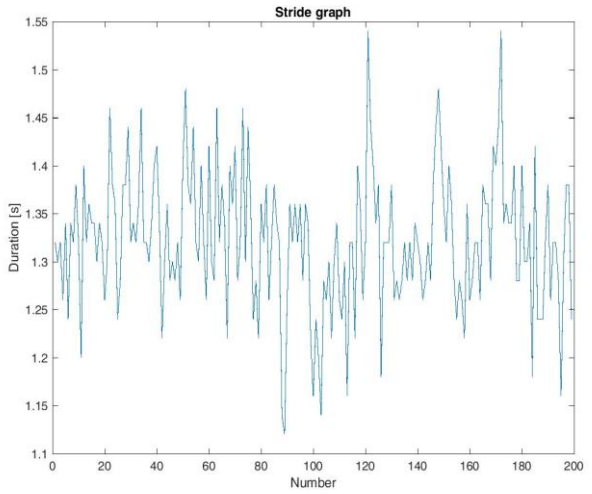

Fig. 9– Generic walk sessions stride graph

In Table I some experimental results are shows.

TABLE I

Subject #	Type of walk	Mean stride duration (s)	Standard deviation stride duration (s)	Mean stance duration (s)	Standard deviation stance duration (s)
1	Normal for 15 minutes	1.2552	0.0425	0.8312	0.0965
1	Normal for 8 minutes	1.2414	0.0325	0.8245	0.0314
2	Normal for 13 minutes	1.3578	0.0814	0.7547	0.0945
2	Shuffle for 5 minutes	1.3841	0.4885	1.008	0.6369
8	Shuffle for 15 minutes	1.2698	0.5723	0.9851	0.7987
15	Fast for 5 minutes	1.1512	0.0622	0.7538	0.1222
15	Shuffle for 9 minutes	1.2789	0.2308	0.9852	0.3525

VI. Conclusions

A promising rugged diagnostic tool for gait duration analysis has been presented. The preliminary study has given very good results in terms of simplicity of use, portability and effectiveness.

In the next future it will be used by AD and PD patients as early diagnostic tool and it will be investigates the use of and adequate number of sensor in order to monitor not only the gait duration and variation, but also the gait length variability.

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