Science and Industry - the best of both worlds

The Embedded Systems Institute (ESI) specializes in scientific research and industrial innovation in the field of high-tech embedded systems. ESI was founded by Philips, ASML, Océ-Technologies, and TNO, in cooperation with Delft University of Technology, Eindhoven University of Technology, and the University of Twente. What sets ESI apart is its focus on scientific research with a high industrial relevance. Projects are ongoing with ASML, Philips Healthcare, NXP Semiconductors, Océ-Technologies, Thales, FEI Company, and Vanderlande Industries, all world-leaders in their fields.

The research projects are carried out by multidisciplinary project teams. These teams consist of ESI Research Fellows and experts and researchers from the industrial partners and university research groups.

Regularly these projects have opportunities for graduate students (afstudeerders) studying at one of the Dutch universities or polytechnics (hogescholen). The students will do the graduation work at the premises of either the academic partner or the industrial partner of the project. We are looking for graduate students in computer science, electrical and mechanical engineering, as well as other relevant fields that can spend full-time on their graduate project.

Current vacancies

MODEST

Multi-disciplinary, model-based design methods constitute a sound scientific foundation for making products and their development process more effective, more efficient and more responsive to societal needs. The application of models implies a sharp reduction in the number of necessary physical prototypes, thereby accelerating the development process and simultaneously reducing the use of resources. Another good example of the advantages of model-based design is the optimal use of available energy during the process of printing through which the equipment becomes more energy savvy.

Vacancy Modest-afstudeerder-01

Visualization of a simulated printer engine

The jobs focuses on making visualizations a printer engine, coupled to a simulation environment. One earlier example is shown in the picture below. Together with the Océ, ESI and TU/e researchers, you will define, specify and implement the visualizations that will facilitate the interpretation of the simulation results.
There are several tasks for one or more students:

**Storing results and playing them back**
Currently the visualization is only connected to the actual (interactive) simulation. There is need to be able to rewind the simulation to examine what happened in a specific time period in more detail.

**Storing the interaction and playing it back**
Recording the interactions sent to the simulation and providing a possibility to play back can assist testers in specifying test scenarios.

**Using the visualization for the timing design environment**
In order to get a more unified view on the device during the various stages of the development, the current visualization method must be changed and data must be converted to the required representation. Thus the current paper path visualization can be used as the paper path visualization for the timing design environment.

**Using data from the real device for the visualization**
Visualizing logged data from the actual device after a run or even using device data during a run allows examining aspects of the device which are not (easily) visible just by looking at the device. Furthermore, examining a log file of a test run allows rewinding and re-examining complex interactions between components.

**Value history visualization**
When examining exact values of part properties, an overview of the value change over time is also useful. Integrate the information about the values of these parts with the current visualization in a more interactive way.

**Required profile:**
The student should meet the corresponding set of requirements:

- The candidate should have fulfilled all the other obligations for the study and be full-time available for the terminal project (afstudeeropdracht).
- The candidate will work at least 4 days per week at Océ in Venlo
- The candidate must have an academic coach (ESI / Océ can assist in finding an academic coach)

**Your application**
For more information about the position available, please contact Lou Somers, Océ Software Team Leader:
lou.somers@oce.com

Interested candidates are requested to apply by E-mail to: Lou Somers, Océ Software Team Leader