

LIN YANG

LGRC A313, 140 Governors Dr., University of Massachusetts, Amherst, MA 01003.
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EDUCATION

Ph.D. in Information Engineering The Chinese University of Hong Kong, Hong Kong. Advisor: Wing Shing Wong (FIEEE) Thesis: Competitive and Regret Analysis for Online Optimization	August 2015 - August 2018
Master in Automatic Control University of Science and Technology of China, Hefei. Advisor: Jin Zhu	August 2012 - June 2015
Bachelor in Information Science University of Science and Technology of China, Hefei.	August 2008 - June 2012

EMPLOYMENTS

Postdoctoral Research Associate (with fellowship) in College of Information & Computer Science, UMass Amherst Advisor: Donald F. Towsley, Mohammad Hajiesmaili	2020.1 - Pres.
Postdoctoral Fellow in IE, CUHK Advisor: Wing Shing Wong	2018.10 - 2019.12

RESEARCH INTERESTS

System: Performance Analysis, Modeling, and Online Resource Optimization for Networked and Energy-Efficient Computing Systems
Online Optimization: Online Knapsacks (Online Multidimensional Knapsack, Online Multiple Knapsack, Online Knapsack with Departure), Online Buffer Management and Online Linear Programming etc.
Learning Theory: Multi-Armed Bandits, Expert Problems, Distributed Learning, and Learning with Attacks/Corruptions etc.

ACADEMIC SERVICES

TPC Member: ICCCN 2022
Journal and Conference Reviewers: ICML, SIGMETRICS, MOBIHOC, ICDCS, TNET

HONORS AND AWARDS

CDS Postdoctoral Fellowship (UMass Amherst)	2020
ACM SIGMETRICS Student Travel Grant	2018
Best Teaching Assistant Award <i>Awarded by IE Department of CUHK</i>	2016
Excellent Graduate <i>Awarded by the Education Department of Anhui Province</i>	2015
China National Scholarship <i>Awarded by the Chinese Government</i>	2014
Guanghua Scholarship <i>Awarded by the Chinese Academy of Science</i>	2013

TEACHING EXPERIENCE

ENGG1110D Problem Solving by Programming	<i>Fall 2015</i>
ENGG2430B Probability and Statistics for Engineers	<i>Spring 2016</i>
CSCI1140 Programming Laboratory	<i>Fall 2016</i>
ENGG2430C Probability and Statistics for Engineers	<i>Spring 2017</i>
CSCI1140 Programming Laboratory	<i>Fall 2017</i>
CSCI2100D Data Structure	<i>Spring 2018</i>

TALKS

1. Adversarial Bandits with Corruptions

- NeurIPS 2020 (virtual) (2020.12)

2. Online Learning and Online Optimization

- The International Young Scholars Forum of Sun Yat-sen University (2020.12)
- Invited talk at Northeast University (China) (2021.5)

3. Cooperative Learning with Heterogeneous Agents

- Internal talk of Annual Fall Meeting (virtual) hosted by Distributed Analytics & Information Science International Technology Alliance (2020.9)

4. Heterogeneous Structures for Online Learning Algorithms

- Theory Seminar in Department of CICS in UMass, Amherst (2020.3)
- SIGMETRICS 2018 (2018.6)

5. Online QoS Bugger Management

- SIGMETRICS 2018 (2018.6)

PUBLICATIONS

(# equal contribution, * corresponding author, ® Five Representative Publications)

- [1] Bo Sun[#], **Lin Yang**[#], Mohammad Hajiesmaili, Adam Wierman, Don Towsley.
The Online Knapsack Problem with Departures.
One-shot Revision **SIGMETRICS** 2022.
- [2] **Lin Yang**, Yu-Zhen Chen, Mohammad Hajiesmaili, Mark Herbster, Don Towsley.
Hierarchical Learning Algorithms for Multi-scale Expert Problems.
ACM International Conference on Measurement and Modeling of Computer Systems (**SIGMETRICS**), June 2022. (Full Paper).
(CORE A*, Tsinghua CS Conference Rank A, Acceptance Rate at Winter Round: 13/122 \approx 10.7%)
- [3] **Lin Yang**, Yu-Zhen Janice Chen, Mohammad Hajiesmaili, John CS Lui, Don Towsley.
Distributed Bandits with Heterogeneous Agents.
IEEE International Conference on Computer Communications (**INFOCOM**), 2022.
(CORE A*, Tsinghua CS Conference Rank A, CCF Rank A, Acceptance Rate: 225/1129 \approx 19.9%)
- [4] **Lin Yang**, Ali Zeynali, Mohammad Hajiesmaili, Ramesh Sitaraman, Don Towsley.
Competitive Algorithms for Online Multidimensional Knapsack Problems. ®
ACM International Conference on Measurement and Modeling of Computer Systems (**SIGMETRICS**), June 2022. (Full Paper)
(CORE A*, Tsinghua CS Conference Rank A, Acceptance Rate at Summer Round: 10/64 \approx 16%)

Journal Version: Proceedings of the ACM on Measurement and Analysis of Computing Systems (POMACS), 2021, 5(3): 1-30.

