## **Bibliography**

- [1] V Acuna, Abhaykumar Kumbhar, Edwin Vattapparamban, F Rajabli, and I Guvenc. "Localization of WiFi devices using probe requests captured at unmanned aerial vehicles". In: 2017 IEEE Wireless Communications and Networking Conference (WCNC). IEEE. 2017, pp. 1–6.
- [2] Lu Bai, Neil Ireson, Suvodeep Mazumdar, and Fabio Ciravegna. "Lessons learned using Wi-Fi and Bluetooth as means to monitor public service usage". In: Proceedings of the 2017 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2017 ACM International Symposium on Wearable Computers. 2017, pp. 432–440.
- [3] Marco V Barbera, Alessandro Epasto, Alessandro Mei, Vasile C Perta, and Julinda Stefa. "Signals from the crowd: Uncovering social relationships through smartphone probes". In: *Proceedings of the 2013 Conference on Internet Measurement Conference*. 2013, pp. 265–276.
- [4] Anas Basalamah. "Crowd mobility analysis using WiFi sniffers". In: *IJACSA*) International Journal of Advanced Computer Science and Applications 7.12 (2016), pp. 374–378.
- [5] Nicola Bernini, Luca Bombini, Michele Buzzoni, Pietro Cerri, and Paolo Grisleri. "An embedded system for counting passengers in public transportation vehicles". In: 2014 IEEE/ASME 10th International Conference on Mechatronic and Embedded Systems and Applications (MESA). IEEE. 2014, pp. 1–6.
- [6] Falk Brockmann, Marcus Handte, and Pedro José Marrón. "CutiQueue: People counting in waiting lines using Bluetooth Low Energy based passive presence detection". In: 2018 14th International Conference on Intelligent Environments (IE). IEEE. 2018, pp. 1–8.
- [7] Jeong Woo Choi, Dae Hyeon Yim, and Sung Ho Cho. "People counting based on an IR-UWB radar sensor". In: *IEEE Sensors Journal* 17.17 (2017), pp. 5717–5727.
- [8] Bekir Sait Ciftler, Sener Dikmese, Ismail Güvenç, Kemal Akkaya, and Abdullah Kadri. "Occupancy counting with burst and intermittent signals in smart buildings". In: *IEEE Internet of Things Journal* 5.2 (2017), pp. 724–735.
- [9] Mathieu Cunche, Mohamed Ali Kaafar, and Roksana Boreli. "I know who you will meet this evening! Linking wireless devices using Wi-Fi probe requests". In: 2012 IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM). IEEE. 2012, pp. 1–9.
- [10] Simone Di Domenico, Mauro De Sanctis, Ernestina Cianca, Paolo Colucci, and Giuseppe Bianchi. "LTE-based passive device-free crowd density estimation". In: 2017 IEEE International Conference on Communications (ICC). IEEE. 2017, pp. 1–6.
- [11] Simone Di Domenico, Giovanni Pecoraro, Ernestina Cianca, and Mauro De Sanctis. "Trained-once device-free crowd counting and occupancy estimation using WiFi: A Doppler spectrum based approach". In: 2016 IEEE 12th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob). IEEE. 2016, pp. 1–8.
- [12] Adriano Di Luzio, Alessandro Mei, and Julinda Stefa. "Mind your probes: De-anonymization of large crowds through smartphone WiFi probe requests". In: *IEEE INFOCOM 2016-The 35th Annual IEEE International Conference on Computer Communications*. IEEE. 2016, pp. 1–9.
- [13] Paul Fuxjaeger, Stefan Ruehrup, Thomas Paulin, and Bernd Rainer. "Towards privacy-preserving Wi-Fi monitoring for road traffic analysis". In: *IEEE Intelligent Transportation Systems Magazine* 8.3 (2016), pp. 63–74.

2 BIBLIOGRAPHY

[14] Christin Groba. "Demonstrations and people-counting based on WiFi probe requests". In: 2019 IEEE 5th World Forum on Internet of Things (WF-IoT). IEEE. 2019, pp. 596–600.

