Chongxuan Li

(+86) 15201523592 | chongxuanli1991@gmail.com | ml.cs.tsinghua.edu.cn/~chongxuan

Education

Tsinghua University Sep 2014 – Jul 2019
*PhD in Computer Science and Technology, co-supervised by **Bo Zhang** and **Jun Zhu*** *Beijing, China*

Tsinghua University Sep 2010 – Jul 2014
*BE in Institute for Interdisciplinary Information and Sciences (**Yao Class**)* *Beijing, China*

Experience

Tsinghua University Sep 2019 – Present
*Postdoctoral researcher, supervised by **Jun Zhu*** *Beijing, China*

University of Amsterdam Sep 2017 – Sep 2018
*PhD guest researcher, supervised by **Max Welling*** *Amsterdam, Netherlands*

Scientific Awards and Distinctions

China Computer Federation (CCF) Distinguished PhD Dissertation Award 2019

Shuimu Tsinghua Scholar Program 2019

Chinese Postdoctoral Innovative Talent Support Program 2019

Microsoft Research Fellowship 2017

Runner-up prize of the vizdoom AI competition 2017 @CIG 2017

Publications

Selected Publications during PhD

- **Chongxuan Li**, Chao Du, Kun Xu, Max Welling, Jun Zhu and Bo Zhang. *To Relieve Your Headache of Training an MRF, Take AdVIL*. International Conference on Learning Representations (**ICLR**) 2020.
- **Chongxuan Li**, Max Welling, Jun Zhu and Bo Zhang. *Graphical Generative Adversarial Networks*. Advances in Neural Information Processing Systems (**NeurIPS**) 2018.
- **Chongxuan Li**, Jun Zhu and Bo Zhang. *Max-Margin Deep Generative Models for (Semi-)Supervised Learning*. IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**) 2018, 40(11): 2762-2775.
- **Chongxuan Li**, Kun Xu, Jun Zhu and Bo Zhang. *Triple Generative Adversarial Nets*. Advances in Neural Information Processing Systems (**NeurIPS**) 2017.
- **Chongxuan Li**, Jun Zhu and Bo Zhang. *Learning to Generate with Memory*. International Conference on Machine Learning (**ICML**) 2016.
- **Chongxuan Li**, Jun Zhu, Tianlin Shi and Bo Zhang. *Max-Margin Deep Generative Models*. Advances in Neural Information Processing Systems (**NeurIPS**) 2015.

Other Publications during PhD and Postdoc (* indicates equal contribution)

- Fan Bao*, **Chongxuan Li***, Kun Xu, Hang Su, Jun Zhu and Bo Zhang. *Bi-level Score Matching for Learning Energy-based Latent Variable Models*. Advances in Neural Information Processing Systems (**NeurIPS**) 2020.
- Tianyu Pang, Kun Xu, **Chongxuan Li**, Yang Song, Stefano Ermon and Jun Zhu. *Efficient Learning of Generative Models via Finite-Difference Score Matching*. Advances in Neural Information Processing Systems (**NeurIPS**) 2020.
- Kun Xu, Chao Du, **Chongxuan Li**, Jun Zhu and Bo Zhang. *Learning Implicit Generative Models by Teaching Explicit Ones*, European Conference on Machine Learning (**ECML**), 2020.
- Kun Xu, **Chongxuan Li**, Huanshu Wei, Jun Zhu and Bo Zhang. *Understanding and Stabilizing GANs' Training Dynamics with Control Theory*. International Conference on Machine Learning (**ICML**), 2020.
- **Chongxuan Li**, Jun Zhu and Bo Zhang. *Conditional Graphical Generative Adversarial Networks*. Journal of Software, 2019. (in Chinese)
- Kun Xu, **Chongxuan Li**, Jun Zhu and Bo Zhang. *Multi-objects Generation with Amortized Structural Regularization*. Advances in Neural Information Processing Systems (**NeurIPS**) 2019.
- Chao Du, Kun Xu, **Chongxuan Li**, Jun Zhu and Bo Zhang. *Learning Implicit Generative Models by Teaching Explicit Ones*. International Conference on Machine Learning (**ICML**) Workshop on Theoretical Foundations and Applications of Deep Generative Models, 2018.

