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Sommario	This work is focused on the development of a safety framework for Human-Humanoid coexistence, with emphasis on humanoid locomotion. After a brief introduction to the fundamental concepts of humanoid locomotion, the two most common approaches for gait generation are presented, and are extended with the inclusion of a stability condition to guarantee the boundedness of the generated trajectories. Then the safety framework is presented, with the introduction of different safety behaviors. These behaviors are meant to enhance the overall level of safety during any robot operation. Proactive behaviors will enhance or adapt the current robot operations to reduce the risk of danger, while override behaviors will stop the current robot activity in order to take action against a particularly dangerous situation. A state machine is defined to control the transitions between the behaviors. The behaviors that are strictly related to locomotion are subsequently detailed, and an implementation is proposed and validated. A possible implementation of the remaining behaviors is proposed through the review of related works that can be found in literature.
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