# A MATLAB to Modelica Translator

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Matlab is a proprietary, interactive, dynamically-typed language for technical computing. It is widely used for prototyping algorithms and applications of scientific computations. Since it is a dynamically typed language, the execution of programs has to be analyzed and interpreted which results in lower computational performance. In order to increase the performance and integrate with Modelica applications it is useful to be able to translate Matlab programs to statically typed Modelica programs.

This paper presents the design and implementation of Matlab to Modelica translator. The Lexical and Syntax analysis is done with the help of the OMCCp (OpenModelica Compiler Compiler parser generator) tool which generates the Matlab AST, which is later used by the translator for generating readable and reusable Modelica code.

*Keywords: Modelica, MetaModelica, Matlab, OMCCp, translation.*