

# Dengwang Tang

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## EDUCATION

*Ph.D.* Electrical and Computer Engineering (GPA: 4.00) 2021  
Advisor: Vijay Subramanian  
Dissertation: Games in Multi-Agent Dynamic Systems: Decision Making with Compressed Information  
University of Michigan, Ann Arbor, MI

*M.S.*, Mathematics (GPA: 4.00) 2021  
University of Michigan, Ann Arbor, MI

*M.S.*, Electrical and Computer Engineering (GPA: 4.00) 2018  
University of Michigan, Ann Arbor, MI

*B.S.E.*, Electrical and Computer Engineering (GPA: 3.81) 2016  
University of Michigan – Shanghai Jiao Tong University Joint Institute  
Shanghai Jiao Tong University, Shanghai, China

*B.S.E.*, Computer Engineering, *summa cum laude* (GPA: 3.93) 2016  
Minor: Mathematics  
University of Michigan, Ann Arbor, MI

## WORKING EXPERIENCE

*Postdoctoral Researcher* October 2022 – Present  
University of Southern California, Los Angeles, CA  
Advisors: Rahul Jain, Ashutosh Nayyar, and Pierluigi Nuzzo

*Postdoctoral Researcher* October 2021 – September 2022  
University of California, Berkeley, CA  
Advisor: Venkatachalam Anantharam

*Software Engineering Intern* May 2019 – August 2019  
Google LLC., San Francisco, CA  
Responsibilities: Devise and implement deep learning algorithms for anomaly detection on process execution logs

## TEACHING EXPERIENCE

*Graduate Student Instructor* (3 occasions)  
University of Michigan, Ann Arbor, MI  
EECS301: Probabilistic Methods in Engineering Winter 2020  
EECS501: Probability and Random Process Winter 2018, Fall 2018  
Responsibilities: Grading exams, holding discussion sessions and office hours

*Teaching Assistant*  
UM-SJTU Joint Institute, Shanghai Jiao Tong University, Shanghai, China  
VV285: Honors Calculus III Summer 2013

Responsibilities: Grading homeworks and exams, holding discussions sessions and office hours

## PUBLICATIONS AND WORKING PAPERS

### *Journal Publications*

1. **D. Tang**, H. Tavafoghi, V. G. Subramanian, A. Nayyar, D. Teneketzis, "Dynamic Games among Teams with Delayed Intra-Team Information Sharing," *Dynamic Games and Applications* (2022)
2. **D. Tang**, V. G. Subramanian, "Random Walk Based Sampling for Load Balancing in Multi-server Systems," *Proceedings of the ACM on Measurement and Analysis of Computing Systems* (2019), Vol. 3(1), p. 14
3. **D. Tang**, V. G. Subramanian, "Eigenvalues of LRU via a Linear Algebraic Approach," *Operation Research Letters* (2018), Vol. 46(2), p.193-198

### *Preprints*

1. **D. Tang**, A. Nayyar, R. Jain, P. Nuzzo, "Regret Analysis of the Posterior Sampling-based Learning Algorithm for Episodic POMDPs," *arXiv preprint arXiv:2310.10107* (2023)
2. **D. Tang**, R. Jain, B. Hao, Z. Wen, "Efficient Online Learning with Offline Datasets for Infinite Horizon MDPs: A Bayesian Approach," *arXiv preprint arXiv:2310.11531* (2023)
3. B. Hao, R. Jain, **D. Tang**, Z. Wen, "Bridging Imitation and Online Reinforcement Learning: An Optimistic Tale," *arXiv preprint arXiv:2303.11369* (2023)
4. **D. Tang**, V. G. Subramanian, "Derandomized Load Balancing using Random Walks on Expander Graphs," *arXiv preprint arXiv:1901.09094* (2019)
5. **D. Tang**, V. G. Subramanian, "Approximately Envy-Free Spectrum Allocation with Complementarities," *arXiv preprint arXiv:1606.01457* (2016)

### *Conference Papers*

1. **D. Tang**, A. Nayyar, R. Jain, "A Novel Point-based Algorithm for Multi-agent Control Using the Common Information Approach," *IEEE Conference on Decision and Control (CDC)*, (2023)
2. **D. Tang**, H. Tavafoghi, V. G. Subramanian, A. Nayyar, D. Teneketzis, "Private Information Compression in Dynamic Games among Teams," *IEEE Conference on Decision and Control (CDC)*, (2021)
3. **D. Tang**, V. G. Subramanian, "Derandomized Asymmetrical Balanced Allocation," *57th Annual Allerton Conference on Communication, Control, and Computing*, Monticello, IL, USA, (2019)
4. **D. Tang**, V. G. Subramanian, "Balanced Allocation on Graphs with Random Walk Based Sampling," *56th Annual Allerton Conference on Communication, Control, and Computing*, Monticello, IL, USA, (2018) pp. 765-766.

## TALKS

*Point-based Algorithm for Multi-agent Control Using the Common Information Approach* 2023  
SoCal Control Workshop at University of California Santa Barbara, Isla Vista, CA

*Private Information Compression in Dynamic Games among Teams* 2021  
IEEE Conference on Decision and Control (CDC), remote due to pandemic

*Dynamic Games among Teams with Asymmetric Information* 2021  
Centre for Intelligent Machines (CIM) and Groupe d'études et de Recherche en Analyse des Décisions (GERAD) Virtual Informal Systems Seminar, Montréal, QC (remote due to pandemic)

*Derandomized Asymmetrical Balanced Allocation* 2019  
57th Annual Allerton Conference on Communication, Control, and Computing, Monticello, IL

<i>Balanced Allocation with Random Walk Based Sampling</i> Stanford CS Theory Lunch, Stanford, CA	2019
<i>Random Walk Based Sampling for Load Balancing in Multi-Server Systems</i> ACM SIGMETRICS 19', Phoenix, AZ	2019
<i>Balanced Allocation on Graphs with Random Walk Based Sampling</i> 56th Annual Allerton Conference on Communication, Control, and Computing, Monticello, IL (2018)	2018

## REFEREE WORK

IEEE/ACM Transactions on Networking (ToN)	2023
Dynamic Games and Applications (DGAA)	2023
IEEE Transactions on Automatic Control (IEEE-TAC)	2022, 2023
IEEE Control Systems Letters (L-CSS) / IEEE Conference on Decision and Control (CDC)	2021, 2023
Systems & Control Letters (SCL)	2022
SIAM Journal on Control and Optimization (SICON)	2022
IEEE Control Systems Letters (L-CSS) / American Control Conference (ACC)	2020

## SKILLS

Programming: Python, Matlab, C++, Julia  
 Languages: Native Mandarin Chinese, Full Professional English, Elementary French

## REFERENCE

**Vijay Subramanian**, Associate Professor,  
 Electrical and Computer Engineering Department, University of Michigan,  
 1301 Beal Avenue, Ann Arbor, MI, 48109-2122, USA.  
 vgsubram@umich.edu  
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**Demosthenis Teneketzis**, Professor,  
 Electrical and Computer Engineering Department, University of Michigan,  
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**Rahul Jain**, Professor,  
 Ming Hsieh Department of Electrical and Computer Engineering, University of Southern California,  
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**Ashutosh Nayyar**, Associate Professor,  
 Ming Hsieh Department of Electrical and Computer Engineering, University of Southern California,  
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