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Sommario/riassunto	The effectiveness of ten different feature sets in classification of voice recordings of the sustained phonation of the vowel sound /a/ into a healthy and pathological classes is investigated as well as a non approach to building a sequential committee of support vector machines (SVM) for the classifications is proposed. The optimal values of hyperparameters of the committee and the feature sets providing the best performance are found during the genetic search. In the experimental investigations performed using 444 voice recordings of the sustained phonation of the vowel sound /a/ coming from 148 subjects, three recordings from each subject, the correct classification rate of over 92 % was obtained. The classification accuracy has been compared with the accuracy obtained from four human experts.