

Haoran Yu

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Communications and Networking Lab (Commnet)
Department of Electrical and Computer Engineering
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Professional Experience

- **Post-Doctoral Fellow** Jan. 2018 - Present
Department of Electrical and Computer Engineering, Northwestern University
Advisors: Prof. Randall Berry (Fellow, IEEE) and Prof. Ermin Wei
- **Post-Doctoral Fellow** Feb. 2017 - Jan. 2018
Department of Information Engineering, The Chinese University of Hong Kong
- **Post-Doctoral Researcher** Oct. 2016 - Feb. 2017
Department of Information Engineering, The Chinese University of Hong Kong

Education

- **The Chinese University of Hong Kong** Hong Kong
Ph.D., Information Engineering Aug. 2012 - Sep. 2016
Thesis title: Optimization and Economic Analysis of Wi-Fi Networks
Advisor: Prof. Jianwei Huang (Fellow, IEEE)
- **Yale University** New Haven, CT, US
Visiting Student, Yale Institute for Network Science (YINS) Sep. 2015 - May 2016
Advisor: Prof. Leandros Tassiulas (Fellow, IEEE)
- **Beijing Institute of Technology** Beijing, China
B.E., Information Engineering (ranking: 1/114) Sept. 2008 - June 2012
Silver Graduate Student Award (selection ratio 1%)

Main Research Interests

- Mechanism Design for Networks
 - Sharing Economy
 - Mobile Advertising
 - Cellular and Wi-Fi Integration
 - Location-Based Services

Selected Awards

- **Best Team Player Award**, Network Communications and Economics Lab, CUHK, 2017
- **Best Paper Award Finalist** (one of 5 finalists from 1600 submissions), IEEE INFOCOM (acceptance rate 18%, CCF Ranking: Section A), 2016

- **Best-in-Session Presentation Award**, IEEE INFOCOM, 2016
- **Best Student Presentation Award**, Network Communications and Economics Lab, CUHK, 2016
- **Best Student Presentation Award**, Network Communications and Economics Lab, CUHK, 2014
- **Outstanding Teaching Assistant Award**, Information Engineering Department, CUHK, 2014
- **Silver Graduate Student Award** (selection ratio 1%), School of Info. and Electronics, BIT, 2012

Research Grants

- **Professional Development Travel Grant**, Northwestern University, 2019
- **Research Fellowship Scheme**, CUHK, 2016-2017
- **Student Travel Grant**, IEEE Communications Society for attending IEEE INFOCOM, 2016
- **Overseas Research Attachment Programme**, Faculty of Engineering, CUHK, 2015-2016
- **Global Scholarship Programme for Research Excellence**, CUHK, 2015-2016
- **Student Travel Grant**, IEEE Communications Society for attending IEEE GLOBECOM, 2014
- **Research Postgraduate Student Grants for Overseas Academic Activities**, CUHK, 2014
- **Postgraduate Studentship**, CUHK, 2012 - 2016
- **National Scholarship** (selection ratio 2%), China, 2008-2009, 2009-2010

Teaching Experiences

- **The Chinese University of Hong Kong**
Teaching Assistant, Department of Information Engineering
 - IERG3280: Networks: Technology, Economics, and Social Interactions (Spring 2015)
 - IEMS5709: Advanced Topics in Information Engineering (Spring 2015)
 - ENGG2420C: Complex Analysis and Differential Equations for Engineers (Fall 2014)
 - IERG3280: Networks: Technology, Economics, and Social Interactions (Spring 2014)
 - ENGG2420C: Engineering Mathematics II (Fall 2013)
 - ENGG2012B: Advanced Engineering Maths (Spring 2013)
 - IERG4200: Channel Coding and Modulation (Fall 2012)

Publications

- **Book Chapter**
 1. M. H. Cheung, H. Yu, and J. Huang, "Mobile Data Offloading for Heterogeneous Wireless Networks," chapter in *Key Technologies for 5G Wireless Systems*, V. W. S. Wong, R. Schober, D. W. K. Ng, and L. C. Wang (editors), Cambridge University Press, April 2017.

