# Yuning You

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## RESEARCH FOCUS

Machine-learning algorithms for structural data mining (e.g. graphs, point clouds, and fields), and their use in building simulators of living organisms at multiple scales (e.g. virtual tissues).

## EXPERIENCES

**The Chinese University of Hong Kong, Shenzhen**, Guangdong — Sep 2025 – Present
Assistant Professor in School of Science and Engineering

**California Institute of Technology**, Pasadena, California — Jul 2024 – Aug 2025
Postdoctoral Scholar in Division of Biology and Biological Engineering
Advisor: Prof. Matt Thomson

**Texas A&M University**, College Station, Texas — Aug 2019 – Aug 2024
*Ph.D. in Electrical Engineering*
Graduate Research Assistant in Department of Electrical and Computer Engineering (Part-Time) Sep 2020 – May 2024
Advisors: Prof. Yang Shen & Prof. Zhangyang (Atlas) Wang

**Xi'an Jiaotong University**, Xi'an, Shaanxi — Aug 2015 – Jun 2019
*B.Eng. in Information Engineering*

**Genentech, Inc.**, South San Francisco, California — May 2023 – Aug 2023
Early Clinical Development/AIML Intern in Genentech Research and Early Development

**insitro, Inc.**, South San Francisco, California — May 2022 – Aug 2022
ML Small Molecules Intern in Department of Data Science and Machine Learning

## PUBLICATIONS (Check Full List on [Google Scholar])

**MLGenX'25** [link]: "Building Foundation Models to Characterize Cellular Interactions via Geometric Self-Supervised Learning on Spatial Genomics", **Y. You**, Z. Wang, K. Fleisher, R. Liu, M. Thomson, *Machine Learning for Genomics Explorations Workshop, International Conference on Learning Representations*, 2025.

**AIDrugX@NeurIPS'24** [link]: "Correlational Lagrangian Schrödinger Bridge: Learning Dynamics with Population-Level Regularization", **Y. You**, R. Zhou, Y. Shen, *AI for New Drug Modalities Workshop, Conference on Neural Information Processing Systems*, 2024.

**HUGO'24** [link]: "Critical Assessment of Variant Prioritization Methods for Rare Disease Diagnosis within the Rare Genomes Project", ..., **Y. You**, ..., *Human Genomics*, vol. 18(44), 2024. (Impact Factor 4.50, Outcome of CAGI6 RGP)

**ICLR'24** [link]: "Latent 3D Graph Diffusion", **Y. You**, R. Zhou, J. Park, H. Xu, C. Tian, Z. Wang, Y. Shen, *International Conference on Learning Representations*, oprev., 2024. (Acceptance Rate 31.00%)

**NeurIPS'23** [link]: "Graph Mixture of Experts: Learning on Large-Scale Graphs with Explicit Diversity Modeling", H. Wang, Z. Jiang, **Y. You**, Y. Han, G. Liu, J. Srinivasa, R. Kompella, Z. Wang, *Conference on Neural Information Processing Systems*, pp. 50825-50837, 2023. (Acceptance Rate 26.10%)

**ICLR'23** [link]: "Graph Domain Adaptation via Theory-Grounded Spectral Regularization", **Y. You**, T. Chen, Z. Wang, Y. Shen, *International Conference on Learning Representations*, oprev., 2023. (Acceptance Rate 31.80%)

**NeurIPS'22** [link]: "Augmentations in Hypergraph Contrastive Learning: Fabricated and Generative", T. Wei*, **Y. You***, T. Chen, Y. Shen, J. He, Z. Wang, *Conference on Neural Information Processing Systems*, pp. 1909-1922, 2022. (*Equal Contribution, Acceptance Rate 25.60%)

**Bioinformatics'22** [link]: "Cross-Modality and Self-Supervised Protein Embedding for Compound-Protein Affinity and Contact Prediction", **Y. You**, Y. Shen, *Bioinformatics*, vol. 38(Supplement_2), pp. 68-74, 2022. (Impact Factor 6.93, MoML'22, ECCB'22 with Acceptance Rate 17.40%, 3DSIG COSI@ISMB/ECCB'21, MLSB@NeurIPS'20)

