[20] A. Luoto and K. Systä, "Fighting network restrictions of request-response pattern with MQTT," *IET Softw.*, vol. 12, no. 5, pp. 410–417, 2018.

[21] G. Marsh, A. P. Sampat, S. Potluri, and D. K. Panda, "Scaling advanced message queuing protocol (AMQP) architecture with broker federation and infiniband," Ohio State Univ., Columbus, OH, USA, Tech. Rep. OSU-CISRC-5/09-TR17, vol. 38, 2008.

[22] D. Vanderelst and A. Winfield, "An architecture for ethical robots inspired by the simulation theory of cognition," *Cogn. Syst. Res.*, vol. 48, pp. 56–66, 2018.

[23] M. Zolotas and Y. Demiris, "Towards explainable shared control using augmented reality," in *Proc. IEEE/RSJ Int. Conf. Intell. Robots Syst.*, 2019, pp. 3020–3026.

[24] M. Asada, K. F. MacDorman, H. Ishiguro, and Y. Kuniyoshi, "Cognitive developmental robotics as a new paradigm for the design of humanoid robots," *Robot. Auton. Syst.*, vol. 37, no. 2/3, pp. 185–193, 2001.

[25] W. S. R. Can et al., ""Integrative social robotics"—A new method paradigm to solve the description problem and the regulation problem?," *What Social Robots Can Should Do: Proc. Robophilosophy/TRANSOR*, vol. 290, 2016, Art. no. 104.

[26] E. Cioroaica, B. Buhnova, and E. Tomur, "A paradigm for safe adaptation of collaborating robots," in *Proc. 17th Symp. Softw. Eng. Adaptive Self-Manag. Syst.*, 2022, pp. 113–119.

[27] J. P. Vasconez, G. A. Kantor, and F. A. A. Cheein, "Human–robot interaction in agriculture: A survey and current challenges," *Biosyst. Eng.*, vol. 179, pp. 35–48, 2019.

[28] S. Vougioukas, S. Fountas, S. Blackmore, and L. Tang, "Combining reactive and deterministic behaviours for mobile agricultural robots," *Oper. Res.*, vol. 5, no. 1, pp. 153–163, 2005.

[29] K. Kashiwazaki, Y. Sugahara, J. Iwasaki, K. Kosuge, S. Kumazawa, and T. Yamashita, "Greenhouse partner robot system," in *Proc. 41st Int. Symp. Robot., 6th German Conf. Robot.*, 2010, pp. 1–8.

[30] B. Blackmore, S. Fountas, S. Vougioukas, L. Tang, C. Sørensen, and R. Jørgensen, "A method to define agricultural robot behaviours," in *Proc. Automat. Technol. Off-Road Equip. Proc. Conf., Amer. Soc. Agricultural Biol. Eng.*, 2004, Art. no. 155.

[31] A. Ribeiro and J. Conesa-Muñoz, "Multi-robot systems for precision agriculture," in *Innovation in Agricultural Robotics for Precision Agriculture*. Berlin, Germany: Springer, 2021, pp. 151–175.

[32] R. F. Carpio et al., "A navigation architecture for Ackermann vehicles in precision farming," *IEEE Robot. Automat. Lett.*, vol. 5, no. 2, pp. 1103–1110, Apr. 2020.

[33] H. Durmuş, E. O. Güneş, M. Kırcı, and B. B. Üstündağ, "The design of general purpose autonomous agricultural mobile-robot: 'Agrobot'," in *Proc. 4th Int. Conf. Agro-Geoinformat.*, 2015, pp. 49–53.

[34] A. Belhassena et al., "Towards an architecture for agricultural autonomous robots' scheduling," in *Proc. IEEE 25th Int. Enterprise Distrib. Object Comput. Workshop*, 2021, pp. 194–203.

[35] A. Roukh, F. N. Fote, S. A. Mahmoudi, and S. Mahmoudi, "Big data processing architecture for smart farming," *Procedia Comput. Sci.*, vol. 177, pp. 78–85, 2020.

[36] L. Emmi et al., "Exploiting the internet resources for autonomous robots in agriculture," *Agriculture*, vol. 13, no. 5, 2023, Art. no. 1005.

[37] P. Nebot, J. Torres-Sospedra, and R. J. Martínez, "A new HLA-based distributed control architecture for agricultural teams of robots in hybrid applications with real and simulated devices or environments," *Sensors*, vol. 11, no. 4, pp. 4385–4400, 2011.

[38] G. Adamides et al., "Design and development of a semi-autonomous agricultural vineyard sprayer: Human–robot interaction aspects," *J. Field Robot.*, vol. 34, no. 8, pp. 1407–1426, 2017.

[39] J. Tardaguila, "The VineRobot project," Accessed: Jun. 16, 2020. [Online]. Available: http://www.vinerobot.eu/

[40] L. Emmi, M. Gonzalez-de Soto, G. Pajares, and P. Gonzalez-de Santos, "New trends in robotics for agriculture: Integration and assessment of a real fleet of robots," *Sci. World J.*, vol. 2014, 2014, Art. no. 404059.

[41] R. Raja, T. T. Nguyen, D. C. Slaughter, and S. A. Fennimore, "Real-time robotic weed knife control system for tomato and lettuce based on geometric appearance of plant labels," *Biosyst. Eng.*, vol. 194, pp. 152–164, 2020.

[42] R. Raja, D. C. Slaughter, S. A. Fennimore, and M. C. Siemens, "Real-time control of high-resolution micro-jet sprayer integrated with machine vision for precision weed control," *Biosyst. Eng.*, vol. 228, pp. 31–48, 2023.

[43] Q. Feng, W. Zou, P. Fan, C. Zhang, and X. Wang, "Design and test of robotic harvesting system for cherry tomato," *Int. J. Agricultural Biol. Eng.*, vol. 11, no. 1, pp. 96–100, 2018.

