Assignment: Survey of a Wireless Networking Topic
18-452/750 Wireless Networking, Spring 2018

Monday, April 16

1. **Visible Light Communication (Shivani Sheth, Snigdha Sharma)**

- Indoor Optical Wireless Communication: Potential and State-of-the art, IEEE Communications Magazine, Sep 2011.
- ✓ Vehicle to vehicle communication using visible light communication, IEEE Photonics Journal, 2014
- PixNet: Interference-Free Wireless Links Using LCD-Camera Pairs, ACM Mobicom, 2010.

2. **Vehicular (Ranjini Narayan, Jack Dangremon)**

- A-star: A mobile ad hoc routing strategy for metropolis vehicular communications," in IFIP NETWORKING 2004., Lecture Notes in Computer Science, Springer,
- R. Frank, E. Giordano, P. Cataldi, and M. Gerla, "TrafRoute: A different approach to routing in vehicular networks," in Wireless and Mobile Computing, Networking and Communications (WiMob), 2010 IEEE 6th International Conference on, 2010

- ✓ DAZL: Density-Aware Zone-based Packet Forwarding in Vehicular Networks, 2012 IEEE Vehicular Networking Conference.

- LASP: Look-Ahead Spatial Protocol for Vehicular Multi-hop Communication, 2016 IEEE Vehicular Networking Conference. (brief)

3. **Localization (Devin Gund, Anthony Kuntz)**

- ✓ RADAR: An In-Building RF-based User Location and Tracking System, Infocom 2000. Presented in class)
- CEASAR: Carrier Sense Ranging in Off-the-Shelf 802.11 Wireless LAN, ACM CoNext 2011
- No Need to War-Drive: Unsupervised Indoor Localization, Mobisys 2012
- Accurate Indoor localization with zero start-up cost , ACM Mobicom 2014

Wednesday, April 18

4. **Backscatter and Ambient Communication (Jingxian Wang, Akshay Gadre)**

- Review for better papers
- Ambient Backscatter: Wireless Communication Out of Thin Air, ACM Sigcomm 2013
- Dewdrop: An Energy-Aware Runtime for Computational RFID, NSDI 2011

✓ [Powering the Next Billion Devices with WiFi](#), ACM CoNEXT 2015

5. 60GHz – Millimeter wave (Allen Chao, Chen Yang)

✓ [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

6. Sensing with WiFi (Steffen Holm, Jess Chernak)

- [Smart Homes that Monitor Breathing and Heart Rate](#), CHI 2015

✓ [E-eyes: Device-free Location-oriented Activities Identification Using Fine-grained WiFi Signatures](#), ACM Mobicom 2014

- [Keystroke Recognition Using WiFi Signals](#), ACM Mobicom 2015

Monday, April 23

7. Wireless security (Ananya Chandra, Joshue Goldstein)

✓ [SafeSlinger: Easy-to-Use and Secure Public-Key Exchange](#), Mobicom 2013

- [SecureArray: Improving WiFi Security with Fine-Grained Physical-Layer Information](#), ACM Mobicom 2013

- [On fast and accurate detection of unauthorized wireless access points using clock skews](#). ACM MobiCom, 2008

8. Low power wireless (Nikhil Nilakantan)

✓ [Versatile low power media access for wireless sensor networks](#). Polastre, Joseph, Jason Hill, and David Culler, The 2nd international conference on Embedded networked sensor systems. ACM, 2004.

- [Koala: Ultra-low power data retrieval in wireless sensor networks](#). Musăloiu-E, Răzvan, Chieh-Jan Mike Liang, and Andreas Terzis. Information Processing in Sensor Networks. IPSN 2008.

- [Design and evaluation of a versatile and efficient receiver-initiated link layer for low-power wireless](#). Dutta, Prabal, et al. The 8th ACM Conference on Embedded Networked Sensor Systems, 2010.