Wide Web. Pages: 563-564. April, 2012.
- C50: Cheng-Te Li, Shou-De Lin, and Man-Kwan Shan. "Influence Propagation and

Maximization for Heterogeneous Social Networks." ACM Proceedings of the 21st international conference companion on World Wide Web. Pages: 559-560. April, 2012.

- C51: Cheng-Te Li, Hsun-Ping Hsieh, and Shou-De Lin. "CrowDiffuse: Information Diffusion over Crowds with Social Network." ACM SIGGRAPH 2012 Posters, Page 124-1~124-4. July, 2012.
- C52: Cheng-Te Li and Shou-De Lin. "EvaPlanner: An Evacuation Planner with Social-based Flocking Kinetics." Proceedings of the 18th ACM SIGKDD international conference on Knowledge discovery and data mining. Pages: 1568-1571. August, 2012.
- C53: Cheng-Te Li and Shou-De Lin. "Centrality Analysis, Role-based Clustering, and Egocentric Abstraction for Heterogeneous Social Networks." 2012 International Conference on Social Computing (SocialCom). Pages: 1-10. September, 2012.
- C54: 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." Proceedings of the 18th ACM SIGKDD international conference on Knowledge discovery and data mining. KDD Cup 2012 Workshop. August, 2012.
- C55: Yi-Chen Lo, Cheng-Te Li, and Shou-De Lin. "Parallelizing Preferential Attachment Models for Generating Large-Scale Social Networks that Cannot Fit into Memory." 2012 International Conference on Social Computing (SocialCom). Pages: 229-238. September, 2012.
- C56: Wan-Yu Lin, Nanyun Peng, Chun-Chao Yen, Shou-De Lin. "Online Plagiarism Detection through Exploiting Lexical, Syntactic and Semantic Information." Proceedings of the ACL 2012 System Demonstrations. Pages: 145-150. July, 2012.
- C57: Tsung-Ting Kuo, San-Chuan Hung, Wei-Shih Lin, Nanyun Peng, Shou-De Lin, and Wei-Fen Lin. "Exploiting Latent Information to Predict Diffusions of Novel Topics on Social Networks." Proceedings of the 50th Annual Meeting of the ACL: Short Papers - Volume 2. Pages: 344-348. July, 2012.
- C58: Hung-Yi Lo, Shou-De Lin, and Hsin-Min Wang. "Generalized k-Labelset Ensemble for Multi-label Classification." 2012 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). Pages: 2061-2064.

March, 2012.

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