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Sommario/riassunto	The influence of foot geometry on energy efficiency in bipedal walking is investigated. A method for the optimization of the foot geometry of a bipedal robot is developed. It is based on a planar model with arbitrary convex foot geometry in combination with a hybrid zero dynamics based controller. Optimal gaits and foot geometries are determined. The average energy consumption can be reduced by more than 80% compared to a model with point feet.