

Optimization Models for Engineering Applications

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The author will present recent development of research directions in the area of optimization models and methods for various engineering problems at Brno University of Technology. The discussed problems belong to the areas of waste management, energy production and distribution, supply chain management and logistics, steel and iron production control, and reliable design.

They are based on real world data instances and they inspired interesting ideas in the areas of (1) model building and transformations, (2) studies of models' useful theoretical properties, (3) development and modifications of solution methods and heuristics, and (4) software implementations including presentations of results. They also helped to establish new links between various groups of researchers and invited many young master and doctoral students to modern ideas of operations research. Therefore, the directions for possible collaborations will be also proposed.