

References

- [1] Pavement Types kernel description. <https://www.pavementinteractive.org/reference-desk/pavement-types-and-history/pavement-types>. Accessed: 2019-01-02.
- [2] I. Aicardi, P. Dabove, A. Lingua, and M. Piras. Sensors integration for smartphone navigation: Performances and future challenges. *The International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences*, 40(3):9, 2014.
- [3] b. Amirgaliyev, Kuatov. Road condition analysis using 3-axis accelerometer and gps sensor. *International Information Technologies University*, 2016.
- [4] . T. A. R. V. Ankur Kataria1, 2. Quantifying smartphone vulnerabilities. *International Conference on Signal Processing and Integrated Networks (SPIN))*, 2014.
- [5] R. G. Bartle and D. R. Sherbert. *Introduction to real analysis*. Hoboken, NJ: Wiley, 2011.
- [6] D. O. Danila Machmud. The implementation of wash, rinse, and spin technique in accelerometer's data processing on android smartphone to generate stream keys. *Lembaga Sandi Negara*, 2017.
- [7] B. L. Davis, T. F. Rodriguez, and S. T. Shivappa. Mobile device indoor navigation, Feb. 25 2014. US Patent 8,660,581.
- [8] A. Dietrich, H. Schmidt, and J.-P. Hathout. Orientation and navigation for a mobile device using inertial sensors, Dec. 13 2005. US Patent 6,975,959.
- [9] S. Guo-hong. Application development research based on android platform. *Beijing Vocational College of Agriculture IT Department, 102442, China)*, 2014.
- [10] M. Kumar and G. A. Maul. International symposium on marine positioning. *Bulletin géodésique*, 61(3):293–295, 1987.
- [11] S. L. Lau and K. David. Movement recognition using the accelerometer in smartphones. In *Future Network and Mobile Summit, 2010*, pages 1–9. IEEE, 2010.
- [12] A. Mednis, G. Strazdins, R. Zviedris, G. Kanonirs, and L. Selavo. Real time pothole detection using android smartphones with accelerometers. In *Distributed Computing in Sensor Systems and Workshops (DCOSS), 2011 International Conference on*, pages 1–6. IEEE, 2011.

- [13] J. A. P. Montañés, A. M. Rodríguez, and I. S. Prieto. Smart indoor positioning/location and navigation: A lightweight approach. *International Journal of Interactive Multimedia & Artificial Intelligence*, 2(2), 2013.
- [14] V. I. V. Nikolay I. Tulenkov. Development of ground penetrating radar system. *Faculty of Radio Engineering and Telecommunications*, 2018.
- [15] M. G. Wing, A. Eklund, and L. D. Kellogg. Consumer-grade global positioning system (gps) accuracy and reliability. *Journal of forestry*, 103(4):169–173, 2005.
- [16] W.-J. Yi, W. Jia, and J. Saniie. Mobile sensor data collector using android smartphone. In *Circuits and Systems (MWSCAS), 2012 IEEE 55th International Midwest Symposium on*, pages 956–959. IEEE, 2012.