- Danyang Sun, Tongzheng Ren, **Chongxuan Li**, Jun Zhu, and Hang Su. *Learning to Write Stylized Chinese Characters by Reading a Handful of Examples.* International Joint Conferences on Artificial Intelligence (**IJCAI**) 2018.
- Chao Du,**Chongxuan Li**, Yin Zheng, Jun Zhu and Bo Zhang. *Collaborative Filtering with User-Item Co-Autoregressive Models.* Association for the Advancement of Artificial Intelligence (**AAAI**) 2018.
- Jianfei Chen, **Chongxuan Li**, Yizhong Ru and Jun Zhu. *Population Matching Discrepancy and Applications in Deep Learning.* Advances in Neural Information Processing Systems (**NeurIPS**) 2017.
- Mengchen Liu, Jiaxin Shi, Zhen Li, **Chongxuan Li**, Jun Zhu, and Shixia Liu. *Interactive Demo: A Visual Analysis System for Analyzing Deep Convolutional Neural Networks.* International Conference on Machine Learning (**ICML**) Workshop on Visualization for Deep Learning, 2016.
- Mengchen Liu, Jiaxin Shi, Zhen Li, **Chongxuan Li**, Jun Zhu, and Shixia Liu. *Towards Better Analysis of Deep Convolutional Neural Networks.* IEEE Conference on Visual Analytics Science and Technology (IEEE **VAST**, **TVCG** track), 2016, 23(1): 91-100.

Preprints († indicates corresponding author)

- **Chongxuan Li**, Kun Xu, Jiashuo Liu, Jun Zhu and Bo Zhang. *Triple Generative Adversarial Networks.* Submitted to TPAMI.
- Tsung Wei Tsai, **Chongxuan Li** and Jun Zhu. *MiCE: Mixture of Contrastive Experts for Unsupervised Image Clustering.* Submitted to ICLR 2021.
- Cheng Lu, Jianfei Chen, **Chongxuan Li**, Qiuhao Wang and Jun Zhu. *Implicit Normalizing Flows.* Submitted to ICLR 2021.
- Qijun Luo, Zhili Liu, Lanqing Hong, **Chongxuan Li**†, Kuo Yang, Liyuan Wang, Fengwei Zhou, Guilin Li, Zhenguo Li, and Jun Zhu†. *Relaxed Conditional Image Transfer for Semi-supervised Domain Adaptation.* Submitted to AAAI 2021.
- Fan Bao, Kun Xu, **Chongxuan Li**, Lanqing Hong, Jun Zhu and Bo Zhang. *Variational (Gradient) Estimate of the Score Function in Energy-based Latent Variable Models.* Arxiv 2010.08258.
- Tsung Wei Tsai, **Chongxuan Li** and Jun Zhu. *DS3L: Deep Self-Semi-Supervised Learning for Image Recognition.* Arxiv 1905.13305.

Patents

Method and device for establishing generative adversarial network models of three-model games — 11th Dec 2019
- Jun Zhu, **Chongxuan Li**, Kun Xu, Bo Zhang — Nos. CN107273978B

Image processing based generation method of maximum interval depth generation model — 1st May 2019
- Jun Zhu, **Chongxuan Li**, Bo Zhang — Nos. CN105224948B

Grant Support

National Natural Science Foundation – General Program (Nos. 62076145) — Jan 2021 – Dec 2024
- *Study of Efficient and Convergent Learning and Inference Algorithms in Deep Generative Models* — **Role: PI**

Tsinghua-Huawei Large Granularity Long Term Corporation Project — Sep 2019 – Aug 2022
- *Advanced Machine Learning Theory and Algorithm* — **Role: sub-project co-leader**

Chinese Postdoctoral Innovative Talent Support Program — Jul 2019 – Jul 2021
- *Bayesian Deep Learning: Algorithms, Models and Applications* — **Role: PI**

National Natural Science Foundation – Key Program (Nos. 61620106010) — Jan 2017 – Dec 2021
- *Machine Learning on Big Data: Theory, System Platform and Network Media Application* — **Role: participant**

Invited Talks

Microsoft Research Asia — Oct 2019
- *Graphical Deep Generative Models* — *Beijing, China*

GAN Workshop in National Big Data and Artificial Intelligence Science Conference — Jul 2019
- *Learning Generative Adversarial Networks with Limited Supervision* — *Kunming, China*

Student Webinar in Vision and Learning Seminar — Apr 2019
- *Max Margin Deep Generative Models for (Semi)-supervised Learning* — *Hefei, China*

Alibaba — Oct 2018
- *Graphical Generative Adversarial Networks* — *Beijing, China*

International Conference on Machine Learning — Jun 2016
- *Learning to Generate with Memory* — *New York City, American*

Services

PC members: UAI, AAAI, IJCAI.

Reviewers: ICML, NeurIPS, ICLR, TPAMI, TNNLS.