

# Winston W. L. Ho

## *Curriculum Vitae*

**Contact**      <http://www1.i2r.a-star.edu.sg/~wlho/>  
<https://sites.google.com/site/drwinstonho/>

## **Positions**

2012–2013      Scientist  
Institute for Infocomm Research

2011–2012      Postdoctoral Fellow  
Technion, Israel Institute of Technology

2008–2011      Research Engineer  
Institute for Infocomm Research

2003            Industrial Attachment Intern  
Institute for Communications Research

## **Education**

2004–2008      *Ph.D., Electrical Engineering*  
National University of Singapore  
Thesis: *Multiuser MIMO Wireless Communications: Optimal and Efficient Schemes for Rate Maximization and Power Minimization*  
Supervisors: Lye Kin Mun and Liang Ying Chang

2000–2004      *B.Eng. (Hon.), Electrical Engineering*  
National University of Singapore  
Final Year Project: *Febrile Fits Monitor*  
Supervisor: Ko Chi Chung

## **Fellowships and Awards**

2004            Agency for Science, Technology and Research Graduate Scholarship  
2002            NUS DEAN'S LIST 2002/2003 Semester 1  
2000            NUS DEAN'S LIST 2000/2001 Semester 1

## **Research Interests**

### **Broad**

- ❖ signal processing and communications theory
- ❖ wireless communications
- ❖ convex optimization

### **Specific**

- ❖ algorithms for multiuser space-time wireless communications
- ❖ broadband resource allocation and cooperative communications

## Selected Publications

### Journals

W. W. L. Ho, T. Q. S. Quek, S. Sun, and R. W. Heath Jr., "Decentralized precoding for multicell MIMO downlink," *IEEE Trans. Wireless Commun.*, vol. 10, no. 6, pp. 1798–1809, Jun. 2011.

W. W. L. Ho and Y.-C. Liang, "Optimal resource allocation for multiuser MIMO-OFDM systems with user rate constraints," *IEEE Trans. Veh. Technol.*, vol. 58, no. 3, pp. 1190–1203, Mar. 2009.

S. Lin, W. W. L. Ho, and Y.-C. Liang, "Block diagonal geometric mean decomposition (BD-GMD) for MIMO broadcast channels," *IEEE Trans. Wireless Commun.*, vol. 7, no. 7, pp. 2778–2789, Jul. 2008.

### Conferences

W. W. L. Ho, T. Q. S. Quek, and S. Sun, "Distributed precoding for network MIMO," in *Proc. IEEE Int. Conf. Commun.*, Cape Town, SOUTH AFRICA, May 2010, pp. 1–5.

W. W. L. Ho, T. Q. S. Quek, and S. Sun, "Decentralized base station processing for multiuser MIMO downlink CoMP," in *Proc. IEEE Veh. Technol. Conf.*, Taipei, TAIWAN, May 2010, pp. 1–5.

W. W. L. Ho and Y.-C. Liang, "Two-way relaying with multiple antennas using covariance feedback," in *Proc. IEEE Veh. Technol. Conf.*, Calgary, CANADA, Sep. 2008, pp. 1–5.

W. W. L. Ho and Y.-C. Liang, "Efficient resource allocation for power minimization in MIMO-OFDM downlink," in *Proc. IEEE Veh. Technol. Conf.*, Calgary, CANADA, Sep. 2008, pp. 1–5.

W. W. L. Ho and Y.-C. Liang, "User ordering and subchannel selection for power minimization in MIMO broadcast channels using BD-GMD," in *Proc. IEEE Veh. Technol. Conf.*, Calgary, CANADA, Sep. 2008, pp. 1–5.

W. W. L. Ho and Y.-C. Liang, "Efficient power minimization for MIMO broadcast channels with BD-GMD," in *Proc. IEEE Int. Conf. Commun.*, Glasgow, SCOTLAND, Jun. 2007, pp. 2791–2796.

S. Lin, W. W. L. Ho, and Y.-C. Liang, "MIMO broadcast communications using block-diagonal uniform channel decomposition (BD-UCD)," in *Proc. IEEE Int. Symp. Personal, Indoor and Mobile Radio Commun.*, Helsinki, FINLAND, Sep. 2006, pp. 1–5.

S. Lin, W. W. L. Ho, and Y.-C. Liang, “Block-diagonal geometric mean decomposition (BD-GMD) for multiuser MIMO broadcast channels,” in Proc. IEEE Int. Symp. Personal, Indoor and Mobile Radio Commun., Helsinki, FINLAND, Sep. 2006, pp. 1–5.

### **Book Chapter**

W. W. L. Ho, T. Q. S. Quek, and R. W. Heath, Jr., “Distributed Multicell Precoding for Network MIMO”, Cognitive Radio and Interference Management: Technology and Strategy, Edited by M.-L. Ku and J.-C. Lin, IGI Global, pp. 78–101, 2012.

### **Service to the International Community**

2009–2010      Committee Secretary  
IEEE VTS Singapore Chapter  
<http://ewh.ieee.org/r10/singapore/vts/>

2010            I organized the International Conference on Communication Systems (ICCS) which was successfully held in November 2010. I was the main administrator for the conference management system and helped in several important aspects such as obtaining IEEE sponsorship, corresponding with authors and societies, maintaining the conference website, and overseeing the publication process.

### **Other Activities**

2005–2006      Committee Member, NGS Scholars Alliance  
2000–2001      Member, Navigators, NUS  
1996–1997      Member, Fencing Team, Raffles Junior College  
1993–1995      Member, Choir, Raffles Institution  
1992–1995      Member, Swim Team, Raffles Institution

### **Programming Experience**

Matlab, LaTeX, C, C++, Java, Python, Arduino, Octave

2013-05-05