Classification of Occlusal Curves Using Clustering Methods

Nina Daskalova¹, Dimitar Filchev²

¹ Sofia University, Faculty of Mathematics and Informatics ninad@fmi.uni-sofia.bg

² Medical University of Sofia, Faculty of Dental Medicine mitko@vilem.bg

 $Keywords:\ dental\ medicine,\ statistical\ clustering,\ occlusal\ curves,\ medical\ software$

A new method for dental prosthetics, which uses specially designed software to model occlusal curves, has been investigated. Using this software, the occlusal curves distances have been taken of 103 students from the Faculty of Dental Medicine, from 19 to 26 years of age, of which 49 women and 54 men. K-means and hierarchical cluster analysis have been performed on this same dataset. The purpose of this research is to aid and improve the existing expert classification and in general to compare software-assisted approach to human expert one.

Acknowledgements This work was supported by the European Social Fund through the Human Resource Development Operational Programme under contract BG051PO001-3.3.06-0052 (2012/2014).