

BIBLIOGRAPHY

- [1] United Nations. (2015). World population ageing report. World Popul Ageing Rep, 2015.
- [2] United Nations Population Division, World Population Prospects: The 2017 Revision(New York: United Nations,2017)
- [3] Chatterji, S., Byles, J., Cutler, D., Seeman, T., & Verdes, E. (2015). Health, functioning, and disability in older adults—present status and future implications. *The lancet*, 385(9967), 563-575.
- [4] World Health Organization. (2001). International classification of functioning, disability and health: ICF. Geneva: World Health Organization
- [5] Verdonschot, M. M., De Witte, L. P., Reichrath, E., Buntinx, W. H. E.,& Curfs, L. M. (2009). Community participation of people with an intellectual disability: A review of empirical findings. *Journal of Intellectual Disability Research*, 53(4), 303-318.
- [6] Mitra, S., Palmer, M., Kim, H., Mont, D., & Groce, N. (2017). Extra costs of living with a disability: A review and agenda for research. *Disability and health journal*, 10(4), 475-484.
- [7] Muller-Kluits, N., & Slabbert, I. (2018). Caregiver burden as depicted by family caregivers of persons with physical disabilities. *Social Work*, 54(4), 493-502..
- [8] Yoshida, S. (2007). A Global Report on Falls Prevention: Epidemiology of Falls. Geneva, Swtizerland. World Health Organization.

- [9] Bergen, G. (2016). Falls and fall injuries among adults aged 65 years. United States, 2014. MMWR. Morbidity and mortality weekly report, 65.
- [10] Florence, C. S., Bergen, G., Atherly, A., Burns, E., Stevens, J., & Drake, C. (2018). Medical costs of fatal and nonfatal falls in older adults. Journal of the American Geriatrics Society, 66(4), 693-698.
- [11] World Health Organisation. (2015). WHO World Report on Aging and Health.
- [12] Centers for Disease Control and Prevention. (2014). Falls Among Older Adults: An Overview.
- [13] Karlsson, M. K., Magnusson, H., von Schewelov, T., & Rosengren, B. E. (2013). Prevention of falls in the elderly?a review. Osteoporosis international, 24(3), 747-762.
- [14] Chaccour, K., Darazi, R., El Hassani, A. H., & Andres, E. (2016). From fall detection to fall prevention: A generic classification of fall-related systems. IEEE Sensors Journal, 17(3), 812-822.
- [15] Amin, M. G., Zhang, Y. D., Ahmad, F., & Ho, K. D. (2016). Radar signal processing for elderly fall detection: The future for in-home monitoring. IEEE Signal Processing Magazine, 33(2), 71-80.
- [16] Skubic, M., Harris, B. H., Stone, E., Ho, K. C., Su, B. Y., & Rantz, M. (2016, August). Testing non-wearable fall detection methods in the homes of older adults. In 2016 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC) (pp. 557-560). IEEE.
- [17] Sposaro, F., & Tyson, G. (2009, September). iFall: an Android application for fall monitoring and response. In 2009 Annual International Conference of the IEEE Engineering in Medicine and Biology Society (pp. 6119-6122). IEEE.
- [18] Villaverde, A. C., R-Moreno, M. D., Barrero, D. F., & Rodriguez, D. (2016, October). Triaxial Accelerometer Located on the Wrist for Elderly People? s

Fall Detection. In International Conference on Intelligent Data Engineering and Automated Learning (pp. 523-532). Springer, Cham.

