

### Main Effects of Denoising & Percent Motion, and interactions with Shell Scheme

	Translation	Rotation
1. <b>Identify the object and the reference point.</b>	The object is the car, and the reference point is the starting line.	The object is the wheel, and the reference point is the center of the wheel.
2. <b>Identify the initial position and the final position.</b>	The initial position is at the starting line, and the final position is at the finish line.	The initial position is at the top of the wheel, and the final position is at the bottom of the wheel.
3. <b>Identify the displacement and the distance.</b>	The displacement is the straight-line distance from the starting line to the finish line.	The distance is the arc length of the wheel's rotation.
4. <b>Identify the velocity and the speed.</b>	The velocity is the displacement divided by the time taken.	The speed is the distance divided by the time taken.
5. <b>Identify the acceleration and the angular acceleration.</b>	The acceleration is the change in velocity divided by the time taken.	The angular acceleration is the change in angular velocity divided by the time taken.

Characteristic	Translation			Rotation		
	Beta	95% CI <sup>1</sup>	p-value	Beta	95% CI <sup>1</sup>	p-value
(Intercept)	0.129	0.042, 0.216	0.004	0.297	0.056, 0.538	0.016
Scheme						
<i>ABCD</i>	—	—		—	—	
<i>HCP</i>	0.059	-0.065, 0.182	0.3	0.254	-0.087, 0.595	0.14
Denoising						
<i>MP-PCA</i>	—	—		—	—	
<i>None</i>	0.302	0.178, 0.425	<0.001	0.512	0.171, 0.853	0.003
% Motion	-0.007	-0.009, -0.004	<0.001	-0.037	-0.044, -0.030	<0.001
Scheme * Denoising						
<i>HCP * None</i>	-0.286	-0.460, -0.112	0.001	-0.215	-0.697, 0.267	0.4
Scheme * % Motion						
<i>HCP * % Motion</i>	0.006	0.003, 0.010	<0.001	0.011	0.001, 0.020	0.034
Denoising * % Motion						
<i>None * % Motion</i>	0.002	-0.001, 0.006	0.2	0.033	0.023, 0.043	<0.001
Scheme * Denoising * % Motion						
<i>HCP * None * % Motion</i>	-0.003	-0.008, 0.002	0.2	-0.028	-0.042, -0.014	<0.001

<sup>1</sup> CI = Confidence Interval