- [15] Antonio Guillén-Pérez and María Dolores Cano Baños. "A WiFi-based method to count and locate pedestrians in urban traffic scenarios". In: 2018 14th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob). IEEE. 2018, pp. 123–130.
- [16] Gaurangi Gupta, Vaishnavi Bhope, Japneet Singh, and AR Harish. "Device-free crowd count estimation using passive UHF RFID technology". In: *IEEE Journal of Radio Frequency Identification* 3.1 (2018), pp. 3–13.
- [17] Marcus Handte, Stefan Foell, Stephan Wagner, Gerd Kortuem, and Pedro José Marrón. "An internet-of-things enabled connected navigation system for urban bus riders". In: *IEEE Internet of Things Journal* 3.5 (2016), pp. 735–744.
- [18] Marcus Handte, Muhammad Umer Iqbal, Stephan Wagner, Wolfgang Apolinarski, Pedro José Marrón, Eva Maria Muñoz Navarro, Santiago Martinez, Sara Izquierdo Barthelemy, and Mario González Fernández. "Crowd density estimation for public transport vehicles". In: EDBT/ICDT Workshops. 2014, pp. 315–322.
- [19] Arief Hidayat, Shintaro Terabe, and Hideki Yaginuma. "WiFi scanner technologies for obtaining travel data about circulator bus passengers: Case study in Obuse, Nagano Prefecture, Japan". In: *Transportation Research Record* 2672.45 (2018), pp. 45–54.
- [20] Baoqi Huang, Guoqiang Mao, Yong Qin, and Yun Wei. "Pedestrian flow estimation through passive WiFi sensing". In: *IEEE Transactions on Mobile Computing* (2019).
- [21] Yuchen Jia and Ju Zhang. "The application of wireless communication technology in bus over-crowding monitoring". In: 6th International Conference on Wireless, Mobile and Multi-Media (ICWMMN). IET, 2015, pp. 11–16.
- [22] Jana Kalikova and Jan Krcal. "People counting by means of Wi-Fi". In: 2017 Smart City Symposium Prague (SCSP). IEEE. 2017, pp. 1–3.
- [23] Pravein Govindan Kannan, Seshadri Padmanabha Venkatagiri, Mun Choon Chan, Akhihebbal L Ananda, and Li-Shiuan Peh. "Low cost crowd counting using audio tones". In: *Proceedings of the 10th ACM Conference on Embedded Network Sensor Systems*. 2012, pp. 155–168.
- [24] Tarun Kulshrestha, Divya Saxena, Rajdeep Niyogi, and Jiannong Cao. "Real-time crowd monitoring using seamless indoor-outdoor localization". In: *IEEE Transactions on Mobile Computing* (2019).
- [25] Abdullah Kurkcu and Kaan Ozbay. "Estimating pedestrian densities, wait times, and flows with Wi-Fi and Bluetooth sensors". In: *Transportation Research Record* 2644.1 (2017), pp. 72–82.
- [26] Takahiko Kusakabe, Hideki Yaginuma, and Daisuke Fukuda. "Estimation of bus passengers, Äô waiting time at a coach terminal with Wi-Fi MAC addresses". In: *Transportation Research Procedia* 32 (2018), pp. 62–68.
- [27] Kai Li, Chau Yuen, Salil S Kanhere, Kun Hu, Wei Zhang, Fan Jiang, and Xiang Liu. "An experimental study for tracking crowd in smart cities". In: *IEEE Systems Journal* 13.3 (2018), pp. 2966–2977.
- [28] Weizhe Liu, Mathieu Salzmann, and Pascal Fua. "Estimating people flows to better count them in crowded scenes". In: arXiv preprint arXiv:1911.10782 (2019).
- [29] Ubaid Mehmood, I Moser, Prem Prakash Jayaraman, and Abhik Banerjee. "Occupancy estimation using WiFi: A case study for counting passengers on busses". In: 2019 IEEE 5th World Forum on Internet of Things (WF-IoT). IEEE. 2019, pp. 165–170.
- [30] Lars Mikkelsen, Radoslav Buchakchiev, Tatiana Madsen, and Hans Peter Schwefel. "Public transport occupancy estimation using WLAN probing". In: 2016 8th International Workshop on Resilient Networks Design and Modeling (RNDM). IEEE. 2016, pp. 302–308.

BIBLIOGRAPHY 3

[31] Lars Mikkelsen, Hans-Peter Schwefel, and Tatiana Madsen. "Sensing quality and estimation of public transport occupancy during live operation". In: 2018 IEEE 17th International Symposium on Network Computing and Applications (NCA). IEEE. 2018, pp. 1–4.

