

# *BU, Fanchen* 卜凡辰

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## *Education*

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- PhD** *Korea Advanced Institute of Science and Technology (KAIST)*  
*Electrical Engineering* *2022.03 - Now*  
*Data Mining Lab (Supervisor: Prof. Shin, Kijung)*
- Master** *Korea Advanced Institute of Science and Technology (KAIST)*  
*Electrical Engineering, GPA: 4.21/4.3* *2019.09 - 2021.08*  
*Control Lab (Supervisor: Prof. Chang, Dong Eui)*  
*Thesis: A Novel Optimization Algorithm with Orthogonality for Deep Neural Networks Inspired by Feedback Integrators*
- Bachelor** *University of Chinese Academy of Sciences (UCAS)*  
*Computer Science and Technology, GPA: 3.71/4* *2015.09 - 2019.08*  
*Supervisor: Prof. Zhao, Dongbin*  
*Thesis: Vehicle Trajectory Prediction Based on Deep Learning*

## *Publications*

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- [C6] **Bu, Fanchen**, and Kijung Shin. “On Improving the Cohesiveness of Graphs by Merging Nodes: Formulation, Analysis, and Algorithms.” KDD 2023.
- [C5] Kim, Sunwoo, **Fanchen Bu**, Minyoung Choe, Jaemin Yoo, and Kijung Shin. “How Transitive Are Real-World Group Interactions? - Measurement and Reproduction.” KDD 2023.
- [J2] **Bu, Fanchen**, Shinhwan Kang, and Kijung Shin. “Interplay between Topology and Edge Weights in Real-World Graphs.” Data Mining and Knowledge Discovery 2023.
- [C4] Lee, Soo Yong, **Fanchen Bu**, Jaemin Yoo, and Kijung Shin. “Towards Deep Attention in Graph Neural Networks: Problems and Remedies.” ICML 2023.
- [C3] Kim, Hyunju, Jihoon Ko, **Fanchen Bu**, and Shin Kijung. “Characterization of Simplicial Complexes by Counting Simplexes Beyond Four Nodes.” WWW 2023.
- [J1] **Bu, Fanchen**, Geon Lee, and Kijung Shin. “Hypercore Decomposition for Non-Fragile Hyperedges: Concepts, Algorithms, Observations, and Applications.” Data Mining and Knowledge Discovery 2023.
- [C2] **Bu, Fanchen**, and Dong Eui Chang. “Double prioritized state recycled experience replay.” ICCE-Asia 2020.
- [C1] **Bu, Fanchen**, and Dong Eui Chang. “Feedback gradient descent: Efficient and stable optimization with orthogonality for DNNs.” AAAI 2022.

## *Languages*

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- Chinese** Native (Native: Mandarin, Wu Chinese; Intermediate: Cantonese; Elementary: Hokkien)
- English** Advanced (IELTS 7.5; GRE 333)
- Korean** Intermediate