

DR. YUAN LUO

CURRENT POSITION

Assistant Professor
The School of Science and Engineering
The Chinese University of Hong Kong (Shenzhen)

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EDUCATION AND WORKING

- **The Chinese University of Hong Kong (Shenzhen)**, China
 - Tenure-Track Assistant Professor, School of Science and Engineering March 2021 - Present
- **Imperial College London**, London, United Kingdom
 - Research Fellow, Department of Computing Apr. 2017 - Feb. 2021
 - Advisor: Prof. [Nick Jennings](#) (Companion of The Order of the Bath (CB), Fellow of the Royal Academy of Engineering (FREng), Fellow of IEEE)
- **The Chinese University of Hong Kong**, Hong Kong
 - Postdoc Fellow, Information Engineering Sept. 2015 - Mar. 2017
 - Advisor: Prof. [Jianwei Huang](#) (Fellow of IEEE)
- **The Chinese University of Hong Kong**, Hong Kong
 - Ph.D., Information Engineering Aug. 2011 - Aug. 2015
 - Advisor: Prof. [Jianwei Huang](#) (Fellow of IEEE)
- **University of California at Berkeley**, Berkeley, United States
 - Visiting Scholar, Department of Electrical Engineering and Computer Sciences Sept. 2014 - Mar. 2015
 - Advisor: Prof. [Jean Walrand](#) (Fellow of IEEE)
- **Beijing University of Posts and Telecommunications**, Beijing, China
 - M.S., Information & Communication Engineering Sept. 2008 - Apr. 2011
 - Advisor: Prof. Ping Zhang (Fellow of IEEE)
 - Excellent Graduate Student Award
- **Tianjin University**, Tianjin, China
 - B.S., Electronics Engineering (GPA:3.82/4, Rank: 3/149) Sept. 2004 - Jul. 2008
 - Best Undergraduate Thesis

WORKING EXPERIENCES

- **Ennoval Technology Co. Ltd.** Shenzhen, China
 - Co-founder** Jul. 2012 - Jun. 2013
 - Our Ennoval Technology Ltd. was a start-up based on Hong Kong ICT creative fund. We provide a solution for cable fault monitoring in telecommunication access networks.
 - As a co-founder I was in charge of detecting algorithm design and implementation.
 - I also involved in the entire process of capital raising and negotiation with the Venture Capitals.
- **SHARP Laboratories Co. Ltd** Shanghai, China
 - Researcher, in Wireless Communication Group** Apr. 2011 - Jul. 2011
 - I was in charge of developing L1&L2 protocols for LTE-A network based on 3GPP LTE-A Specifications.
 - I developed the whole program for the simulation validation.
 - I participated in several standardized proposal such as channel state information feedback mechanism design and downlink grant physical downlink control channel design.
 - I filed several patents.

SELECTED AWARDS

- **Imperial College Fellowship**, 2017-2022
- **CUHK Young Scholar Thesis Award 2015** of the Chinese University of Hong Kong (the only awardee from Faculty of Engineering), 2016
- **CUHK Postgraduate Research Output Award 2015** of the Chinese University of Hong Kong (the only awardee from Faculty of Engineering), 2016
- **Best Paper Award** in IEEE WIOPT, 2014 (only **top 1%**-rated paper was selected)
- **Global Scholarship Programme for Research Excellence Award** of The Chinese University of Hong Kong, 2014
- **Overseas Research Attachment Programme Award** of The Chinese University of Hong Kong, 2014

- **Hong Kong PhD Fellowship**, 2011-2014 (top 3%)
 - The Highest Honor for a PhD Student in Hong Kong
- **Excellent Graduate Student Award** of Beijing University of Posts and Telecommunications, 2011
- **Best Undergraduate Thesis** of Tianjin University, 2008
- **First Prize** in National Undergraduate Electronic Design Contest, Tianjin Region, 2007

PUBLICATIONS

Book

1. **Y. Luo**, L. Gao, and J. Huang, “Economics of Database-Assisted Spectrum Sharing”, Xuemin (Sherman) Shen (series editor), Springer, 80 pages, July 2016 (<https://www.springer.com/la/book/9783319432304>).

