

Title (en)
ROBOTIC VEHICLE

Title (de)
ROBOTERFAHRZEUG

Title (fr)
VÉHICULE ROBOTISÉ

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Abstract (en)
[origin: WO2021220103A1] A robotic vehicle (10) comprising a pair of rear wheels (11, 12), at least one front wheel (13, 14), at least one steering motor (50) mounted with said at least one front wheel (13, 14), wherein said at least one front wheel (13, 14) is adapted to freely rotate about a vertical axis (Zm) perpendicular to the ground, wherein said at least one steering motor (50) is adapted to impose a torque which steers said at least one front wheel (13,14) with which it is mounted making the robotic vehicle (10) steer by a steering angle (ϕ) with respect to an instantaneous direction of linear motion (Xm) of the robotic vehicle (10), wherein the robotic vehicle (10) comprises at least one processor (70) and at least one storage (80), wherein said at least one processor (70) controls said at least one steering motor (50) and calculates a spatial position and a spatial orientation of the robotic vehicle (10), wherein said at least one storage (80) contains at least one selection algorithm which implements a process for sharing a control authority for directing the robotic vehicle (10), wherein said at least one storage (80) contains a predefined preferred path (100) or the position of an obstacle to be overcome, wherein for each predefined time step said at least one selection algorithm selects depending on a metric a torque value which said at least one steering motor (50) imposes on said at least one front wheel (13, 14), wherein said torque value ranges between 0 and a predefined maximum torque value, wherein said metric is defined depending only on a distance of the robotic vehicle (10) from said predefined preferred path (100), or from an obstacle to be overcome, and on an angle of approach (δ), wherein the angle of approach (δ) of said metric is calculated by said at least one processor (70) depending on an approaching trajectory towards said predefined preferred path (100) or towards said obstacle to be overcome.

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