



Dr. Edward Cao

Modeling Gene Expression Kinetics in Cells

Zhixing Cao (Edward), Ph.D., is an Assistant Professor in the Department of Chemical Engineering at Queen's University. He received his B.Eng. in Automatic Control from Zhejiang University (2012) and Ph.D. in Chemical and Biomolecular Engineering from the Hong Kong University of Science and Technology (2016). He conducted postdoctoral research at Harvard University and the University of Edinburgh, and became a professor at East China University of Science and Technology in 2019. He is a recipient of the NSERC Discovery Grant, MIT Technology Review Innovators Under 35 Asia Pacific (2021), a Nature Communications featured paper in computational life science (2021), the NSFC Outstanding Project Award (2021), the Alibaba Damo Academy Promising Scientist Award (2023), and ScholarGPS Highly Ranked Scholar (top 0.05%) in gene expression (2024). He serves on the editorial boards of The Innovation (IF 25.7), IEEE/CAA Journal of Automatica Sinica (IF 19.2), and others. His research focuses on AI for reaction kinetics, leveraging AI and mathematical modeling to uncover the dynamics of cellular function as a complex biochemical reaction system.