HALFPLANE LOCATION DEPTH IN STATISTICAL SHAPE ANALYSIS

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We introduce the problems of statistical shape analysis from robust point of view. We investigate Tukey half space medians for Procrustes landmark coordinates in comparison to Procrustes mean shape coordinates and present bivariate boxplots (bagplots) for landmarks and bootstrap bivariate boxplots for median shape. Finally, we derive Monte Carlo test for median shape differences. We apply mentioned methods to biological anthropology and zoology.