

APPENDIX A: RAW DATA COLLECTED FROM SELECTED STUDIES

CITATION	RESEARCH FOCUS	TYPES OF WEARABLES DISCUSSED	UTILISATION	WEARING POSITON	BENEFITS
Alam, M.F., Katsikas, S. & Hadjiefthymiades, S., (2015). An advanced system architecture for the maintenance work in extreme environment. <i>1st IEEE International Symposium on Systems Engineering, ISSE 2015 - Proceedings</i> , pp.406–411.	Advanced system architecture for maintenance workers in extreme environments using augmented reality for accurate maintenance tasks.	Wireless personnel supervision system (WPSS) with AR	Augmenting	Head	Workplace health and safety
Baka, A.D. & Uzunoglu, N.K., (2016). Protecting Workers from Step Voltage Hazards. <i>IEEE Technology and Society Magazine</i> , 35(1), pp.69–74.	Protecting electricians from step-voltage hazards using wearable devices to detect step-voltages in industrial areas.				Workplace safety
Chen, Y. & Kamara, J.M., (2011). A framework for using mobile computing for information management on construction sites. <i>Automation in Construction</i> , 20(7), pp.776–788.	Introduces a framework for the implementation of mobile computing on construction sites and validates the result with case studies.	Head-mounted display, chest-mounted display	Delivering, Monitoring	Head, chest	Progress monitoring
Chu, G. <i>et al.</i> , (2014). The experiments of wearable robot for carrying heavy-weight objects of shipbuilding works. <i>Automation Science and Engineering (CASE), 2014 IEEE International Conference</i> , pp.978–983.	Experiments with a wearable robot for carrying heavy objects in shipbuilding works. Testing two types of wearable exoskeletons for industrial work. Testing the manoeuvrability and benefits of these robots.	Electro-hydraulic wearable robot and electric wearable robot	Assisting	Overall body	Improving worker health
Dubinsky, Y., Limonad, L. & Mashkif, N., (2014). Wearable-based Mobile App for Decision Making. In <i>Proceedings of the 2nd International Workshop on Mobile Development Lifecycle - MobileDeLi '14</i> . New York, New York, USA: ACM Press, pp. 19–22.	Wearable-based mobile app to help with decision-making. Study identifies how wearable devices can identify situations involving cognitive dissonance.	ECG device, Nymi band,	Monitoring		
Durkin, B.J. & Lokshina, I. V., (2015). The impact of integrated wireless and mobile communication technologies on the corporate world. In <i>2015 Wireless Telecommunications Symposium (WTS)</i> . IEEE, pp. 1–5.	Studies about the impact of integrated wireless and mobile communication technologies on the corporate world.	EEG device, ECG tracker to apps on external devices	Monitoring, Tracking	Head	Workplace health and safety
Glance, D.G. <i>et al.</i> , (2016). Impact of a Digital Activity Tracker-Based Workplace Activity Program on Health and Wellbeing. In <i>Proceedings of the 6th International Conference on Digital Health Conference - DH '16</i> . New York, New York, USA: ACM Press, pp. 37–41.	Measures the health and well-being of workers through assessments and activity programs in the workplace.	Digital pedometer: Fitbit, Jawbone and Misfit	Monitoring, Tracking	Wrist	Monitoring physiological
Hamper, A., (2015). A Context Aware Mobile Application for Physical Activity Promotion. <i>2015 48th Hawaii International Conference on System Sciences</i> , pp.3197–3206.	Discusses how to use context-aware applications to promote physical activity.	Blood sugar and cholesterol sensors connected to apps on external devices	Monitoring	Wrist	Monitoring physiological
Kenn, H. & Bürgy, C., (2014). “Are we crossing the chasm in wearable AR?” - 3rd workshop on wearable systems for industrial augmented reality applications. <i>Proceedings - International Symposium on Wearable Computers, ISWC</i> , pp.213–216.	Information about an augmented reality-based wearable system and why further research of such a system is required.	Head-mounted displays and complete head-worn computing devices	Augmenting, Delivering	Head	Industrial designing
Kim, T. <i>et al.</i> , (2009). Sensor-based feedback systems in organizational computing. <i>Proceedings - 12th IEEE International Conference on Computational Science and Engineering, CSE 2009</i> , 4, pp.966–969.	Discusses sensor-based feedback systems in organizational computing and how such systems can improve the performance and satisfaction of workers.	Sociometric badge	Tracking	Neck	Monitoring physiological
Kritzler, M. <i>et al.</i> , (2015). Wearable Technology as a Solution for Workplace Safety. <i>Proceeding of the 14th International Conference on Mobile and Ubiquitous Multimedia (MUM 2015)</i> , (Mum), pp.213–217.	Discusses wearable technology as a solution for workplace safety, explaining the ideas for, and implementation of, a safety system for personal protective equipment (PPE), based on wearable sensors and wireless technology.	PPE with beacons, smartwatches and apps on external devices	Monitoring	Wrist	Workplace health and safety
