CURRICULUM VITAE — GAUTAM GOEL

Address:	Simons Institute
	University of California at Berkeley
Website:	www.gautamcgoel.com
Email:	ggoel@berkeley.edu

Research Interests: online learning and learning theory; signal processing, optimization, and control.

Appointments:

8/2022–	Postdoctoral Researcher
	Simons Institute & Foundations of Data Science Institute
	UC Berkeley
8/2015-5/2022	PhD Student
	Computing and Mathematical Sciences Department
	California Institute of Technology

Academic Qualifications:

2022	PhD. in Computing and Mathematical Sciences
	Thesis title: *Regret-Optimal Control*.
	Advisor: Babak Hassibi
	California Institute of Technology
2015	BSc. in Applied Mathematics
	Georgia Institute of Technology

Awards:

2022	ETH AI Center Postdoctoral Fellowship (declined to accept)
2022	Vector Institute Postdoctoral Fellowship (declined to accept)
2022	Bhansali Family Doctoral Prize in Computer Science
2021	Named a Rising Star in Data Science by the University of Chicago
2018	Amazon AI4Science Fellowship
2015	National Science Foundation Graduate Research Fellowship
2014	Commendation by Georgia General Assembly (SR-902, 2013-2014 session)
2014	Georgia Tech School of Mathematics Outstanding Junior Award
2013	Goldwater Scholarship

Preprints:

P2. **Gautam Goel**, Naman Agarwal, Karan Singh, and Elad Hazan: *Best of Both Worlds in Online Control: Competitive Ratio and Policy Regret*.

P1. **Gautam Goel** and Babak Hassibi: *Measurement-Feedback Control with Optimal Data-Dependent Regret*. Under review at IEEE Transactions of Automatic Control.

Publications in Peer-Reviewed Journals:

J3. **Gautam Goel** and Babak Hassibi: *Competitive Control*. Accepted at IEEE Transactions on Automatic Control, to appear in September 2023.

J2. **Gautam Goel** and Babak Hassibi: *Regret-Optimal Estimation and Control*. Accepted at IEEE Transactions on Automatic Control, to appear in Special Issue on Learning and Control.

Publications in Peer-Reviewed Conference Proceedings: (* denotes equal contribution)

C9. **Gautam Goel** and Babak Hassibi: *Online Estimation and Control with Optimal Pathlength Regret.* Invited Session on "Non-Asymptotic Learning and Control of Dynamical Systems", Conference on Decision and Control (CDC) 2022.

C8. **Gautam Goel** and Babak Hassibi: *Online Estimation and Control with Optimal Pathlength Regret.* Learning for Dynamics and Control (L4DC) 2022.

C7. Oron Sabag, **Gautam Goel**, Sahin Lale,and Babak Hassibi. *Regret-Optimal Full-Information Control.* American Control Conference (ACC) 2021.

C6. **Gautam Goel** and Babak Hassibi. *Regret-Optimal Measurement-Feedback Control.* Learning for Dynamics and Control (L4DC) 2021.

C5. Yiheng Lin, **Gautam Goel**, and Adam Wierman. *Online Optimization with Predictions and Non-Convex Losses.* SIGMETRICS 2020.

C4. **Gautam Goel***, Yiheng Lin*, Haoyuan Sun*, and Adam Wierman. *Beyond Online Balanced Descent: An Optimal Algorithm for Smoothed Online Optimization.* Neural Information Processing Systems (NeurIPS) 2019. **Spotlight Presentation**.

C3. **Gautam Goel** and Adam Wierman. *An Online Algorithm for Smoothed Regression and LQR Control.* International Conference on Artificial Intelligence and Statistics (AISTATS) 2019. Extended abstract appeared at Real-World Sequential Decision Making Workshop, ICML 2019, and Mathematical Aspects of Performance Modelling (MAMA) Workshop, SIGMETRICS 2019.

C2. Niangjun Chen*, **Gautam Goel*** and Adam Wierman. *Smoothed Online Convex Optimization in High Dimensions.* Conference on Learning Theory (COLT) 2018. Extended abstract appeared at Mathematical Aspects of Performance Modelling (MAMA) Workshop, SIGMETRICS 2018.

C1. **Gautam Goel**, Niangjun Chen and Adam Wierman. *Thinking Fast and Slow: Optimization Decomposition Across Timescales.* Conference on Decision and Control (CDC) 2017. Extended abstract appeared at Mathematical Aspects of Performance Modelling (MAMA) Workshop, SIGMETRICS 2017.

Invited talks:

2022	ETH Zurich AI Center. Hosted by Florian Dörfler and Melanie Zeilinger.
2022	Nikolai Matni's group in University of Pennsylvania ECE department.
2022	Vector Insitute/University of Toronto. Hosted by Dan Roy and Angela Schoellig.
2021	Na Li's group in Harvard SEAS department.
2021	Princeton ALG-ML Seminar. Hosted by Elad Hazan
2021	Madeleine Udell's group in Cornell University ORIE department.
2021	Statistical Machine Learning Seminar, UC Santa Barbara. Hosted by Yu-Xiang Wang.
2021	Google DeepMind/University of Alberta. Hosted by Csaba Szepesvári.
2019	Conference on Information Sciences and Systems (CISS) at Johns Hopkins University.
2018	Applied Probability Society (APS) at Northwestern University.

Departmental Service:

2021–2022	CMS Graduate Student Advisory Council
2017–2018	Keller Colloquium Committee

Professional Service:

Journal reviewer	IEEE Trans. on Information Theory (IEEE T-IT), IEEE Trans. on Automatic Control (IEEE TAC), IEEE Trans. on Networking (IEEE TNET)
Conference reviewer	Neural Information Processing Systems (NeurIPS), International Conference on Artificial Intelligence and Statistics (AISTATS), Learning for Dynamics and Control (L4DC)