Opening

In the context of a KWR project in collaboration with Philips Healthcare, LaQuSo has an opening for a researcher in the area of source code analysis/reverse engineering.

Most, if not all, modern software products are based on a combination of new and legacy code. Additionally, most medical products are quite large. This makes it difficult for developers to understand and improve the products. A second issue is that for such products, it is difficult to check whether the implementation of the software is in line with the design. The goad of the assignment is to improve understanding of the current systems via reverse engineering methods and in this way improve the systems.

The following items are specifically addressed:

- static code analysis based on parsing code, finding dependencies and analyzing software structures, especially in large software products, relations and dependencies between subsystems can become difficult to recognize;
- visualization of software dependencies;
- analyze methods of dynamic software analysis, like software trace analysis, automatic code instrumentation; the use of process mining related methods for an a posteriori analysis of the systems flows will be investigated;
- visualization of software dynamics, threading models and sequences.

The candidate for this function needs to have a thorough understanding of software development. Furthermore, he or she needs to be able to cooperate with a large team of software developers and understand their needs and concerns.

Requirements

Candidates for this function should have a PDEng (in areas such as Software Technology) or a PhD degree (in areas such as Computer Science) and shall have the ability to use and extend advanced process mining techniques to harvest the required information from the data and deploy this in real life situations with real data. A team player is required since multiple people are working on this topic, and different disciplines and technologies are to be combined. Since the work will take place within an innovation department of Philips Healthcare, a "self supporting innovator" attitude is required.

Position

LaQuSo is offering a position as researcher (UFO category "*Onderzoeker*") at the Department of Mathematics and Computer Science of Eindhoven University of Technology for a period of 1 October 2009 until 31 December 2010. Employment and salary are in accordance with the Collective Labor Agreement of the Dutch Universities (CAO NU).

Information

For more information, please contact H.T.G. Weffers (h.t.g.weffers@laquso.com, +31 40 247 2526)