

## **ABSTRACT**

Shortening the development time in the automotive industry with simultaneous rise of complexity, efficiency and product variety requires more efficient, faster, and optimized simulation methods. In this paper we focus on the computational design of optimized cooling packages for vehicles in a very early stage of the development process. We propose a stochastic method for tuning simulation models which we optimize with respect to minimized operating and material costs. A Genetic Algorithm – Gradient Search hybrid is used for this searching in the design space.