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# Bing Luo

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## PROFESSIONAL EXPERIENCES

### International Post-Doctoral Research Fellow

Oct. 2019 – Now

- Shenzhen Institute of Artificial Intelligence and Robotics for Society (AIRS)

Working with: Prof. Jianwei Huang (*Fellow, IEEE*)

- Yale Institute for Network Science (YINS), Yale University

Working with: Prof. Leandros Tassiulas (*Fellow, IEEE*)

### Project Manager

Apr. 2012 - Jan. 2016

China Mobile Communication Corporation, Headquarter

Beijing, China

- China Mobile LTE quality of service management innovation project
- China Mobile LTE wireless quality management innovation project

## EDUCATION

### The University of Melbourne

Melbourne, VIC Australia

Ph.D., Electrical & Electronics Engineering

May. 2016 – Sep. 2019

### Beijing Univ. of Posts and Telecommunications

Beijing, China

- M.E., Communication and Information Systems

Sep. 2009 – Mar. 2012

- B.E., Communication Engineering

Sep. 2005 – Jul. 2009

## RESEARCH VISITING

### IBM T. J. Watson Research Center

Yorktown Heights, NY, USA

Department of Distributed AI

Feb. 2019

### Yale University

New Haven, CT, US

Yale Institute for Network Science

Sep. 2018 – Jan. 2019

### Friedrich-Alexander-University

Erlangen, Germany

Institute for Digital Communications

Apr. 2018 – Jun. 2018

### Aalto University

Helsinki, Finland

Department of Communications and Networking

Sep. 2011 – Oct. 2011

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## PUBLICATIONS

### • Journal Papers

1. **B. Luo**, X. Li, S. Wang, J. Huang, L. Tassiulas, "Cost-Effective Federated Learning in Mobile Edge Networks," submitted to *IEEE Journal on Selective Areas in Communications (JSAC)*, 2021.
2. **B. Luo**, PL. Yeoh, R. Schober and B. Krongold, "Distributed Energy Beamforming for Wireless Power Transfer over Frequency-Selective Fading Channels," submitted to *IEEE Transactions on Green Communications and Networking*, 2021.
3. **B. Luo**, PL. Yeoh, and B. Krongold, "Optimal Transmit Strategy and Power Allocation for OFDM-DAS with Total and Individual Power Constraints," submitted to *IEEE Transactions on Green Communications and Networking*, 2021.
4. **B. Luo**, PL. Yeoh, and B. Krongold, "Optimal Co-Phasing Power Allocation and Capacity of Coordinated OFDM Transmission with Total and Individual Power Constraints," *IEEE Transactions on Communications*, vol. 67, no. 10, pp. 7103-7113, Oct. 2019.
5. **B. Luo**, Q. Cui, and X. Tao, "Optimal Joint Water-Filling for Coordinated Transmission over Frequency-Selective Fading Channels," *IEEE Communication Letters*, vol.15, no.2, pp.190-192, Feb. 2011.
6. **B. Luo**, Q. Cui, X. Tao, and P. Zhang, "Closed Form Solutions of Joint Water-Filling for Coordinated Transmission," *IEICE Transactions on Communications*, vol. 93-B, no. 12, pp. 3461-3468, Jan. 2010.
7. Q. Cui, **B. Luo**, X. Huang and A.A. Dowhuszko, "Closed Form Solution for Minimizing Power Consumption in Coordinated Transmissions," *EURASIP Journal on Wireless Communications and Networking*: vol. 2012, no. 122, Mar. 2012.
8. Q. Cui, X. Huang, **B. Luo** and X. Tao, "Capacity Analysis and Optimal Power Allocation for Coordinated MIMO-OFDM Systems," *Science China Information Sciences*, vol. 55, no. 6, pp.1372-1378, Jun. 2012.