[44] A. Silwal, J. R. Davidson, M. Karkee, C. Mo, Q. Zhang, and K. Lewis, "Design, integration, and field evaluation of a robotic apple harvester," *J. Field Robot.*, vol. 34, no. 6, pp. 1140–1159, 2017.

[45] S. Yuan, Y. Lei, S. Xin, and L. Bing, "Design and experiment of intelligent mobile apple picking robot," *J. Agricultural Mechanization Res.*, vol. 1, 2016, Art. no. 035.

[46] K. A. M. Almendral, R. M. G. Babaran, B. J. C. Carzon, K. P. K. Cu, J. M. Lalanto, and A. C. Abad, "Autonomous fruit harvester with machine vision," *J. Telecommun., Electron. Comput. Eng.*, vol. 10, no. 1–6, pp. 79–86, 2018.

[47] M. D. Ferreira, A. C. Sanchez, O. A. Braunbeck, and E. A. Santos, "Harvesting fruits using a mobile platform: A case study applied to citrus," *Engenharia Agrícola*, vol. 38, no. 2, pp. 293–299, 2018.

[48] C. Lehnert, A. English, C. McCool, A. W. Tow, and T. Perez, "Autonomous sweet pepper harvesting for protected cropping systems," *IEEE Robot. Automat. Lett.*, vol. 2, no. 2, pp. 872–879, Apr. 2017.

[49] C. W. Bac, J. Hemming, B. Van Tuijl, R. Barth, E. Wais, and E. J. van Henten, "Performance evaluation of a harvesting robot for sweet pepper," *J. Field Robot.*, vol. 34, no. 6, pp. 1123–1139, 2017.

[50] I. Hulsegge, D. Schokker, G. Klandermans, and C. Kamphuis, "A data-architecture to monitor and collect cow-individual methane emissions real-time from commercial dairy farms," in *Proc. 12th World Congr. Genet. Appl. Livestock Prod. Techn. Species Orientated Innov. Animal Breeding, Contribution Genet. Solving Soc. Challenges*, 2022, pp. 3307–3310.

[51] M. A. Alanezi, M. S. Shahriar, M. B. Hasan, S. Ahmed, A. Yusuf, and H. R. Bouchekara, "Livestock management with unmanned aerial vehicles: A review," *IEEE Access*, vol. 10, pp. 45001–45028, 2022.

[52] F. de Lima et al., "Counting cattle in UAV images using convolutional neural network," *Remote Sens. Appl.: Soc. Environ.*, vol. 29, 2023, Art. no. 100900.

[53] S. Raja Gopal and V. Prabhakar, "Intelligent edge based smart farming with LoRa and IoT," *Int. J. Syst. Assurance Eng. Manage.*, vol. 15, pp. 21–27, 2024.

[54] G. A. Kakamoukas, P. G. Sarigiannidis, and A. A. Economides, "FANets in agriculture–A routing protocol survey," *Internet Things*, vol. 18, 2022, Art. no. 100183.

[55] D. Chikurtev, "Service-oriented architecture for control of modular robots," in *Proc. 26th Int. Conf. Circuits, Syst., Commun. Comput.*, 2022, pp. 304–309.

[56] J. Zheng, L. Chen, Y. Li, Y. A. Khan, H. Lyu, and X. Wu, "An intelligent robot sorting system by deep learning on RGB-D image," in *Proc. 22nd Int. Symp. INFOTEH-JAHORINA*, 2023, pp. 1–8.

[57] D. Romanov, O. Korostynska, O. I. Lekang, and A. Mason, "Towards human-robot collaboration in meat processing: Challenges and possibilities," *J. Food Eng.*, vol. 331, 2022, Art. no. 111117.

[58] R. Raja, A. K. Burusa, and G. Kootstra, "Advanced robotic system for efficient pick-and-place of deformable poultry in cluttered bin: A comprehensive evaluation approach," 2023, *arXiv:23823117.v1*.

[59] K. Khodabandehloo, "Achieving robotic meat cutting," *Animal Front.*, vol. 12, no. 2, pp. 7–17, 2022.

[60] H. Einarsdóttir, B. Gu dhmundsson, and V. Ómarsson, "Automation in the fish industry," *Animal Front.*, vol. 12, no. 2, pp. 32–39, 2022.

[61] K. Ahlin, "The robotic workbench and poultry processing 2.0," *Animal Front.*, vol. 12, no. 2, pp. 49–55, 2022.

[62] H. Kennedy et al., "Crop signal markers facilitate crop detection and weed removal from lettuce and tomato by an intelligent cultivator," *Weed Technol.*, vol. 34, no. 3, pp. 342–350, 2020.

[63] R. R. Shamshiri et al., "Simulation software and virtual environments for acceleration of agricultural robotics: Features highlights and performance comparison," *Int. J. Agricultural Biol. Eng.*, vol. 11, no. 4, pp. 15–31, 2018.

[64] H. Wang, C. J. Hohimer, S. Bhusal, M. Karkee, C. Mo, and J. H. Miller, "Simulation as a tool in designing and evaluating a robotic apple harvesting system," *IFAC-PapersOnLine*, vol. 51, no. 17, pp. 135–140, 2018.

[65] J. Hemming et al., "A robot for harvesting sweet-pepper in greenhouses," in *Proc. Int. Conf. Agricultural Eng.*, Zürich, Switzerland, 2014.

[66] E. Van Henten, B. V. Van Tuijl, J. Hemming, J. Kornet, J. Bontsema, and E. Van Os, "Field test of an autonomous cucumber picking robot," *Biosyst. Eng.*, vol. 86, no. 3, pp. 305–313, 2003.