Open positions at Marvell

Architectural Exploration and Modeling student

Location: Petach Tikva or Yokneam

Description:
The position is for an intern position in the switching architecture group

• We are developing innovative architectures that require deep architecture exploration.

• Simulation models are the main tools for exploring new architectures, validating them in context of the device level and at system level. At device level the simulations models provide means for analysis of Architectural and uArchitectural alternatives, SW/HW tradeoffs. At system level, the simulation models enable exploring system level feature for example: network caching and dynamic load balancing algorithms.

The activity is partitioned to two stages:

• Development of simulation models and infrastructure at device level and system level (e.g. Data Center). This includes traffic generators, abstract system nodes and specific device level mechanisms and features. C/C++ knowledge is an advantage but not mandatory.

• Architecture exploration which involves running regressions of different architecture options and parameters, analysis of simulation metrics leading to recommendations for the architecture.

The intern will develop simulation models at device level and system level based on tools like C++ and SystemC. The models will be used for architecture exploration. The definition might be in different levels of details – either as a fully detailed specification that needs implementation or at higher level problem statement that requires the candidate to develop a solution.

In any case – it is expected from the candidate to fully understand the architecture being explored and the results of the simulation in order to fix/improve the solution.

Qualifications:

• 3rd year student for BSC in electrical or computer engineering
• Programming – Advantage
• C/C++, SystemC, Perl, Python scripting Knowledge - Advantage
• Computer architecture - Advantage