

Assignment: Survey of a Wireless Networking Topic

18-452/18-750 Wireless Networking, Spring 2017

Accessing some papers requires you to be on campus. Alternatively you can use a VPN.

Papers marked with a checkmark are part of the course syllabus.

Friday April 14:

Low power wireless (Ashwin Raghavachari)

- ✓ [Versatile low power media access for wireless sensor networks](#). The 2nd international conference on Embedded networked sensor systems. ACM, 2004.
- [Koala: Ultra-low power data retrieval in wireless sensor networks](#). Information Processing in Sensor Networks. IPSN 2008.
- [Design and evaluation of a versatile and efficient receiver-initiated link layer for low-power wireless](#). The 8th ACM Conference on Embedded Networked

Channel-aware optimization (Artur Balanuta)

- [CENTAUR: Realizing the Full Potential of Centralized WLANs through a Hybrid Data Path](#), ACM MobiCom 2009
- [Interference-Aware Transmission Power Control for Dense Wireless Networks](#), Proceedings of the Annual Conference of ITA, September 2007.
- ✓ [DIRC: Increasing Indoor Wireless Capacity Using Directional Antennas](#), ACM Sigcomm 2009.

5G – Millimeter wave (Diana Zhang)

- ✓ [802.11ad: Directional 60GHz Communication for Multi-Gbps WiFi](#), IEEE Communications Magazine, Dec 2014
- [Cutting the Cord in Virtual Reality](#), ACM Hotnets 2016
- [Demystifying 60GHz Outdoor Picocells](#), ACM Mobicom 2014

Wednesday April 26:

Network coding (Sarah Kwan)

- [ExOR: Opportunistic Multi-Hop Routing for Wireless Networks](#), ACM Sigcomm 2005
- ✓ [XORs in The Air: Practical Wireless Network Coding](#), ACM Sigcomm 2006
- [Embracing Wireless Interference: Analog Network Coding](#), ACM Sigcomm 2007

- [Trading Structure for Randomness in Wireless Opportunistic Routing](#), ACM Sigcomm 2007 (brief)

Spectrum auctions (Madhu Harishanar)

- ✓ [Auction Approaches for Resource Allocation in Wireless Systems: A Survey](#), IEEE Communications Surveys and Tutorials, 2013 (sections I-III only)
- [Spectrum Auction Design](#), Review of Industrial Organization, 2013.
- [Enabling Spectrum Sharing in Secondary Market Auctions](#), IEEE Transactions on Mobile Computing, 2014.

Cellular handsets (Fatema Almeshqab)

- ✓ [A Practical Traffic Management System for Integrated LTE-WiFi Networks](#), ACM Mobicom 2014
- [Discovering Fine-grained RRC State Dynamics and Performance Impacts in Cellular Networks](#), ACM Mobicom 2014
- [FlexiWeb: Network-Aware Compaction for Accelerating Mobile Web Transfers](#), ACM Mobicom 2015

Monday May 1:

Localization (Tyler Goulding)

- ✓ [No Need to War-Drive: Unsupervised Indoor Localization](#), Mobisys 2012
- [CEASAR: Carrier Sense Ranging in Off-the-Shelf 802.11 Wireless LAN](#), ACM CoNext 2011
- [Accurate Indoor localization with zero start-up cost](#), ACM Mobicom 2014

Backscatter and Ambient Communication (Yifei Liu)

- [Dewdrop: An Energy-Aware Runtime for Computational RFID](#), NSDI 2011
- [Passive Wi-Fi: Bringing Low Power to Wi-Fi Transmissions](#), NSDI 2016
- ✓ [Powering the Next Billion Devices with WiFi](#), ACM CoNEXT 2015

Wireless security (Evi Bernitsas)

- ✓ [SafeSlinger: Easy-to-Use and Secure Public-Key Exchange](#), Mobicom 2013
- [SecureArray: Improving WiFi Security with Fine-Grained Physical-Layer Information](#), ACM Mobicom 2013
- [Acoustic Eavesdropping through Wireless Vibrometry](#), Mobicom 2015
- [Keystroke Recognition Using WiFi Signals](#), ACM Mobicom 2015 (possible alternative for 3)