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# Deconvolution of complex spectra into components by the bee swarm algorithm

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## Abstract

The bee swarm algorithm is adapted for the solution of the problem of deconvolution of complex spectral contours into components. Comparison of biological concepts relating to the behaviour of bees in a colony and mathematical concepts relating to the quality of the obtained solutions is carried out (mean square error, random solutions in the each iteration). Model experiments, which have been realized on the example of a signal representing a sum of three Lorentz contours of various intensity and half-width, confirm the efficiency of the offered approach.

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