Lavallière, M. <i>et al.</i> , (2016). Tackling the challenges of an aging workforce with the use of wearable technologies and the quantified-self. <i>DYNA</i> , 83(197), p.38.	Explains how wearable technologies can be used to tackle the challenges faced by an aging work force.	Smart safety helmet combined with EEG sensors and an inertial measurements unit	Monitoring	Head, chest	Monitoring physiological
K Leinonen, T. <i>et al.</i> , (2013). Scenarios for peer-to-peer learning in construction with emerging forms of collaborative computing. In <i>International Symposium on Technology and Society, Proceedings</i> . pp. 59–71.	Information about the use of augmented reality in construction work.	Smart glass with AR	Augmenting	Head	Industrial designing
Luo, Z. & Yu, Y., (2013). Wearable stooping-assist device in reducing risk of low back disorders during stooped work. <i>2013 IEEE International Conference on Mechatronics and Automation, IEEE ICMA 2013</i> , (Ld), pp.230–236.	Discusses reducing physical strain on the lower back with the help of a wearable stooping-assist device (WSAD).	WSAD	Assisting	Overall body	Improve worker health
Milosevic, M. <i>et al.</i> , (2012). Preliminary analysis of physiological changes of nursing students during training. <i>Conference Proceedings: ... Annual International Conference Of The IEEE Engineering In Medicine And Biology Society. IEEE Engineering In Medicine And Biology Society. Annual Conference</i> , 2012, pp.3772–3775.	Discusses conducting simulations for nursing students with different type of tasks. Students wear wireless sensors, which detect stress to determine which tasks cause the most stress.	Zephyr BioHarness 3	Monitoring	Chest	Monitoring physiological
Moran, S., Nishida, T. & Nakata, K., (2013). Comparing British and Japanese Perceptions of a Wearable Ubiquitous Monitoring Device. <i>IEEE Technology and Society Magazine</i> , 32(4), pp.45–49.	Discusses experiments on the effects of wearable tracking devices, comparing the reactions and attitudes of British and Japanese workers toward these devices.	RFID "UBI Tags"	Tracking	On the body	Monitoring physiological

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Moran, S. <i>et al.</i> , (2012). Studying the impact of ubiquitous monitoring technology on office worker behaviours: The value of sharing research data. <i>2012 IEEE International Conference on Pervasive Computing and Communications Workshops, PERCOM Workshops 2012</i> , pp.902–907.	Discusses experiments on the effects of wearable tracking and performance monitoring devices in workplace.	RFID Wearable tags	Tracking	On the body	Monitoring physiological
Moran, S. & Nakata, K., (2010). Ubiquitous monitoring in the office: Salient perceptions of data collection devices. <i>Proceedings - SocialCom 2010: 2nd IEEE International Conference on Social Computing, PASSAT 2010: 2nd IEEE International Conference on Privacy, Security, Risk and Trust</i> , pp.494–499.	Discusses ubiquitous monitoring in the office focusing on user perceptions of wearable monitoring devices.	RFID wearable tags	Tracking	On the body	Monitoring physiological
Muaremi, A., Arnrich, B. & Tröster, G., (2013). Towards Measuring Stress with Smartphones and Wearable Devices During Workday and Sleep. <i>BioNanoScience</i> , 3(2), pp.172–183.	Discusses experiments to determine the solution for assessing the stress experience of people using features derived from smartphones and wearable chest belts.	Wahoo chest belt with applications on external devices	Monitoring	Chest	Monitoring physiological
Nadeem, A. <i>et al.</i> , (2015). Application specific study, analysis and classification of body area wireless sensor network applications. <i>Computer Networks</i> , 83, pp.363–380.	Provides information on scenarios where Body Area Sensor Network (BASN) can be used for both application and technical aspects.	ECG sensor node, Pulse Oximetry sensor node, EMG sensor node, inertial sensor node, artificial pancreas, blood pressure sensor node	Monitoring	Chest, finger, thigh, ankle, stomach, arms	Monitoring physiological
Nee, A.Y.C. <i>et al.</i> , (2012). Augmented reality applications in design and manufacturing. <i>CIRP Annals - Manufacturing Technology</i> , 61(2), pp.657–679.	Discusses different applications for augmented reality in industrial work.	Head-mounted display with AR	Augmenting, Delivering	Head	Industrial design
Nikayin, F. <i>et al.</i> , (2014). Workplace primary prevention programmes enabled by information and communication technology. <i>Technological Forecasting and Social Change</i> , 89, pp.326–332.	Presents an illustrative case of a primary prevention programme in Finland using wearable devices in the work environment.	Pedometers	Monitoring	Wrist	Monitoring physiological
Peppoloni, L. <i>et al.</i> , (2014). (WMSDs issue) A novel wearable system for the online assessment of risk for biomechanical load in repetitive efforts. <i>International Journal of Industrial Ergonomics</i> , 52, pp.1–11.	Discusses experiments on supermarket cashiers monitoring the physical strain on their hands as they perform constant repetitive movements.	Wearable inertial measurements units (WIMU)	Monitoring	Arm	Monitoring
