

LIN YANG

Suzhou Campus, Nanjing University, Suzhou, China.
+86 13128934810 ◊ linyang@nju.edu.cn yanglin.cuhk@gmail.com

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

Tenure-track Assistant Professor, Nanjing University	2022.8 - Pres.
Postdoctoral Research Associate (with fellowship) in College of Information & Computer Science, UMass Amherst Advisor: Don Towsley, Mohammad Hajjiesmaili	2020.1 - 2022.6
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

TEACHING EXPERIENCE

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

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*. $\text{\textcircled{R}}$ 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*. $\text{\textcircled{R}}$ 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*. $\text{\textcircled{R}}$ 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)

Choh-Ming Li Chair Professor
Department of Information Engineering
The Chinese University of Hong Kong
Shatin, NT, Hong Kong, China
wswong@ie.cuhk.edu.hk
(852)3943-1444

Donald F. Towsley

Distinguished Professor
College of Information & Computer Sciences
University of Massachusetts, Amherst
Amherst, MA, USA, 01003
towsley@cs.umass.edu
(413)545-0207

Ramesh K. Sitaraman

Professor
College of Information & Computer Sciences
University of Massachusetts, Amherst
Amherst, MA, USA, 01003
ramesh@cs.umass.edu
(413)577-3178

John C.S. Lui

Choh-Ming Li Chair Professor
Department of Computer Science and Engineering
The Chinese University of Hong Kong
Shatin, NT, Hong Kong, China
cslui@cse.cuhk.edu.hk
(852)3943-8407

Mohammad H. Hajiesmaili

Research Assistant Professor
College of Information & Computer Sciences
University of Massachusetts, Amherst
Amherst, MA, USA, 01003
hajiesmaili@cs.umass.edu
(202)431-3560

Mohammad Sadegh Talebi

Assistant Professor
Department of Computer Science (ML Section)
University of Copenhagen
Universitetsparken 1, 2100 Copenhagen, Denmark
m.shahi@di.ku.dk
(45)3153-9770