

# Haoran Yu

(Updated: November 30, 2018)

Communications and Networking Lab (Commnet)  
Department of Electrical Engineering and Computer Science  
Northwestern University

Phone: 1-847-316-1232  
Email: yhrhawk@gmail.com  
Website: haoranyu.net

## Professional Experience

- **Post-Doctoral Fellow** Jan. 2018 - Present  
*Department of Electrical Engineering and Computer Science, 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

- Network Games and Economics
  - Sharing Economy
  - Business Models of Mobile Advertising
  - Location-Based Services and Marketing
  - One-to-Many Sequential Bargaining
- Wireless Communications and Networking
  - Wi-Fi Data Offloading
  - Coexistence of LTE Unlicensed and Wi-Fi

## 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, 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

- **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**, 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.
2. **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.
3. **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.
4. **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.
5. **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.

- **Conference Publications**

1. **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%).
2. 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%).
3. **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).
4. **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%).
5. **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.
6. **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%).
7. **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.

8. **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.
9. **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 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 Green Communications and Networking (TGCN)
  - \* IEEE Transactions on Vehicular Technology (TVT)
  - \* ACM Transactions on Modeling and Performance Evaluation of Computing Systems (ToMPECS)

- \* EURASIP Journal on Wireless Communications and Networking
- \* 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)