Selected publications (citations were checked at the beginning of Nov. 2013)

Since 2008, Professor Jie Zhang’s publications have been cited for over 2100 times. The papers listed below include some of the most widely cited papers on femtocell and eICIC for HetNet (Heterogeneous Network), both of which are key enabling technologies for 4G/5G mobile communications networks.

For up-to-date citation information, please visit http://scholar.google.co.uk/citations?user=2zEFa4gAAAAJ&hl=en.

[1] Jie Zhang, Guillaume de la Roche, et al
Femtocells – Technologies and Deployment
This is the first technical book on femtocell and has been used by all major femtocell vendors and operators.

OFDMA femtocells: A roadmap on interference avoidance

Access Control Mechanisms for Femtocells
This is the most widely cited femtocell paper on access control.

Enhanced Inter-Cell Interference Coordination Challenges in Heterogeneous Networks.
IEEE Wireless Communications, vol. 18, no 3, pp. 22 – 30, June 2011. [citations: 200] This is the most widely cited paper on eICIC.

Access Methods to WiMAX Femtocells: A downlink system-level case study
IEEE ICCS (International Conference on Communication Systems), Guangzhou, China, November 2008. [68 citations]
This is the first femtocell paper on access control.

Interference Avoidance and Dynamic Frequency Planning for WiMAX Femtocells Networks
IEEE ICCS (International Conference on Communication Systems), Guangzhou, China, November 2008. [76 citations]
This is the first paper on OFDMA-based femtocell.
Applying FDTD to the coverage prediction of WiMAX femtocells
Eurasip Journal of Wireless Communications and Networking, Feb. 2009, Article ID 308606. [51 citations]

[8] G de la Roche, A Ladányi, D López-Pérez, CC Chong, J Zhang
Self-organization for LTE enterprise femtocells
GLOBECOM Workshops (GC Wkshps), 2010 IEEE, 674-678
This is the first paper on enterprise femtocell. [18 citations]

OFDMA femtocells: A self-organizing approach for frequency assignment
IEEE PIMRC (Personal, Indoor and Mobile Radio Communications), Tokyo, Japan, September 2009. [54 citations]

[10] Valcarce, D. López Pérez, G. De La Roche and J. Zhang
Limited Access to OFDMA femtocells
IEEE PIMRC (Personal, Indoor and Mobile Radio Communications), Tokyo, Japan, September 2009. [44 citations]

Intracell Handover for Interference and Handover Mitigation in OFDMA Two-Tier Networks
EURASIP Journal of Wireless Communications and Networking. Special issue on Femtocells, March 2010. [41 citations]

[12] A. Valcarce, G. De La Roche, J. Zhang
A GPU approach to FDTD for Radio Coverage Prediction
IEEE International Conference on Communication Systems (ICCS), Guangzhou, China, November 2008. [26 citations]

[13] Alvaro Valcarce and Jie Zhang
Empirical Indoor-to-Outdoor propagation model for residential areas at (0.9 - 3.5) GHz

A New Deterministic Hybrid Model for Indoor-to-Outdoor Radio Coverage Prediction

Antenna Height Compensation for an Indoor to Outdoor Channel model based on a 2D Finite Difference Model
29th Progress In Electromagnetics Research Symposium (PIERS), Marrakesh, Morocco, March 2011.

The Characterization and Human-Body Influence on Indoor 3.525 GHz Path
Loss Measurement
International Workshop on Planning and Optimization of Wireless Communication Networks (IEEE WCNC2010 Workshop), Sydney, Australia, April 2010.

Combination of Geometric and Finite Difference Models for Radio Wave Propagation in Outdoor to Indoor Scenarios
European Conference on Antennas and Propagation (EuCAP 2010), Barcelona, Spain, April 2010.

Implementation and Validation of a New Combined Model for Outdoor to Indoor Radio Coverage Predictions
EURASIP Journal on Wireless Communications and Networking, Article ID 215352, 2010.

Combined Model for Outdoor to Indoor Radio Propagation
COST2100 Management Meeting, TD(10)10045, Athens, Greece, February 2010.

A New Approach to Solve Angular Dispersion of Discrete Ray Launching for Urban Scenarios

[21] G. de la Roche, J-M. Gorce and J. Zhang
Optimized implementation of the 3D MR-FDPF method for Indoor radio propagation predictions
3rd European Conference on Antennas and Propagation (EuCAP 2009 ), Berlin, Germany, March 2009.

Intelligent Ray Launching Algorithm for Indoor Scenarios

[23] A. Valcarce, H. Song and J. Zhang
Characterization of the Numerical Group Velocity in Yee’s FDTD Grid

On the design of dispersion-robust pulsed sources for wideband finite-difference time-domain electromagnetic simulations
IEEE Transactions on Microwave Theory and Techniques, vol. 58, no. 11, 2838 – 2849, Nov. 2010

Multiuser Scheduling on the Downlink of an LTE Cellular System
[26] J. Yang, M. Aydin, J. Zhang, C. Maple
**UMTS Base Station Location Planning: a Mathematical Model and Heuristic Optimisation Algorithms**
*IET Communications, October 2007, vol. 1 (5), pp.1007-1014. [35 citations]*

[27] L. Zhao, J. Zhang, and H. Zhang
**Using Incompletely Cooperative Game Theory in Wireless Mesh Networks**

**Multiuser Scheduling in HSDPA**
*IET Communications, vol. 3, no. 8 , pp. 1363-1370, Aug. 2009 [8 citations]*

[29] R. Kwan, C. Leung, J. Zhang
**Proportional Fair Multiuser Scheduling in LTE**

**A multiobjective optimization framework for IEEE 802.16e network design and performance analysis**
*IEEE Journal on Selected Areas in Communications (J-SAC), vol. 27, no. 2, pp. 202-216, February 2009 special issue on Broadband Access Networks. [17 citations]*

[31] H. Song, R. Kwan and J. Zhang
**Approximations of EESM Effective SNR Distribution**

[32] H. Song, R. Kwan and J. Zhang
**General Results on SNR Statistics involving EESM-based Frequency Selective Feedbacks**

[33] H. Song, R. Kwan, J. Zhang
**On statistical characterization of EESM effective SNR over frequency selective channels**