**ICLR'22** [link]: "Bayesian Modeling and Uncertainty Quantification for Learning to Optimize: What, Why, and How", **Y. You**, Y. Cao, T. Chen, Z. Wang, Y. Shen, *International Conference on Learning Representations*, oprev., 2022. (Acceptance Rate 32.29%)

**WSDM'22** [link]: "Bringing Your Own View: Graph Contrastive Learning without Prefabricated Data Augmentations", **Y. You**, T. Chen, Z. Wang, Y. Shen, *ACM International Conference on Web Search and Data Mining*, pp. 1300-1309, 2022. (Acceptance Rate 20.22%)

**ICML'21 Long Presentation** [link]: "Graph Contrastive Learning Automated", **Y. You**, T. Chen, Y. Shen, Z. Wang, *International Conference on Machine Learning*, pp. 12121-12132, 2021. (Acceptance Rate 3.01%)

**TVT'21** [link]: "Probabilistic Constructive Interference Precoding for Imperfect CSIT", G. Lyu, **Y. You**, A. Li, X. Liao, C. Masouros, *IEEE Transactions on Vehicular Technology*, vol. 70(4), pp. 3932-3937, 2021. (Impact Factor 5.97)

**NeurIPS'20** [link]: "Graph Contrastive Learning with Augmentations", **Y. You***, T. Chen*, Y. Sui, T. Chen, Z. Wang, Y. Shen, *Conference on Neural Information Processing Systems*, pp. 5812-5823, 2020. (*Equal Contribution, Acceptance Rate 20.09%)

**ICML'20** [link]: "When Does Self-Supervision Helps Graph Convolutional Networks?", **Y. You***, T. Chen*, Z. Wang, Y. Shen, *International Conference on Machine Learning*, pp. 10871-10880, 2020. (*Equal Contribution, Acceptance Rate 21.80%)

**CVPR'20** [link]: "$L^2$-GCN: Layer-Wise and Learned Efficient Training of Graph Convolutional Networks", **Y. You***, T. Chen*, Z. Wang, Y. Shen, *IEEE/CVF Conference on Computer Vision and Pattern Recognition*, pp. 2127-2135, 2020. (*Equal Contribution, Acceptance Rate 22.08%)

## AWARDS

Distinguished Graduate Student Award for Excellence in Research, Association of Former Students of Texas A&M University [link] Mar 2025

ECEN Quality Graduate Student Award, Department of Electrical and Computer Engineering, Texas A&M University Apr 2023

NSF Student Travel Awards, ACM International Conference on Web Search and Data Mining Dec 2021

Chevron Scholarship, Department of Electrical and Computer Engineering, Texas A&M University Sep 2021

Electrical and Computer Engineering PhD Merit Fellowship, Department of Electrical and Computer Engineering, Texas A&M University Feb 2019

## TALKS

*An AI-based virtual tissue enables computational design of perturbation strategies in human tissues*, University of Southern California, Prof. Leonardo Morsut's Lab, Los Angeles Aug 2025

Texas A&M University, Prof. James Cai's Lab, online Oct 2023

Genentech, Inc., Spatial Omics Journal Club, online — Aug 2023

AstraZeneca plc, AI&A Journal Club, online — Mar 2022

University of Texas at Austin, Prof. Mingyuan Zhou's Group, online — Oct 2021

Technical University of Munich, Learning on Graphs and Geometry Reading Group (LoGaG), online — Aug 2021

ISMB/ECCB'21, 3DSIG COSI: Structural Bioinformatics and Computational Biophysics, online [video] — Jul 2021

ICML'21, Session of Semisupervised and Unsupervised Learning, online [video] — Jul 2021

## SERVICES

Area Chair of New Perspectives in Advancing Graph Machine Learning Workshop at NeurIPS'25

Co-Organizer of AI Bootcamp VIII on Graph Machine Learning at Caltech

Session Chair of Semisupervised and Unsupervised Learning at ICML'21

Reviewer in Conferences of ICML'21-24, NeurIPS'21-24, ICLR'22,24-25, WWW'22, LoG'22,24, ISMB/ECCB'21,23-24, ACM-BCB'21,23,24; Journals of TPAMI'21,23, TMLR'23, TNNLS'21-23, TKDE'22, TAI'22, INS'21, PeerJ'21, NEPL'21, JCST'22,24, SIPN'22, INFFUS'23, JBS'23, CSUR'24, Nature Communications Chemistry'25