- [32] Tor A Myrvoll, Jan E Håkegård, Tomoko Matsui, and François Septier. "Counting public transport passenger using WiFi signatures of mobile devices". In: 2017 IEEE 20th International Conference on Intelligent Transportation Systems (ITSC). IEEE. 2017, pp. 1–6.
- [33] Ryo Nishide. "Filter efficiency analysis for extracting mobile device signals to estimate bus passengers population". In: *Proceedings of the 7th IIAE International Conference on Intelligent Systems and Image Processing.* 2019.
- [34] Nuno Nunes, Miguel Ribeiro, Catia Prandi, and Valentina Nisi. "Beanstalk: A community based passive Wi-Fi tracking system for analysing tourism dynamics". In: *Proceedings of the ACM SIGCHI Symposium on Engineering Interactive Computing Systems*. 2017, pp. 93–98.
- [35] Luiz Oliveira, João Henrique, Daniel Schneider, Jano de Souza, Sérgio Rodriques, and Weiming Sherr. "Sherlock: Capturing probe requests for automatic presence detection". In: 2018 IEEE 22nd International Conference on Computer Supported Cooperative Work in Design ((CSCWD)). IEEE. 2018, pp. 848–853.
- [36] Luiz Oliveira, Daniel Schneider, Jano De Souza, and Weiming Shen. "Mobile device detection through WiFi probe request analysis". In: *IEEE Access* 7 (2019), pp. 98579–98588.
- [37] Thongtat Oransirikul and Hideyuki Takada. "The practicability of predicting the number of bus passengers by monitoring Wi-Fi signal from mobile devices with the polynomial regression". In: Adjunct Proceedings of the 2019 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2019 ACM International Symposium on Wearable Computers. 2019, pp. 781–787.
- [38] Robert J Orr and Gregory D Abowd. "The smart floor: A mechanism for natural user identification and tracking". In: *CHI'00 extended abstracts on Human factors in computing systems*. 2000, pp. 275–276.
- [39] Woramate Pattanusorn, Itthisek Nilkhamhang, Somsak Kittipiyakul, Kittipong Ekkachai, and Atsushi Takahashi. "Passenger estimation system using Wi-Fi probe request". In: 2016 7th International Conference of Information and Communication Technology for Embedded Systems (IC-ICTES). IEEE. 2016, pp. 67–72.
- [40] Ivano Pinna, Bruno Dalla Chiara, and F Deflorio. "Automatic passenger counting and vehicle load monitoring". In: *Ingegneria Ferroviaria* 65.2 (2010), pp. 101–138.
- [41] Francesco Potortì, Antonino Crivello, Michele Girolami, Paolo Barsocchi, and Emilia Traficante. "Localising crowds through Wi-Fi probes". In: Ad Hoc Networks 75 (2018), pp. 87–97.
- [42] Francesco Potortì, Antonino Crivello, Michele Girolami, Emilia Traficante, and Paolo Barsocchi. "Wi-Fi probes as digital crumbs for crowd localisation". In: 2016 International Conference on Indoor Positioning and Indoor Navigation (IPIN). IEEE. 2016, pp. 1–8.
- [43] Pichaya Prasertsung and Teerayut Horanont. "How does coffee shop get crowded? Using WiFi footprints to deliver insights into the success of promotion". In: Proceedings of the 2017 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2017 ACM International Symposium on Wearable Computers. 2017, pp. 421–426.
- [44] Alessandro EC Redondi and Matteo Cesana. "Building up knowledge through passive WiFi probes". In: *Computer Communications* 117 (2018), pp. 1–12.
- [45] Paul Reichl, Beng Oh, Ravi Ravitharan, and Mark Stafford. "Using WiFi technologies to count passengers in real-time around rail infrastructure". In: 2018 International Conference on Intelligent Rail Transportation (ICIRT). IEEE. 2018, pp. 1–5.
- [46] Deepak Babu Sam, Skand Vishwanath Peri, Amogh Kamath, R Venkatesh Babu, et al. "Locate, size and count: Accurately resolving people in dense crowds via detection". In: arXiv preprint arXiv:1906.07538 (2019).

4 BIBLIOGRAPHY

[47] Lorenz Schauer, Martin Werner, and Philipp Marcus. "Estimating crowd densities and pedestrian flows using Wi-Fi and Bluetooth". In: *Proceedings of the 11th International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services.* 2014, pp. 171–177.

