

TABLE I
ESTIMATION RESULTS OF HUMAN HAND STIFFNESS MEASURED ON THE STRAIGHT LINES S1 AND S3 FOR THE DIFFERENT DRIVING CONDITIONS FOR ALL SUBJECTS.

(a) Hand stiffness

Subject	Stiffness, K_e [N/m]			
	Condition I	Condition II	Condition III	Condition IV
A	161.9 ± 30.5	338.5 ± 65.1	184.1 ± 63.4	212.5 ± 65.9
B	212.2 ± 104.2	368.4 ± 26.6	313.2 ± 137.2	378.8 ± 129.7
C	86.6 ± 31.5	248.0 ± 31.1	127.4 ± 46.6	196.4 ± 58.8
D	153.5 ± 34.2	239.4 ± 36.8	212.9 ± 51.7	191.6 ± 34.3
E	282.9 ± 43.1	438.9 ± 69.6	274.2 ± 66.5	324.2 ± 71.0

(b) Significant differences

Subject	Condition					
	I vs II	I vs III	I vs IV	II vs III	II vs IV	III vs IV
A	**			**	**	
B	**			**	**	
C	**			**	**	**
D	**			**	**	
E	*					**

** 1 % significant level, * 5 % significant level

Future research will be directed to analyze hand impedance in driving on curved lines with adding new driving conditions. It will also be to develop a design method of a driving support system which can adjust steering dynamics depending on driving conditions as well as a reminder system based on human hand impedance properties.

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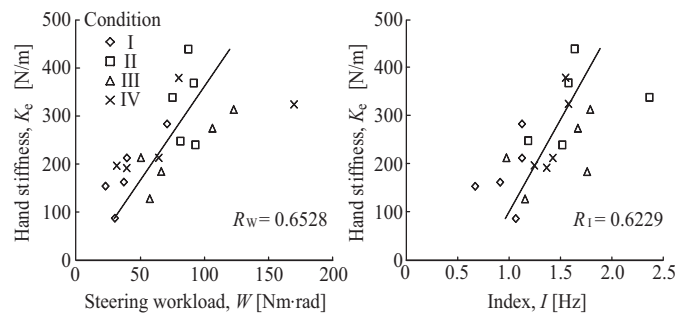


Fig. 11. Relationship between the two indices and hand stiffness for all subjects.

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