

List of publications on october 25th 2025

Journal Articles

- [1] Philip Scales, Olivier Aycard, and Véronique Aubergé. Planning Socially Expressive Mobile Robot Trajectories. *Sensors journal*, 24(11):3533, 2024.
- [2] J. Gomez, O. Aycard, and J. Baber. Efficient detection and tracking of human using 3d lidar sensor. *Sensors journal*, 2023.
- [3] P. Scales, V. Aubergé, and O. Aycard. From vocal prosody to movement prosody, from hri to understanding humans. *Interaction studies journal*, 2022.
- [4] P. Zheng, P-B. Wieber, J. Baber, and O. Aycard. Human arm motion prediction for collision avoidance in a shared workspace. *Sensors journal*, 2022.
- [5] R.O. Chavez-Garcia and O. Aycard. Multiple sensor fusion and classification for moving object detection and tracking. *IEEE Transactions on Intelligent Transportation Systems*, 17(2):525–534, 2015.
- [6] TD. Vu, J. Burlet, and O. Aycard. Grid-based localization and local mapping with moving objects detection and tracking. *Information Fusion, Elsevier*, 12(1):58–69, Janvier 2011.
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- [9] D. Vasquez, T. Fraichard, O. Aycard, and C. Laugier. Intentional motion on-line learning and prediction. *Machine Vision and Applications*, 2008.
- [10] C. Laugier, D. Vasquez, M. Yguel, T. Fraichard, and O. Aycard. Geometric and bayesian model for safe navigation in dynamic environments. *Intelligent Service Robots*, 2007.
- [11] M. Yguel, O. Aycard, and C. Laugier. Efficient gpu-based construction of occupancy grids using several laser range finders. *International Journal of Autonomous Vehicles*, 2007.
- [12] O. Aycard, JF. Mari, and R. Washington. Learning to automatically detect features for mobile robots using second-order hidden markov models. *International Journal of Advanced Robotic Systems*, 2004.

Conference Articles

- [13] Ian Page, Pierre Susbielle, Olivier Aycard, and Pierre-Brice Wieber. Real-time Photorealistic Mapping for Situational Awareness in Robot Teleoperation. In *IROS 2025 - IEEE/RSJ International Conference on Intelligent Robots and Systems*, pages 1–7, Hangzhou, China, October 2025. IEEE.
- [14] O. Aycard. Low level detection and tracking for robust following of a moving person with a mobile robot. In *The 18th IEEE International Conference on Control, Automation, Robotics and Vision (ICARCV)*, 2024.
- [15] P. Scales, V. Aubergé, and O. Aycard. Inducing social perceptions of a mobile robot through motion profiles. In *The 18th IEEE International Conference on Control, Automation, Robotics and Vision (ICARCV)*, 2024.
- [16] C. Brouard and O. Aycard. Robust global localization for a mobile robot using information retrieval techniques. In *The 18th IEEE International Conference on Control, Automation, Robotics and Vision (ICARCV)*, 2024.
- [17] J. Baber, T. Lopez, and O. Aycard. Exploring word embeddings and 3d quantization for human hand motion prediction in shared workspace with robot. In *The 18th IEEE International Conference on Control, Automation, Robotics and Vision (ICARCV)*, 2024.
- [18] J. Baber and O. Aycard. 3d-psh: 3d lidar object detection using adaptive clustering and 3d point spatial histograms. In *The 36th IEEE International Conference on Tools with Artificial Intelligence (ICTAI)*, 2024.

- [19] R. Vallee, L. Pregaldiny, V. Aubergé, E. Cenac, S. Tisseron, and O. Aycard. Contrastive study of prosodic features of a virtual robot addressed to children. In *16th International Conference on Advances in Computer-Human Interactions*, 2023.
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- [25] P. Zheng, P-B. Wieber, and O. Aycard. Online optimal motion generation with guaranted safety in shared workspace. In *IEEE International Conference on Robotics and Automation (ICRA)*, 2020.
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Book Chapters

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Research Reports