- [19] Ropero, F., Vaquerizo-Hdez, D., Muñoz, P., Barrero, D. F., & R-Moreno, M. D. (2019). LARES: An AI-based teleassistance system for emergency home monitoring. *Cognitive Systems Research*, 56, 213-222.
- [20] Gjoreski, H., Bizjak, J., & Gams, M. (2016, September). Using smartwatch as telecare and fall detection device. In 2016 12th International Conference on Intelligent Environments (IE) (pp. 242-245). IEEE.
- [21] Wu, F., Zhao, H., Zhao, Y., & Zhong, H. (2015). Development of a wearable-sensor-based fall detection system. *International journal of telemedicine and applications*, 2015, 2.
- [22] Santiago, J., Cotto, E., Jaimes, L. G., & Vergara-Laurens, I. (2017, January). Fall detection system for the elderly. In 2017 IEEE 7th Annual Computing and Communication Workshop and Conference (CCWC) (pp. 1-4). IEEE.
- [23] Wu, L., Lu, J., Zhang, T., & Gong, J. (2016, October). Robot-assisted intelligent emergency system for individual elderly independent living. In 2016 IEEE Global Humanitarian Technology Conference (GHTC) (pp. 628-633). IEEE.
- [24] Pierleoni, P., Belli, A., Palma, L., Pellegrini, M., Pernini, L., & Valenti, S. (2015). A high reliability wearable device for elderly fall detection. *IEEE Sensors Journal*, 15(8), 4544-4553
- [25] Shoaib, M., Elbrandt, T., Dragon, R., & Ostermann, J. (2010, March). Altcare: Safe living for elderly people. In 2010 4th International Conference on Pervasive Computing Technologies for Healthcare (pp.1-4). IEEE.
- [26] Xu, T., Zhou, Y., & Ma, Z. (2016, July). AtHoCare: An intelligent elder care at home system. In International Conference on Digital Human Modeling and Applications in Health, Safety, Ergonomics and Risk Management (pp. 298-305). Springer, Cham.

- [27] Yang, L., Ren, Y., & Zhang, W. (2016). 3D depth image analysis for indoor fall detection of elderly people. *Digital Communications and Networks*, 2(1), 24-34.
- [28] Nizam, Y., Jamil, M. M. A., & Mohd, M. N. (2016, September). A depth image approach to classify daily activities of human life for fall detection based on height and velocity of the subject. In *International Conference on Movement, Health and Exercise* (pp. 63-68). Springer, Singapore.
- [29] Zhang, Z., Conly, C., & Athitsos, V. (2015, July). A survey on vision-based fall detection. In *Proceedings of the 8th ACM international conference on PErvasive technologies related to assistive environments* (p. 46). ACM.
- [30] Fischinger, David, Peter Einramhof, Konstantinos Papoutsakis, Walter Wohlkinger, Peter Mayer, Paul Panek, Stefan Hofmann et al. "Hobbit, a care robot supporting independent living at home: First prototype and lessons learned." *Robotics and Autonomous Systems* 75 (2016): 60-78.
- [31] Lin, C. C., Chiu, M. J., Hsiao, C. C., Lee, R. G., & Tsai, Y. S. (2006). Wireless health care service system for elderly with dementia. *IEEE Transactions on Information Technology in Biomedicine*, 10(4), 696-704.
- [32] Lv, Z., Xia, F., Wu, G., Yao, L., & Chen, Z. (2010, December). iCare: a mobile health monitoring system for the elderly. In *2010 IEEE/ACM Int'l Conference on Green Computing and Communications & Int'l Conference on Cyber, Physical and Social Computing* (pp. 699-705). IEEE.
- [33] Megalingam, R. K., Pocklassery, G., Jayakrishnan, V., Mourya, G., & Thulasi, A. A. (2014, April). Smartphone based continuous monitoring system for home-bound elders and patients. In *2014 International Conference on Communication and Signal Processing* (pp. 1173-1177). IEEE.
- [34] Burnham, A. D. (2017). U.S. Patent No. 9,717,101. Washington, DC: U.S. Patent and Trademark Office.

