INTELLIGENT COMPUTING-BASED OPTIMISATION PROBLEMS

Tadeusz Burczyński

Institute of Fundamental Technological Research (IPPT)
Polish Academy of Sciences

ABSTRACT

The lecture is devoted to application of an intelligent computing approach which is based on biologically inspired methods as evolutionary algorithms, artificial immune systems and particle swarm algorithms and the finite element method to 2D and 3D shape and topology optimisation problems.

The multi-objective optimisation problems for coupling of mechanical, electrical and thermal fields are also considered.

The case of multiscale modelling in the optimisation and identification problems is also taken account.