

# Haoran Yu

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## Professional Experience

- **Associate Professor (Special Fellow)** Apr. 2020 - Now  
*School of Computer Science, Beijing Institute of Technology*
- **Post-Doctoral Fellow** Jan. 2018 - Aug. 2019  
*Department of Electrical and Computer Engineering, Northwestern University*  
*Working with: 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  
*Hosted by: 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

## Selected Awards

- **Best-in-Session Presentation Award**, IEEE INFOCOM, 2019
- **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 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**, E. Wei, and R. Berry, "Monetizing Mobile Data via Data Rewards," *IEEE Journal on Selected Areas in Communications (JSAC)*, 2020 (**CCF A**).
2. **H. Yu**, G. Iosifidis, B. Shou, and J. Huang, "Pricing for Collaboration Between Online Apps and Offline Venues," *IEEE Transactions on Mobile Computing (TMC)*, April 2019 (**CCF A**).
3. **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.
4. **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.
5. **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 A**).
6. **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 A**).
7. **H. Yu**, G. Iosifidis, J. Huang, and L. Tassiulas, "Auction-Based Competition Between LTE Unlicensed and Wi-Fi," *IEEE Journal on Selected Areas in Communications (JSAC)*, vol. 35, no. 1, pp. 79–90, January 2017 (**CCF A**).
8. **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 A**).

## • Conference Publications

1. **H. Yu**, E. Wei, and R. Berry, "Learning to Price Vehicle Service with Unknown Demand," in *Proc. of ACM International Symposium on Theory, Algorithmic Foundations, and Protocol Design for Mobile Networks and Mobile Computing (MobiHoc)*, Online, October 2020 (acceptance rate 15%, **CCF B**).
2. C. Huang, **H. Yu**, J. Huang, and R. Berry, "Online Crowd Learning with Heterogeneous Workers via Majority Voting," in *Proc. of International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt)*, Volos, Greece, June 2020.
3. C. Huang, **H. Yu**, J. Huang, and R. Berry, "Crowdsourcing with Heterogeneous Workers in Social Networks," in *Proc. of IEEE Global Communications Conference (GLOBECOM)*, Waikoloa, HI, USA, December 2019.
4. C. Huang, **H. Yu**, J. Huang, and R. Berry, "Incentivizing Crowdsourced Workers via Truth Detection," in *Proc. of IEEE Global Conference on Signal and Information Processing (GlobalSIP)*, Ottawa, Canada, November 2019.
5. **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 B**).
6. 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.

7. **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 A**).
8. 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 A**).
9. 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.
10. **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).
11. **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 A**).
12. **H. Yu**, G. Iosifidis, J. Huang, and L. Tassiulas, "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.
13. **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 A**).
14. **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.
15. **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.
16. **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 Chair of ACM MobiHoc Economics of Fog, Edge and Cloud Computing Workshop, October, 2020
- 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 Communications (ICC), June 2020
- ACM MobiHoc Economics of Fog, Edge and Cloud Computing Workshop, October, 2020
- 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, June 2020
- 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 Internet of Things Journal (IoT-J)
  - \* 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)