**Justification of effective parameters of non-contact coordinate measuring machine integration into automobile industry**

Advancements of non-contact measurement technologies, significantly influenced the way production is done for the last decades in most of the developed parts of the world. The core idea of using automated non-contact measurement techniques is total elimination of human error in the production. The technique uses laser based triangulation method with image processing algorithms like CoMP, k-means clustreing, image segmentation, noise filtering, Gaussian-kernel fitting. The PhD mainly focuses on integration of the non-contact measurement technique for Body in White processes in the automotive companies and justification of the effective parameters as precision, repeatability and speed.