Parameters used in simulation tests for „Point-to-Surfel-Distance- (PSD-) based 6D localization algorithm for rough terrain exploration using laser scanner in GPS-denied scenarios":

Parameter	Value
Scanner parameters	
Prism angular speed, ω_p	62,8 rad/s
Mirror angular speed, ω_m	62,0 rad/s
Horizonstal scanning range, φ	From 0 to 360^0
Vertical scanning range, δ	From -45 to -10^0
Scanning frequency, f_s	1000 Hz
Scanner's position on the robot, $[x_{sr}\ y_{sr}\ z_{sr}]$	[0,5 0 0,5] m
Robot parameters	
Applied linear veloity, v_r	0,1 m/s
Disturbance	
Std. deviation for linear velocity, σ_v	0,01 m/s
Std. deviation for angular velocity, σ_ω	0,01 rad/s
Std. deviation for distance measurement, σ_L	0,01 m
Std. deviation for elevation angle measurement δ, σ_δ	0,001 rad
Std. deviation for azimuth angle measurement φ, σ_φ	0,001 rad
Kalman filter parameters	
Sampling time, $T_p = 1/f_s$	0,001 s
Limit for innovation acceptance, dz_{max}	0,7 m
Resolution for estimated disntace calculation, L_{res}	0,05 m
Std. deviation for terrain inclination, $\sigma_{\gamma x} = \sigma_{\gamma y}$	0,01 rad
Std. deviation for average height, σ_z	0,01 m