On Trajectory Generation for Robots

Errata

• Page 29, in (2.32): $q$ as the first element of $\dot{x}$ should be replaced by $\dot{q}$.
• Page 29, the upper limit of the summation in (2.34): $2n \rightarrow n$.
• Page 30, the line after (2.36): expanding spanning the nullspace.
• Page 33, first paragraph: Therefore, repulsive forces are may not be required at all for position-controlled robots, . . .
• Page 57, second line of Sec. 3.6: $\tilde{d} \rightarrow d$.
• Page 130, Fig. 6.12: The optimal trajectory for the min. time is incorrect. The updated figure is attached.
• Page 136, second line: $h(q) > 0 \rightarrow h(q) \geq 0$.
• Page 136, the line after (7.10): . . . , the velocity of the link at the contact point.
• Page 150, the caption of Fig. 7.4: $(0.5, 0.5) \rightarrow (-0.5, -0.5)$
• Page 157, the caption of Fig. 7.13: and the minimum distance to the last link $h$.
• Pages 157 and 158, the captions of Figs. 7.13 and 7.15: $\phi_{L^2} \rightarrow$ the quadratic cost.
• Page 160, in (7.76): $f_i, x_i, u_i$ should be replaced by $f^i, x^i, u^i$, respectively.
• Page 161, fifth line: $x_i \rightarrow x^i$.
• Page 170, in (8.5) and page 184, in (8.49): A factor of 16 is missing in the expression of $T_u(s)$.
• Page 189, 6th line from the bottom: Fig. 8.12a $\rightarrow$ 8.12b.
Figure 6.12  Comparison of the trajectories in Fig. 6.3 in Sec. 6.4 computed with the MPC-based optimization approach (solid black) with the corresponding trajectories obtained by minimizing the jerk (dashed blue) and by scaling the minimum-time solution (dashed-dotted green).