Journal

1. **Y. Luo** and N. Jennings, “A Budget-Limited Mechanism for Category-Aware Crowdsourcing of Multiple-Choice Tasks”, *Artificial Intelligence*, vol. 299, 2021 (SCI, IF:6.628, JCR Q1).
2. **Y. Luo** and N. Jennings, “A Differential Privacy Mechanism that Accounts for Network Effects for Crowdsourcing Systems”, *Journal of Artificial Intelligence Research*, vol. 69, pp: 1127-1164, 2020 (SCI, IF:2.441, JCR Q1).
3. **Y. Luo**, N. Shah, J. Huang, and J. Walrand, “Parametric Prediction from Parametric Agents”, *Operations Research (A+ Journal in Operations Research and Management Science)*, vol. 66, no. 2, pp: 313-326, 2018 (SCI, IF:2.604, JCR Q2).
4. **Y. Luo**, L. Gao, and J. Huang, “An Integrated Spectrum and Information Market for Green Cognitive Communications”, *IEEE Journal on Selected Areas in Communications (No. 1 Ranking Journal in Telecommunications by SCI)*, vol. 34, no. 12, pp. 3326-3338, Aug. 2016 (SCI, IF:11.42, JCR Q1).
5. **Y. Luo**, L. Gao, and J. Huang, “MINE GOLD to Deliver Green Cognitive Communications”, *IEEE Journal on Selected Areas in Communications (No. 1 Ranking Journal in Telecommunications by SCI)*, vol. 33, no. 2, pp. 2749-2760, Dec. 2015 (SCI, IF:11.42, JCR Q1).
6. **Y. Luo**, L. Gao, and J. Huang, “Spectrum Reservation Contract Design in TV White Space Networks”, *IEEE Transactions on Cognitive Communications and Networking (Invited Paper for the Inaugural Double-Issue)*, vol. 1, no. 2, pp. 147-160, June. 2015 (SCI, IF:4.57).
7. **Y. Luo**, L. Gao, and J. Huang, “Business Modeling for TV White Space Networks”, *IEEE Communications Magazine*, vol. 53, no. 5, pp. 82-88, May 2015 (SCI, IF:11.05, JCR Q1).
8. **Y. Luo**, L. Gao, and J. Huang, “Price and Inventory Competition in Oligopoly TV White Space Markets”, *IEEE Journal on Selected Areas in Communications (No. 1 Ranking Journal in Telecommunications by SCI)*, vol. 33, no. 5, pp. 1002-1013, May 2015 (SCI, IF:11.42, JCR Q1).
9. L. Song, L. Li, X. Gao, H. Wang, and **Y. Luo**, “Gain Matrix Design Method to Ensure Reciprocity in TDD MIMO Relay Systems”, *IEICE Transactions on Communications*, vol. E94-B, no. 12, pp. 3395-3398, December, 2011.

Conference

1. **Y. Luo** and N. Jennings, “A Budget-Limited Mechanism for Category-Aware Crowdsourcing Systems”, *Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2020 (A+ Conference in Artificial Intelligence).
2. **Y. Luo** and N. Jennings, “A Differential Privacy Mechanism with Network Effects for Crowdsourcing Systems”, *Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pp. 1998-2000, 2018 (A+ Conference in Artificial Intelligence).
3. **Y. Luo**, N. Shah, J. Huang, and J. Walrand, “Parametric Prediction from Parametric Agents”, *ACM NetEcon 2015 (in conjunction with ACM SIGMETRICS 2015 and ACM EC 2015)*, 2015 (acceptance rate 20% for long papers).
4. **Y. Luo**, L. Gao, and J. Huang, “HySIM: A Hybrid Spectrum and Information Market for TV White Space Networks”, *IEEE International Conference on Computer Communications (INFOCOM)*, pp. 900–908, 2015 (acceptance rate 19%).
5. **Y. Luo**, L. Gao, and J. Huang, “Trade Information, Not Spectrum: A Novel TV White Space Information Market Model”, *IEEE International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt) (Best Paper Award)*, pp. 405–412, 2014.

6. **Y. Luo**, L. Gao, and J. Huang, "Information Market for TV White Space Market", *IEEE Workshop on Smart Data Pricing (SDP) (Invited Paper)*, pp. 604–609, May 2014.
7. **Y. Luo**, L. Gao, and J. Huang, "White Space Ecosystem: A Secondary Network Operator's Perspective", *IEEE Global Communications Conference (GLOBECOM)*, pp. 925–930, 2013.
8. **Y. Luo**, L. Gao, and J. Huang, "Spectrum Broker by Geo-location Database", *IEEE Global Communications Conference (GLOBECOM)*, pp. 5427–5432, 2012.
9. **Y. Luo**, L. Li, and Z. Liu, "A Hybrid Codebook Design Algorithm for MIMO Amplify-and-Forward Relaying System with Power Allocation and Precoding", *IEEE Global Communications Conference (GLOBECOM)*, pp. 1–5, 2010.
10. **Y. Luo**, L. Li, Q. Wang, and Z. Liu, "A Codebook-Based Precoding Method for MIMO Amplify-and-Forward Relaying System", *IEEE Vehicular Technology Conference (VTC-Fall)*, pp. 1-5, 2010.

PATENT

1. "A Codebook-based Signal Sending Method for MIMO Relaying System," China patent, issued CN101873203B
2. "Method, UE Device, and Base station for Transmitting and Receiving Downlink Physical HARQ Indexing," China patent, issued CN102882663A
3. "Method and Device for Downlink Grant Physical Downlink Control Channel," China patent, issued CN102883368A
4. "Channel State Information Feedback Method and User Equipment," China patent, issued CN102857277A
5. "Codebook Generating Method and Device of Pre-coding in Multiple-Input-Multiple-Output (MIMO) System," China patent, issued CN 102006111A
6. "Channel State Information Feedback Method and User Equipment," U.S. patent, WO2013001968

PROFESSIONAL ACTIVITIES

- **Editorship**

- Area Editor, Springer Encyclopedia of Wireless Networks (Area on Network Economics and pricing)

- **Tutorial**

- Economics of Database-Assisted Spectrum Sharing (IEEE DySPAN 2017)
- Economics of TV White Space Networks (IEEE ICC 2015)

- **Academic Organizer and Chair**

- Publicity chair of IEEE Smart Data Pricing (SDP) workshop 2016
- Session chair of IEEE GLOBECOM 2013

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

- AAMAS 2021, IEEE INFOCOM 2020, INFOCOM 2019, INFOCOM 2018, WiOpt2017

- **Selected Technical Reviewers**

- Journal: IEEE/ACM TON, IEEE JSAC, TMC, TWC, TVT,
- Conference: IEEE INFOCOM, GLOBECOM, ICC, WiOpt