



# Automatic Optimization

**You need to optimize your process? Discover the solutions for identifying an ideal billet for complete and flawless filling or a tooling design that minimizes stress. No more long and boring trial plans. Choose automatic optimization!**

SIMHEAT® automatic optimization is an extremely effective tool. Thanks to its genetic algorithm, you can automatically vary an entire range of process parameters (billet dimensions, tool shapes, billet positioning, etc.). This way you will be able to identify

the best conditions for optimally treat your part. In addition, you will study techniques that allow you to reverse engineer certain physical parameters of your process.

## LEVEL

**Advanced**

## PREREQUISITES

**A good grounding in the use of SIMHEAT® is required. A perfect knowledge of the process is essential to determine what you want to optimize and how. You need to understand chaining and transitions.**

## GOALS

- **Understanding optimization concepts and terms: genetic algorithm (individuals and generations), minimizable, constraint and parametered action**
- **Optimizing industrial processes**
- **Identifying parameters by reverse engineering**

TRAINING	DURATION	PRICE EXCL. TAX	PARTICIPANTS
In-company	1.5 days	€2400 per training	1 to 3 people

**DAY 1 >** 8.30 a.m. to 12.00 p.m. & 2.00 p.m. to 5.30 p.m.

<b>Introduction</b>	<ul style="list-style-type: none"> <li>• Presentation of Transvalor</li> <li>• Course goals</li> </ul>
<b>General concepts</b>	<ul style="list-style-type: none"> <li>• Automatic optimization</li> <li>• Individuals and generation</li> <li>• Definition of a minimizable</li> <li>• Definition of a constraint</li> <li>• Definition of configured actions</li> </ul>
<b>Determining rheology by reverse engineering</b>	<ul style="list-style-type: none"> <li>• Defining the simulation</li> <li>• Setup</li> <li>• Interpreting the results</li> </ul>

**DAY 2 >** 8.30 a.m. to 12.00 p.m

<b>Determining a heat transfer coefficient</b>	<ul style="list-style-type: none"> <li>• Defining the case</li> <li>• Setup</li> <li>• Interpreting the results</li> </ul>
<b>Innovation</b>	<ul style="list-style-type: none"> <li>• Optimization with discrete values</li> <li>• Optimization with Design Of Experiment</li> </ul>
<b>Conclusions</b>	<ul style="list-style-type: none"> <li>• Questions and course assessment</li> </ul>