- [5] **Lin Yang**, Yu-Zhen Janice Chen, Stephen Pasteris, Mohammad Hajiesmaili, John CS Lui, Don Towsley.
Cooperative Stochastic Bandits with Asynchronous Agents and Constrained Feedback.
Advances in Neural Information Processing Systems (**NeurIPS**), 2021.
(CORE A*, Tsinghua CS Conference Rank A, CCF Rank A, Acceptance Rate: 26%)
- [6] Russell Lee, Yutao Zhou, **Lin Yang**, Mohammad Hajiesmaili, Ramesh Sitaraman.
Competitive Bidding Strategies for Online Linear Optimization with Inventory Management Constraints.
IFIP Performance, 2021.
- [7] Cheng Tan, **Lin Yang***, Wing Shing Wong.
Learning Based Control Policy and Regret Analysis for Online Quadratic Optimization with Asymmetric Information Structure.
Transactions on Cybernetics. 2021.
- [8] **Lin Yang**, Mohammad Hajiesmaili, Mohammad Sadegh Talebi, John CS Lui, Wing Shing Wong.
Adversarial Bandits with Corruptions: Regret Lower Bound and No-regret Algorithm. ®
Advances in Neural Information Processing Systems (**NeurIPS**), 2020.
(CORE A*, Tsinghua CS Conference Rank A, CCF Rank A, Acceptance Rate: 1900/9454 \approx 20.9%)
- [9] **Lin Yang**[#], Mohammad Hajiesmaili[#], Ramesh Sitaraman, Adam Wierman, Enrique Mallada, Wing Shing Wong.
Online Linear Optimization with Inventory Management Constraints. ®
ACM International Conference on Measurement and Modeling of Computer Systems (**SIGMETRICS**), June 2020. (Full Paper)
(CORE A*, Tsinghua CS Conference Rank A, Acceptance Rate at Winter Round: 14/91 \approx 16%)

Journal Version: Proceedings of the ACM on Measurement and Analysis of Computing Systems (POMACS), 3 (2).

- [10] Cheng Tan, **Lin Yang**, Fangfang Zhang, Zhengqiang Zhang and Wing Shing Wong.
Stabilization of discrete time stochastic system with input delay and control dependent noise.
Systems & Control Letters, 123, 62–68, 2019. Elsevier.
- [11] **Lin Yang**, Mohammad H. Hajiesmaili, and Wing Shing Wong.
Online Linear Programming with Uncertain Constraints.
The 53rd Annual Conference on Information Sciences and Systems (CISS), 2019.
- [12] **Lin Yang**, Lei Deng, Mohammad H. Hajiesmaili, Cheng Tan and Wing Shing Wong.
An Optimal Algorithm for Online Non-convex Learning. ®
ACM International Conference on Measurement and Modeling of Computer Systems (**SIGMETRICS**), June 2018. (Full Paper)
(CORE A*, Tsinghua CS Conference Rank A, Acceptance Rate at Winter Round: 16/114 \approx 14%)

Journal Version: Proceedings of the ACM on Measurement and Analysis of Computing Systems (POMACS), 2018, 2(2): 25.

- [13] Jin Zhu, Tong Luo, **Lin Yang**, Wanqing Xie, and G. E. Dullerud.
An average queue-length-difference-based congestion detection algorithm in TCP/AQM network.
International Journal of Adaptive Control and Signal Processing, 2018.
- [14] Tong Luo, Jin Zhu, **Lin Yang**, Wanqing Xie, Hongsheng Xie.
Robust stability analysis of a kind of joint scheduling algorithms in wireless access network.
Control and Decision. (in Chinese)
- [15] **Lin Yang**, Wing Shing Wong, and Mohammad H. Hajiesmaili.
An Optimal Randomized Online Algorithm for QoS Buffer Management. ®

ACM International Conference on Measurement and Modeling of Computer Systems (**SIGMETRICS**), June 2018. (Full Paper)

(CORE A*, Tsinghua CS Conference Rank A, Acceptance Rate at Summer Round: $10/51 \approx 19.6\%$)

Journal Version: Proceedings of the ACM on Measurement and Analysis of Computing Systems (POMACS), 2017, 1(2): 36.

- [16] Cheng Tan, Changbao Xu, **Lin Yang**, and Wing Shing Wong.
Gittins index based control policy for a class of pursuit-evasion problems.
IET Control Theory and Applications, 12(1), 110-118, 2017.
- [17] **Lin Yang**[#], Mohammad H. Hajiesmaili[#], Hanling Yi, and Minghua Chen.
Hour-Ahead Offering Strategies in Electricity Market for Power Producers with Storage and Intermittent Supply.
ACM International Conference on Measurement and Modeling of Computer Systems (**SIGMETRICS**), 2017.
(Poster Paper)
- [18] Chi-Kin Chau, **Lin Yang**.
Competitive online algorithms for geographical load balancing in data centers with energy storage.
International Workshop on Energy Efficient Data Centres. 2016.
- [19] **Lin Yang**, Jin Zhu, Wanqing Xie, and G. E. Dullerud.
Time Series Analysis for Congestion Detection in TCP/AQM Networks.
IEEE Communications Letters, 19(3), 331-334, 2015.
- [20] Jin Zhu, Limin Xu, **Lin Yang**, and Wanqing Xie.
An optimal vertical handoff decision algorithm for multiple services with different priorities in heterogeneous wireless networks.
Wireless Personal Communications, 83(1), 527-549, 2015.
- [21] **Lin Yang**, Jin Zhu, Wanqing Xie, and Xiaobin Tan.
Stable Tuning for Random Early Detection Algorithm.
IEEE Chinese Control Conference (CCC), July 2014.
- [22] **Lin Yang**, Jin Zhu, Liang Tang, Xita Hu, and Xiaobin Tan.
An Adaptive Resource Reservation Approach in Packet-Switched Wireless Mesh Networks.
IEEE Chinese Control Conference (CCC), July 2013.

REFERENCES

Wing Shing Wong (Ph.D. Supervisor)

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