- [48] Joel Scheuner, Genc Mazlami, Dominik Schöni, Sebastian Stephan, Alessandro De Carli, Thomas Bocek, and Burkhard Stiller. "Probr a generic and passive WiFi tracking system". In: 2016 IEEE 41st Conference on Local Computer Networks (LCN). IEEE. 2016, pp. 495–502.
- [49] Jiaxing Shen, Jiannong Cao, Xuefeng Liu, and Shaojie Tang. "SNOW: Detecting shopping groups using WiFi". In: *IEEE Internet of Things Journal* 5.5 (2018), pp. 3908–3917.
- [50] Kyosuke Shibata and Hiroshi Yamamoto. "People crowd density estimation system using deep learning for radio wave sensing of cellular communication". In: 2019 International Conference on Artificial Intelligence in Information and Communication (ICAIIC). IEEE. 2019, pp. 143–148.
- [51] Utkarsh Singh, Jean-François Determe, François Horlin, and Philippe De Doncker. "Crowd fore-casting based on WiFi sensors and LSTM neural networks". In: *IEEE Transactions on Instrumentation and Measurement* (2020).
- [52] Baoyang Song and Laura Wynter. "Real-time public transport service-level monitoring using passive WiFi: A spectral clustering approach for train timetable estimation". In: arXiv preprint arXiv:1703.00759 (2017).
- [53] Tobias Stahl, Silvia L Pintea, and Jan C van Gemert. "Divide and count: Generic object counting by image divisions". In: *IEEE Transactions on Image Processing* 28.2 (2018), pp. 1035–1044.
- [54] Xiaoyong Tang, Bin Xiao, and Kenli Li. "Indoor crowd density estimation through mobile smart-phone Wi-Fi probes". In: *IEEE Transactions on Systems, Man, and Cybernetics: Systems* (2018).
- [55] Marco Uras, Raimondo Cossu, and Luigi Atzori. "PmA: A solution for people mobility monitoring and analysis based on WiFi probes". In: 2019 4th International Conference on Smart and Sustainable Technologies (SpliTech). IEEE. 2019, pp. 1–6.
- [56] Rafael Valle. "ABROA: Audio-based room-occupancy analysis using Gaussian mixtures and hidden Markov models". In: 2016 Future Technologies Conference (FTC). IEEE. 2016, pp. 1270–1273.
- [57] Edwin Vattapparamban, Bekir Sait Çiftler, Ismail Güvenç, Kemal Akkaya, and Abdullah Kadri. "Indoor occupancy tracking in smart buildings using passive sniffing of probe requests". In: 2016 IEEE International Conference on Communications Workshops (ICC). IEEE. 2016, pp. 38–44.
- [58] Zhe Wang, Tianzhen Hong, Mary Ann Piette, and Marco Pritoni. "Inferring occupant counts from Wi-Fi data in buildings through machine learning". In: *Building and Environment* 158 (2019), pp. 281–294.
- [59] Ooi Boon Yaik, Kong Zan Wai, Ian KT Tan, and Ooi Boon Sheng. "Measuring the accuracy of crowd counting using Wi-Fi probe-request-frame counting technique". In: *Journal of Telecommunication*, *Electronic and Computer Engineering (JTEC)* 8.2 (2016), pp. 79–81.
- [60] Takuya Yoshida and Yoshiaki Taniguchi. "Estimating the number of people using existing WiFi access point in indoor environment". In: Proceedings of the 6th European Conference of Computer Science (ECCS'15). 2015, pp. 46–53.
- [61] Wei Zhang, Yongjie Wang, Yanyan Liu, and Jianghua Zhu. "Deep convolution network for dense crowd counting". In: *IET Image Processing* (2019).
- [62] Youmei Zhang, Faliang Chang, Mengdi Wang, Fulei Zhang, and Chao Han. "Auxiliary learning for crowd counting via count-net". In: *Neurocomputing* 273 (2018), pp. 190–198.
- [63] Yuren Zhou, Billy Pik Lik Lau, Zann Koh, Chau Yuen, and Benny Kai Kiat Ng. "Understanding crowd behaviors in a social event by passive WiFi sensing and data mining". In: *IEEE Internet of Things Journal* (2020).