- **Journal Publications**

1. **H. Yu**, G. Iosifidis, B. Shou, and J. Huang, "Pricing for Collaboration Between Online Apps and Offline Venues," to appear in *IEEE Transactions on Mobile Computing (TMC)* (**CCF Ranking: Section A**).
2. **H. Yu**, E. Wei, and R. Berry, "Analyzing Location-Based Advertising for Vehicle Service Providers Using Effective Resistances," *Proceedings of the ACM on Measurement and Analysis of Computing Systems (POMACS)*, vol. 3, no. 1, March 2019.
3. **H. Yu**, M. H. Cheung, G. Iosifidis, L. Gao, L. Tassiulas, and J. Huang, "Mobile Data Offloading for Green Wireless Networks," *IEEE Wireless Communications*, vol. 24, no. 4, pp. 31–37, August 2017.
4. **H. Yu**, M. H. Cheung, L. Gao, and J. Huang, "Public Wi-Fi Monetization via Advertising," *IEEE/ACM Transactions on Networking (TON)*, vol. 25, no. 4, pp. 2110–2121, August 2017 (**CCF Ranking: Section A**).
5. **H. Yu**, M. H. Cheung, and J. Huang, "Cooperative Wi-Fi Deployment: A One-to-Many Bargaining Framework," *IEEE Transactions on Mobile Computing (TMC)*, vol. 16, no. 6, pp. 1559–1572, June 2017 (**CCF Ranking: Section A**).
6. **H. Yu**, G. Iosifidis, J. Huang, and L. Tassiulas, "Auction-Based Coopetition Between LTE Unlicensed and Wi-Fi," *IEEE Journal on Selected Areas in Communications (JSAC)*, vol. 35, no. 1, pp. 79–90, January 2017 (**CCF Ranking: Section A**).
7. **H. Yu**, M. H. Cheung, L. Huang, and J. Huang, "Power-Delay Tradeoff with Predictive Scheduling in Integrated Cellular and Wi-Fi Networks," *IEEE Journal on Selected Areas in Communications (JSAC)*, vol. 34, no. 4, pp. 735–742, April 2016 (**CCF Ranking: Section A**).

- **Conference Publications**

1. **H. Yu**, E. Wei, and R. Berry, "Analyzing Location-Based Advertising for Vehicle Service Providers Using Effective Resistances," in *Proc. of ACM SIGMETRICS*, Phoenix, Arizona, USA, June 2019 (acceptance rate of Fall deadline 17%, **CCF Ranking: Section B**).
2. **H. Yu**, E. Wei, and R. Berry, "A Business Model Analysis of Mobile Data Rewards," in *Proc. of IEEE International Conference on Computer Communications (INFOCOM)*, Paris, France, April 2019 (acceptance rate 20%, **CCF Ranking: Section A**).
3. Y. Zhu, **H. Yu**, R. Berry, and C. Liu, "Cross-Network Prioritized Sharing: An Added Value MVNO's Perspective," in *Proc. of IEEE International Conference on Computer Communications (INFOCOM)*, Paris, France, April 2019 (acceptance rate 20%, **CCF Ranking: Section A**).
4. Y. Zhu, **H. Yu**, and R. Berry, "The Cooperation and Competition Between an Added Value MVNO and an MNO Allowing Secondary Access," in *Proc. of International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt)*, Avignon, France, June 2019.
5. Y. Zhu, **H. Yu**, and R. Berry, "The Economics of Bundling Content with Unlicensed Wireless Service," in *Proc. of EAI International Conference on Game Theory for Networks (GameNets)*, Paris, France, April 2019.
6. **H. Yu**, E. Wei, and R. Berry, "Watch Ads, Earn Data: Economics of Mobile Data Rewards," in *Proc. of ACM Workshop on the Economics of Networks, Systems and Computation (NetEcon)*, Irvine, CA, USA, June 2018 (in conjunction with ACM SIGMETRICS 2018).