Pina, L., Ramirez, E. & Griswold, W., (2012). Fitbit+: A behaviour-based intervention system to reduce sedentary behaviour. <i>Proceedings of the 6th International Conference on Pervasive Computing Technologies for Healthcare</i> , pp.175–178.	Presents a system designed to leverage Fitbit's near-real-time, automated step-logging to detect sedentary behaviour and then prompt users to take walking breaks.	Fitbit+	Tracking	Wrist	Monitoring physiological
Pioggia, G. <i>et al.</i> , (2009). An ontology-driven multisensorial platform to enable unobtrusive human monitoring and independent living. <i>ISDA 2009 - 9th International Conference on Intelligent Systems Design and Applications</i> , pp.620–623.	Explains the platform that analyses and merges sEMG signals and kinematics variables to provide coherent, dynamic information about the acquired movements.	BTS FREEEMG for sEMG, and a sensorised-Lycra garment	Tracking	Waist, thigh, knee	Monitoring physiological
Ranatunga, D. <i>et al.</i> , (2013). Towards object based manipulation in remote guidance. In <i>2013 IEEE International Symposium on Mixed and Augmented Reality (ISMAR)</i> . Adelaide, SA, Australia: IEEE, pp. 1–6.	Discusses using augmented reality to project 3D images on the surface of objects, and then manipulating those images with hand gestures.	Head-mounted display with AR	Augmenting, Delivering	Head	Improve workers' health
Setz, C. <i>et al.</i> , (2010). Discriminating Stress From Cognitive Load Using a Wearable EDA Device. <i>IEEE Transactions on Information Technology in Biomedicine</i> , 14(2), pp.410–417.	Discusses finding the line between regular cognitive load and stress in work situations. The test subjects were given difficult tasks in an attempt to cause stress and monitor it.	Emotion board	Monitoring	Arm	Monitoring physiological
Shirouzu, S. <i>et al.</i> , (2015). Stress of Kindergarten teachers: How we tried to detect and to reduce it by using a small and wearable ECG and acceleration measuring device? <i>Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS</i> , 2015–Novem, pp.6437–6440.	Discusses using wearable devices such as an ECG and acceleration measuring device to find the causes of stress among kindergarten teachers.	MBIT-wearable ECG and acceleration measuring device	Monitoring	Chest	Monitoring physiological
Singh, M. <i>et al.</i> , (2015). Mauka-Mauka : Measuring and Predicting Opportunities for Webcam-based Heart Rate Sensing in Workplace Environment. In <i>Proceedings of the 10th EAI International Conference on Body Area Networks</i> . ICST, pp. 96–102.	Explains how heart rate sensing in the workplace environment can be beneficial.	Fitbit, Fuel band, Jawbone UP, Nike+	Monitoring, Tracking	Wrist	Monitoring physiological and physiological

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Sole, M. <i>et al.</i> , (2013) a. Control system for workplace safety in a cargo terminal. <i>2013 9th International Wireless Communications and Mobile Computing Conference, IWCMC 2013</i> , pp.1035–1039.	Discusses using RFID tags to monitor the safety of employees and the correct use of safety devices.	RFID tags	Tracking	Chest, head, feet	Workplace safety
Sole, M. <i>et al.</i> , (2013) b. RFID Sensor Network for Workplace Safety Management. <i>Emerging Technologies & Factory Automation (ETFA), 2013 IEEE 18th Conference on</i> , (September), pp.1–4.	Discusses using RFID tags to monitor the safety of employees and the correct use of safety devices.	Passive RFID tags and sensors	Tracking	Chest, head, feet	Workplace safety
Yang, K. <i>et al.</i> , (2016). Semi-supervised near-miss fall detection for ironworkers with a wearable inertial measurement unit. <i>Automation in Construction</i> , 68, pp.194–202.	Studies the reasons ironworkers fall. The collected data can be used to minimize the risk of falling or increase the safety of specific areas.	WIMU	Tracking	Any part of body	Workplace safety and security
Yang, Q. & Shen, Z., (2015). Active Aging in the Workplace and the Role of Intelligent Technologies. In <i>2015 IEEE/WIC/ACM International Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT)</i> . IEEE, pp. 391–394.	Discusses using wearables to reduce the mental and physical stress of future employees and examining how such devices could bring aging populations back to work.	Smartwatch/electronic shirt	Monitoring	Wrist and body	Monitoring physiological
Zenonos, A. <i>et al.</i> , (2016). HealthyOffice: Mood recognition at work using smartphones and wearable sensors. In <i>2016 IEEE International Conference on Pervasive Computing and Communication Workshops (PerCom Workshops)</i> . IEEE, pp. 1–6.	This study focuses on the use of wearable technology embedded with physiological and movement sensors along with external devices (i.e. smartphone) and associated applications to recognize the moods of employees in workplace.	Toshiba Silmee, bar type, W20/W21 with apps on external devices	Monitoring, Tracking	Wristband	Monitoring physiological and physiological