CURRICULUM VITAE

BASIC INFORMATION

Name:	Peng Cheng	Citizenship: Chinese
Residence:	Chongqing, China	Hometown: Shanxi, China
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RESEARCH FIELDS

Privacy and Fairness in Data Mining and Machine Learning;
Machine Learning;
Evolutionary Multi-Objective Optimization; Constraint Programming Tools

EDUCATION

Ph.D. 2010.09-2016.01

Major:	Computer Science
Institute:	Harbin Institute of Technology, China
Research Field:	Privacy-Preserving Data Mining; Evolutionary Multi-Objective Optimization

M.Sc. 2000.09-2003.07

Major:	Computer Science
Institute:	Beijing University of Technology, China
Research Field:	Software Engineering

B.Sc. 1996.09-2000.07

Major:	Computer Science
Institute:	Shenyang Jianzhu University, China

POSTDOCTORAL TRAINING

Free University of Bozen-Bolzano, Italy 2019.10-2020.12

Post-doctoral Fellow in School of Computer Science
Research area: Constraint Programming on Scheduling and Plan

- Model construction scheduling as a Constraint Satisfaction Problem (CSP) and to develop solutions and tools based on constraint programming techniques to solve it.

University of Kansas Medical Center, USA 2016.10-2017.08

Post-doctoral Fellow in Division of Medical Informatics

Research area: Machine Learning on Electronic Health Records

- Develop disease predictive models based on supervised learning techniques applied to medical data.

PROFESSIONAL EXPERIENCE

National University of Singapore (Chongqing) Research Institute 2022.03-Present

Senior Data Scientist in Centre for Modern Logistics

Research area: Privacy and Fairness in Machine Learning; Federated Learning

Feng Chia University, Taiwan 2019.05-2019.09

Visiting Scholar in Department of Information Engineering and Computer Science

Research area: Machine Learning and Information Hiding

Southwest University, China 2017.10-2019.04

Lecturer in School of Computer and Information Science 2021.03-2021.12

Teaching: Machine Learning, Java Programming Language, and et al.

AWARDS

Best Paper Award: IEA/AIE2014

Distinguished Paper Award: AMIA 2017

PUBLICATIONS

Journals:

[1] P. Cheng, J. F. Roddick, S.-C. Chu, and C.-W. Lin, “Privacy preservation through a greedy, distortion-based rule hiding method,” *Applied Intelligence*, vol. 44, no. 2, pp. 295-306, 2016.

[2] P. Cheng, I. Lee, C.-W. Lin, and J.-S. Pan, “Association Rule Hiding Based on Evolutionary Multi-objective Optimization,” *Intelligent Data Analysis*, vol. 20, no. 3, pp. 495-514, 2016.

[3] P. Cheng, I. Lee, J.-S. Pan, C.-W. Lin, and J. F. Roddick, “Hide Association Rules with Fewer Side Effects,” *IEICE Transactions on Information and Systems*, vol. E98-D, no. 10, pp. 1788-1798, 2015.

[4] P. Cheng, J.-S. Pan, C.-W. Lin, and I. Lee, “Manage the Tradeoff in Data Sanitization,” *IEICE Transactions on Information and Systems*, vol. E98-D, no. 10, pp. 1856-1860, 2015.

Conferences:

[1] P. Cheng, L. R. Waitman, Yong Hu, Mei Liu, "Predicting Inpatient Acute Kidney Injury over Different Time Horizons: How Early and Accurate?", in Proceedings of American Medical Informatics Association Annual Symposium (AMIA ’17), Washington, DC, USA, 2017. (Distinguished Paper Award)

[2] P. Cheng, I. Lee, and et al., “BRBA: a Blocking-based Association Rule Hiding Method,” in Thirtieth AAAI Conference on Artificial Intelligence (AAAI ’16), Phoenix, Arizona, USA,

2016. (Spotlight)

[3] P. Cheng, S.-C. Chu, and et al., "Distortion-Based Heuristic Sensitive Rule Hiding Method–The Greedy Way," Modern Advances in Applied Intelligence, Springer, 2014.

[4] P. Cheng, and J.-S. Pan, “Association Rule Hiding Based on Evolutionary Multi-Objective Optimization by Removing Items,” in Twenty-Eighth AAAI Conference on Artificial Intelligence (AAAI ’14), Québec City, Québec, Canada, 2014. (Poster)

[5] P. Cheng, and J.-S. Pan, “Use EMO to Protect Sensitive Knowledge in Association Rule Mining by Adding Items,” in Proceedings of the 2014 Conference Companion on Genetic and Evolutionary Computation (ACM GECCO Companion ’14), Vancouver, British Columbia, Canada, 2014.

[6] P. Cheng, and J.-S. Pan, “Completely Hide Sensitive Association Rules Using EMO by Deleting Transactions,” in Proceedings of the 2014 Conference Companion on Genetic and Evolutionary Computation (ACM GECCO Companion ’14), Vancouver, British Columbia, Canada, 2014.

[7] P. Cheng, J.-S. Pan, and C.-W. Lin, “Privacy Preserving Association Rule Mining Using Binary Encoded NSGA-II,” in Proceedings of the 18th Pacific-Asia Conference on Knowledge Discovery and Data Mining Workshop (PAKDD’ 14), Tainan, Taiwan, 2014.

[8] P. Cheng, J.-S. Pan, C.-W. Lin, “Use EMO to protect sensitive knowledge in association rule mining by removing items”, in Proceedings of the IEEE Congress on Evolutionary Computation (CEC’ 14), Beijing, China, July 6-11, 2014

[9] Q.-X. Feng, K.-K. Tseng, J.-S. Pan, P. Cheng, C. Chen, “New Anti-phishing Method with Two Types of Passwords in OpenID System”. in Proceedings of Fifth International Conference on Genetic and Evolutionary Computing, Kinmen, Taiwan, 2011

[10] L. Li, P. Cheng and et al., "Applying Multi-objective Evolutionary Algorithms to QoS-aware Web Service Composition," Advanced data mining and applications, Springer, 2010.

Technical Reports:

[1] P. Cheng, W. Nutt and et al. Scheduling in Collaborative Construction Process Management. Faculty of Computer Science, Free University of Bozen-Bolzano, Italy, 2020.12

PROFESSIONAL MEMBERSHIPS

2020 – Present	CCF (China Computer Federation)
2014 – Present	ACM (Association for Computing Machinery)
2014 – Present	AAAI (Association for the Advance of Artificial Intelligence)
2017 – Present	IEEE (Institute of Electrical and Electronics Engineers)