- [35] Solórzano, S., Rojas-Ortiz, M., López-Molina, R. A., Clairand, J. M., & Pozo-Espín, D. (2018, April). Home Tele-assistance System for Elderly or Disabled People in Rural Areas. In 2018 International Conference on eDemocracy & eGovernment (ICEDEG) (pp. 380-385). IEEE.
- [36] Johnson, D. O., Cuijpers, R. H., Juola, J. F., Torta, E., Simonov, M., Frisielo, A., ... & Meins, N. (2014). Socially assistive robots: a comprehensive approach to extending independent living. *International journal of social robotics*, 6(2), 195-211.
- [37] Vasavi, K. P., Kumar, N. U., & Prasad, N. S. (2017). Development of Mitthar-The Companion Robot for Lonely Elderly People. *Technology*, 8(3), 84-94.
- [38] Mackenbach, J. P., Borsboom, G. J. J. M., Nusselder, W. J., Loosman, C. W. N., & Schrijvers, C. T. M. (2001). Determinants of levels and changes of physical functioning in chronically ill persons: results from the GLOBE Study. *Journal of Epidemiology & Community Health*, 55(9), 631-638.
- [39] Gill, T. M., Allore, H. G., Hardy, S. E., & Guo, Z. (2006). The dynamic nature of mobility disability in older persons. *Journal of the American Geriatrics Society*, 54(2), 248-254.
- [40] Mollaoğlu, M., Tuncay, F. Ö., & Fertelli, T. K. (2010). Mobility disability and life satisfaction in elderly people. *Archives of gerontology and geriatrics*, 51(3), e115-e119.
- [41] Centers for Disease Control and Prevention. (2020). Disability Impacts All of Us Infographic — CDC. [online] Available at: <https://www.cdc.gov/ncbddd/disabilityandhealth/infographic-disability-impacts-all.html> [Accessed 21 Feb. 2020].
- [42] Inclusive City Maker. (2020). Disabled People in the World in 2019: facts and figures. [online] Available at: <https://www.inclusivecitymaker.com/disabled-people-in-the-world-in-2019-facts-and-figures/> [Accessed 21 Feb. 2020].

- [43] “Fact Sheet on Wheelchairs”, Regional Office for South-East Asia, World Health Organization, October 2010.
- [44] Giesbrecht, E. M., Miller, W. C., Mitchell, I. M., & Woodgate, R. L. (2014). Development of a wheelchair skills home program for older adults using a participatory action design approach. *BioMed research international*, 2014.
- [45] Bourgeois-Doyle, D. (2016). The Maker: George Klein and the first electric wheelchair. *The Future of Health-Care Engineering*, (Skulematters 2016), pp.14-16.
- [46] Fehr, L., Langbein, W. E., & Skaar, S. B. (2000). Adequacy of power wheelchair control interfaces for persons with severe disabilities: A clinical survey. *Journal of rehabilitation research and development*, 37(3), 353-360.
- [47] Simpson, R., LoPresti, E., Hayashi, S., Nourbakhsh, I., & Miller, D. (2004). The smart wheelchair component system. *Journal of Rehabilitation Research & Development*, 41.
- [48] Leaman, J., & La, H. M. (2017). A comprehensive review of smart wheelchairs: past, present, and future. *IEEE Transactions on Human-Machine Systems*, 47(4), 486-499.
- [49] Forslund, E. B., Jørgensen, V., Franzén, E., Opheim, A., Seiger, Å., Ståhle, A., ... & Wahman, K. (2017). High incidence of falls and fall-related injuries in wheelchair users with spinal cord injury: a prospective study of risk indicators. *Journal of rehabilitation medicine*, 49(2), 144-151
- [50] Chen, W. Y., Jang, Y., Wang, J. D., Huang, W. N., Chang, C. C., Mao, H. F., & Wang, Y. H. (2011). Wheelchair-related accidents: relationship with wheelchair-using behavior in active community wheelchair users. *Archives of physical medicine and rehabilitation*, 92(6), 892-898.
- [51] Gavin-Dreschnack, D., Nelson, A., Fitzgerald, S., Harrow, J., Sanchez-Anguiano, A., Ahmed, S., & Powell-Cope, G. (2005). Wheelchair-related falls:

current evidence and directions for improved quality care. *Journal of nursing care quality*, 20(2), 119-127.

