





























- [37] W. Mao, J. He, and L. Qiu. CAT: high-precision acoustic motion tracking. In *Proc. of ACM MobiCom*, 2016.
- [38] The frequency spectrum, instrument ranges, and EQ tips. <http://www.guitarbuilding.org/wp-content/uploads/2014/06/Instrument-Sound-EQ-Chart.pdf>.
- [39] R. Nandakumar, V. Iyer, D. Tan, and S. Gollakota. FingerIO: Using active sonar for fine-grained finger tracking. In *Proc. of ACM CHI*, pages 1515–1525, 2016.
- [40] D. R. Nelson, D. B. Barber, T. W. McLain, and R. W. Beard. Vector field path following for miniature air vehicles. *IEEE Transactions on Robotics*, 23(3):519–529, 2007.
- [41] Opencv. <http://audio.claub.net/tutorials/FR%20measurement%20using%20ARTA.pdf>.
- [42] C. Peng, G. Shen, Y. Zhang, Y. Li, and K. Tan. BeepBeep: a high accuracy acoustic ranging system using COTS mobile devices. In *Proc. of ACM SenSys*, 2007.
- [43] J. Pestana, J. L. Sanchez-Lopez, S. Saripalli, and P. Campoy. Computer vision based general object following for GPS-denied multirotor unmanned vehicles. In *2014 American Control Conference*, pages 1886–1891. IEEE, 2014.
- [44] Phasespace motion capture. <http://www.phasespace.com/impulse-motion-capture.html>.
- [45] B. D. Rao and K. Hari. Performance analysis of root-MUSIC. *IEEE Transactions on Acoustics, Speech, and Signal Processing*, 37(12):1939–1949, 1989.
- [46] H. Ren. On the error analysis and implementation of some eigenvalue decomposition and singular value decomposition. 1996.
- [47] R. Rysdyk. UAV path following for constant line-of-sight. In *2th AIAA Unmanned Unlimited. Conf. and Workshop and Exhibit, San Diego, CA*, 2003.
- [48] R. O. Schmidt. A signal subspace approach to multiple emitter location spectral estimation. *Ph. D. Thesis, Stanford University*, 1981.
- [49] M. Schoor and B. Yang. High-resolution angle estimation for an automotive FMCW radar sensor. In *Proc. of Intern. Radar Symposium (IRS), Cologne, Germany*, 2007.
- [50] D. E. Seborg, D. A. Mellichamp, T. F. Edgar, and F. J. Doyle III. *Process dynamics and control*. John Wiley & Sons, 2010.
- [51] S. Sen, J. Lee, K.-H. Kim, and P. Congdon. Avoiding multipath to revive inbuilding WiFi localization. In *Proceeding of the 11th annual international conference on Mobile systems, applications, and services*, pages 249–262. ACM, 2013.
- [52] P. Sujit, S. Saripalli, and J. B. Sousa. Unmanned aerial vehicle path following: A survey and analysis of algorithms for fixed-wing unmanned aerial vehicles. *IEEE Control Systems*, 34(1):42–59, 2014.
- [53] D. Vasisht, S. Kumar, and D. Katabi. Decimeter-level localization with a single WiFi access point. In *13th USENIX Symposium on Networked Systems Design and Implementation (NSDI 16)*, pages 165–178, 2016.
- [54] J. Wang, D. Vasisht, and D. Katabi. RF-IDraw: virtual touch screen in the air using RF signals. In *Proc. of ACM SIGCOMM*, 2014.
- [55] W. Wang, A. X. Liu, and K. Sun. Device-free gesture tracking using acoustic signals. In *Proceedings of the 22nd Annual International Conference on Mobile Computing and Networking*, pages 82–94. ACM, 2016.
- [56] T. Wei and X. Zhang. mTrack: high precision passive tracking using millimeter wave radios. In *Proc. of ACM MobiCom*, 2015.
- [57] P. Wenig, M. Schoor, O. Gunther, B. Yang, and R. Weigel. System design of a 77 ghz automotive radar sensor with superresolution DOA estimation. In *2007 International Symposium on Signals, Systems and Electronics*, pages 537–540. IEEE, 2007.
- [58] Y. Xie, Z. Li, and M. Li. Precise power delay profiling with commodity WiFi. In *Proceedings of the 21st Annual International Conference on Mobile Computing and Networking*, pages 53–64. ACM, 2015.
- [59] J. Xiong and K. Jamieson. Arraytrack: A fine-grained indoor location system. In *Proc. of NSDI*, pages 71–84, 2013.
- [60] J. Xiong, K. Sundaresan, and K. Jamieson. Tonetrack: Leveraging frequency-agile radios for time-based indoor wireless localization. In *Proceedings of the 21st Annual International Conference on Mobile Computing and Networking*, pages 537–549. ACM, 2015.
- [61] S. Yun, Y. chao Chen, and L. Qiu. Turning a mobile device into a mouse in the air. In *Proc. of ACM MobiSys*, May 2015.
- [62] Z. Zhang, D. Chu, X. Chen, and T. Moscibroda. Swordfight: Enabling a new class of phone-to-phone action games on commodity phones. In *Proc. of ACM MobiSys*, 2012.
- [63] C. Zhou, F. Haber, and D. L. Jaggard. A resolution measure for the MUSIC algorithm and its application to plane wave arrivals contaminated by coherent interference. *IEEE Transactions on signal processing*, 39(2):454–463, 1991.