

Template for thesis project proposals

Project Title	Integration of an existing network-on-chip to a tool written in Chisel (scala).
Author(s)	<i>Student(s) name(s)</i>
Keywords	<i>Give 4-5 keywords</i>
Project description	<p>We would like to integrate an existing network-on-chip written in Chisel, which is a subset of scala, to the rocket chip generator. The rocket chip generator is a tool that supports generation of different architectures based on RISC-V ISA. The tool has a crossbar network for on chip communication. However this is not a feasible structure when the number of cores increase to hundreds. Therefore we plan to replace this network with a scalable 2D mesh network.</p> <ul style="list-style-type: none"> - Scala knowledge is required as the generator and the network-on-chip are written in Chisel. - Hardware development and/or system-on-chip design knowledge will be helpful. <p>For further questions, the students may contact Suleyman Savas by e-mail: suleyman.savas@hh.se or by visiting E321.</p>
References	https://github.com/freechipsproject/rocket-chip https://www2.eecs.berkeley.edu/Pubs/TechRpts/2016/EECS-2016-17.html https://www.mdpi.com/2073-431X/7/2/27
Prerequisites	<i>Courses, any other important information</i>
Time frame	<i>Indicate start and duration of project</i>
Supervisor(s)	Suleyman Savas, Zain Ul-Abdin,
Programme	<i>Name and the number of credits</i>
Examiner	<i>Name of project Examiner</i>
Signatures	<p><i>Student(s):</i> _____ <i>Supervisor(s):</i> _____ <i>Examiner:</i> _____</p>