- [52] Sung, J., Trace, Y., Peterson, E. W., Sosnoff, J. J., & Rice, L. A. (2019). Falls among full-time wheelchair users with spinal cord injury and multiple sclerosis: a comparison of characteristics of fallers and circumstances of falls. *Disability and rehabilitation*, 41(4), 389-395.
- [53] Noury, N., Fleury, A., Rumeau, P., Bourke, A. K., Laighin, G. O., Rialle, V., & Lundy, J. E. (2007, August). Fall detection-principles and methods. In 2007 29th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (pp. 1663-1666). IEEE.
- [54] Ma, C., Li, W., Gravina, R., & Fortino, G. (2016, May). Activity recognition and monitoring for smart wheelchair users. In 2016 IEEE 20th International Conference on Computer Supported Cooperative Work in Design (CSCWD) (pp. 664-669). IEEE.
- [55] Ma, C., Gravina, R., Li, Q., Zhang, Y., Li, W., & Fortino, G. (2017, October). Activity recognition of wheelchair users based on sequence feature in time-series. In 2017 IEEE International Conference on Systems, Man, and Cybernetics (SMC) (pp. 3659-3664). IEEE
- [56] Hiremath, S. V., Intille, S. S., Kelleher, A., Cooper, R. A., & Ding, D. (2015). Detection of physical activities using a physical activity monitor system for wheelchair users. *Medical engineering & physics*, 37(1), 68-76.
- [57] Lotfi, A., Langensiepen, C., & Yahaya, S. (2018). Socially assistive robotics: Robot exercise trainer for older adults. *Technologies*, 6(1), 32.
- [58] Pavone, L., Ricciuti, P., Cafolla, D., & Pasqua, G. (2019). A Kinect-Based Portable Automatic Gait Analysis System-An Experimental Validation. *Bio-medical Journal of Scientific & Technical Research*, 17(1), 12552-12555.

- [59] Magsino, A., Suarez, D., Cruz, C., & Vea, L. (2018, October). Model Development of Lower Body Exercise for the Rehabilitation of Level 6 Filipino Post-Stroke Patients Using Microsoft Kinect Sensor V2. In TENCON 2018-2018 IEEE Region 10 Conference (pp. 1177-1182). IEEE.
- [60] Van Der Schalk, I.,& Spruit, M. (2017). Sign-Lingo: Feasibility of a Serious Game for Involving Parents in the Language Development of their Deaf or Hearing Impaired Child.
- [61] Barth, C. J., Manjarrez, L., & Lopez, E. (2017). Animatronic Kinect Bear.
- [62] Chua, S. H., Limqueco, J. S., Lu, E. L., Que, S. W., & Abuan, D. (2018). Development of a Microcontroller-based Wireless Writing Robotic Arm Controlled by Skeletal Tracking. In 2018 IEEE 10th International Conference on Humanoid, Nanotechnology, Information Technology, Communication and Control, Environment and Management (HNICEM) (pp. 1-6). IEEE.
- [63] M. A. V. J. Muthugala and A. G. B. P. Jayasekara, "MIRob: An intelligent service robot that learns from interactive discussions while handling uncertain information in user instructions," 2016 Moratuwa Engineering Research Conference (MERCon), Moratuwa, 2016, pp. 397-402, doi: 10.1109/MERCon.2016.7480174.
- [64] Webb, J., & Ashley, J. (2012). Beginning Kinect Programming with the Microsoft Kinect SDK. Apress.
- [65] Docs.microsoft.com. 2020. CameraSpacepoint Structure. [online] Available at: [https://docs.microsoft.com/en-us/previous-versions/windows/kinect/dn758354\(v=ieb.10\)](https://docs.microsoft.com/en-us/previous-versions/windows/kinect/dn758354(v=ieb.10)) [Accessed 18 May 2020].
- [66] Vitruvius. 2020. Vitruvius — Create Stunning Kinect Apps In Minutes. [online] Available at: <https://vitruviuskinect.com/> [Accessed 18 May 2020].

- [67] Mathworld.wolfram.com. 2020. Point-Plane Distance – From Wolfram Mathworld. [online] Available at: <https://mathworld.wolfram.com/Point-PlaneDistance.html> [Accessed 18 May 2020].
- [68] Domingo, M. C. (2012). An overview of the Internet of Things for people with disabilities. *journal of Network and Computer Applications*, 35(2), 584-596.
- [69] Demiris, G., & Hensel, B. K. (2008). Technologies for an aging society: a systematic review of “smart home” applications. *Yearbook of medical informatics*, 17(01), 33-40.
- [70] Cheek, P., Nikpour, L., & Nowlin, H. D. (2005). Aging well with smart technology. *Nursing administration quarterly*, 29(4), 329-338.
- [71] Chan, M., Campo, E., Estève, D., & Fourniols, J. Y. (2009). Smart homes—current features and future perspectives. *Maturitas*, 64(2), 90-97