7. **H. Yu**, G. Iosifidis, B. Shou, and J. Huang, "Market Your Venue with Mobile Applications: Collaboration of Online and Offline Businesses," in *Proc. of IEEE International Conference on Computer Communications (INFOCOM)*, Honolulu, HI, USA, April 2018 (acceptance rate 19%, **CCF Ranking: Section A**).
8. **H. Yu**, G. Iosifidis, J. Huang, and L. Tassioulas, "Coopetition between LTE Unlicensed and Wi-Fi: A Reverse Auction with Allocative Externalities," in *Proc. of International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt)*, Tempe, AZ, USA, May 2016.
9. **H. Yu**, M. H. Cheung, L. Gao, and J. Huang, "Economics of Public Wi-Fi Monetization and Advertising," in *Proc. of IEEE International Conference on Computer Communications (INFOCOM)* (**a Best Paper Award finalist and one of top 5 papers of INFOCOM 2016 recommended for fast track publication in IEEE/ACM Transactions on Networking**), San Francisco, CA, USA, April 2016 (acceptance rate 18%, **CCF Ranking: Section A**).
10. **H. Yu**, M. H. Cheung, and J. Huang, "Cooperative Wi-Fi Deployment: A One-to-Many Bargaining Framework," in *Proc. of International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt)*, Mumbai, India, May 2015.
11. **H. Yu**, M. H. Cheung, L. Huang, and J. Huang, "Predictive Delay-Aware Network Selection in Data Offloading," in *Proc. of IEEE Global Communications Conference (GLOBECOM)*, Austin, TX, USA, December 2014.
12. **H. Yu**, M. H. Cheung, L. Huang, and J. Huang, "Delay-Aware Predictive Network Selection in Data Offloading," in *Proc. of IEEE International Conference on Computer Communications (INFOCOM) Student Poster Session*, Toronto, Canada, April 2014.

Professional Activities

- **Memberships**

- IEEE member
- IEEE Communications Society member

- **Organizing Committee Members**

- Publicity Chair of Fog Computing and Communications Workshop, Hong Kong, September 2017
- Publicity Co-Chair of IEEE International Conference on Computer Communications (INFOCOM) Smart Data Pricing Workshop, May 2017

- **Technical Program Committee (TPC) Members**

- IEEE Global Communications Conference (GLOBECOM), December 2017, December 2018
- IEEE International Conference on Computer Communications (INFOCOM) Economics of Fog, Edge and Cloud Computing Workshop, April 2019
- IEEE International Conference on Computer Communications (INFOCOM) Smart Data Pricing Workshop, May 2017
- International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt), May 2017, May 2018, June 2019
- International Conference on Network Games, Control and Optimization (NetGCoop), November 2018

- EAI International Conference on Game Theory for Networks (GameNets), April 2018, April 2019
- IEEE Sarnoff Symposium, 2019
- IEEE Wireless Communications and Networking Conference (WCNC), March 2017
- IEEE International Conference on Communications in China (ICCC), November 2015

- **Technical Reviewers**

- Journals

- * IEEE Journal on Selected Areas in Communications (JSAC)
- * IEEE Transactions on Mobile Computing (TMC)
- * IEEE Transactions on Wireless Communications (TWC)
- * IEEE Transactions on Communications (TCOM)
- * IEEE Transactions on Network Science and Engineering (TNSE)
- * IEEE Transactions on Cognitive Communications and Networking (TCCN)
- * IEEE Transactions on Big Data (TBD)
- * IEEE Transactions on Green Communications and Networking (TGCN)
- * IEEE Transactions on Vehicular Technology (TVT)
- * IEEE Transactions on Signal and Information Processing over Networks (TSIPN)
- * ACM Transactions on Modeling and Performance Evaluation of Computing Systems (ToMPECS)
- * EURASIP Journal on Wireless Communications and Networking
- * Journal of Communications and Information Networks
- * China Communications

- Conferences

- * IEEE International Conference on Computer Communications (INFOCOM)
- * International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt)
- * IEEE International Conference on Computer Communications (INFOCOM) Smart Data Pricing Workshop
- * International Conference on Network Games, Control and Optimization (NetGCoop)
- * IEEE Global Communications Conference (GLOBECOM)
- * IEEE International Conference on Communications (ICC)
- * IEEE International Conference on Communications (ICC) Workshop on E2Nets
- * IEEE Wireless Communications and Networking Conference (WCNC)
- * IEEE International Conference on Communications in China (ICCC)