### • Conference Papers

1. **B. Luo**, X. Li, S. Wang, J. Huang, L. Tassiulas, "Cost-Effective Federated Learning Design," accepted in *IEEE International Conference on Computer Communications (INFOCOM)*, 2021.
2. **B. Luo**, PL. Yeoh, R. Schober and B. Krongold, "Optimal Frequency-Selective Energy Beamforming with Joint Total and Individual Power Constraints", *IEEE Global Communications Conference (GLOBECOM)*, Waikoloa, HI, USA, December, 2019.
3. **B. Luo**, PL. Yeoh and B. Krongold, "Optimal Power Allocation for DAS-OFDM under Joint Total and Individual Power Constraints," *IEEE Global Communications Conference (GLOBECOM)*, Waikoloa, HI, USA, December, 2019.
4. **B. Luo**, PL. Yeoh, R. Schober and B. Krongold, "Optimal Energy Beamforming for Distributed Wireless Power Transfer over Frequency-Selective Channels," *IEEE International Conference on Communications (ICC)*, Shanghai, China, May 2019.
5. **B. Luo**, PL. Yeoh, and B. Krongold, "Optimal Co-phasing Power Allocation for Coordinated OFDM Transmission," *IEEE International Conference on Communications (ICC)*, Paris, France, Jun. 2017.
6. **B. Luo**, Q. Cui, X. Tao, and A.A. Dowhuszko, "On the Optimal Power Allocation for Coordinated Wireless Backhaul in OFDM Based Relay Systems," *IEEE International Conference on Communications (ICC)*, Budapest, Hungary, Jun. 2013.
7. **B. Luo**, Q. Cui, and X. Tao, "Constant-Power Joint Water-filling for Coordinated Transmission," *IEEE Global Communications Conference (GLOBECOM)*, Houston, US, Dec. 2011.
8. **B. Luo**, Q. Cui, H. Wang, and X. Tao, "Optimal Joint Water-filling for OFDM Systems with Multiple Cooperative Power Sources," *IEEE Global Communications Conference (GLOBECOM)*, Miami, US, Dec. 2010.
9. Q. Cui, **B. Luo**, and X. Tao, "Joint Power Allocation Solutions for Power Consumption Minimization in Coordinated Transmission System," *IEEE Global Communications Conference (GLOBECOM) Workshop on Multi-Cell Cooperation*, Houston, US, Dec. 2011.

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## PATENTS

- **US Patent:** “Method for Allocating Downlink Transmission Power of Coordinated Transmission Devices in Coordinated Multi-point Transmission System”. No. US 8,811,147, Aug., 2014  
Inventors: Q. Cui, P. Zhang, X. Tao, **B. Luo**, A.A. Dowhuszko, and J. Hämäläinen.
- **Chinese Patent:** “Method and Apparatus for Distributed Power Control in LTE-A system”. No. CN103906200A, Jul., 2014  
Inventors: **B. Luo**, J. Sun, B. Tan, W. Jin and C. He

## SELECTED HONORS & AWARDS

- |   |           |
|---|-----------|
| • International Postdoc Fellowship, AIRS                      | 2019-2021 |
| • Melbourne Research Scholarship, Melbourne University        | 2016-2019 |
| • Kenneth Myers Memorial Scholarship, Melbourne University    | 2018      |
| • Robert Bage Memorial Scholarship, Melbourne University      | 2017      |
| • Technical Innovation Expert Award, China Mobile             | 2014      |
| • Advanced LTE Technology Professionals Award, China Mobile   | 2013      |
| • 1 <sup>st</sup> Outstanding Master Thesis, BUPT             | 2012      |
| • Wu Tong Communications. Co., Ltd, Scholarship               | 2012      |
| • National First Grade Scholarship                            | 2011      |
| • Meritorious Winner 24th US Mathematical Contest in Modeling | 2008      |

## PROFESSIONAL ACTIVITIES

### Memberships

- IEEE member & IEEE Communications Society member
- TPC member in IEEE ICC 2020、2021 and IEEE GLOBECOM 2020

### Technical Reviewers

- IEEE Journal on Selective Areas in Communications
- IEEE Transactions on Communications
- IEEE Wireless Communication Letters
- IEEE Communication Letters
- IEEE Global Communications Conference (GLOBECOM)
- IEEE International Conference on Communications (ICC)
- IEEE International Conference on Communications (ICC)
- IEEE International Symposium on Information Theory (ISIT)

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## REFERENCES

### **Prof. Jianwei Huang**

Associate Dean, School of Science and Engineering, The Chinese University of Hong Kong, Shenzhen  
Room 608, Teaching Building C, 2001 Longxiang Road, Longgang District, Shenzhen, China  
Email: [jianweihuang@cuhk.edu.cn](mailto:jianweihuang@cuhk.edu.cn)

### **Prof. Leandros Tassiulas**

Chair, Electrical Engineering, Yale Institute for Network Science (YINS), Yale University  
Room 336, 17 Hillhouse Avenue, New Haven, CT 06511, USA  
Email: [leandros.tassiulas@yale.edu](mailto:leandros.tassiulas@yale.edu)

### **Assoc. Prof. Brain Krongold**

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Level 05 Room: 5.12, Electrical and Electronic Engineering, Parkville, VIC 3000, Australia  
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### **Prof. Robert Schober**

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### **Lihong Wei**

General Manager of Department of Networking, China Mobile  
No. 29, Jin Rong St. Xi Cheng Dist., Beijing, 100033, China  
Email: [sunjinxia@chianmobile.com](mailto:sunjinxia@chianmobile.com)

### **Prof. Xiaofeng Tao**

Dean, School of Information and Communications Engineering, BUPT  
No. 10, Xi Tu Cheng Road, Beijing, 100876, China  
Email: [taoxf@bupt.edu.cn](mailto:taoxf@bupt.edu.cn)

### **Prof. Qimei Cui**

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No. 10, Xi Tu Cheng Road, Beijing, 100876, China  
Email: [cuiqimei@bupt.edu.cn](mailto:cuiqimei@bupt.edu.cn)

### **Prof. Jyri Hämmäläinen**

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