Séminaire MIDI : Christos Kloukinas

24 May 2016, 14:00 – 15:30

Titre du séminaire et orateur

Describing Software Architectures - Revisiting The Early Decisions.

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Date et lieu

Mardi 24 mai 2016, 14h.

Université de Cergy-Pontoise, site de St-Martin 1, locaux ETIS, 5ème étage, salle 570.

Abstract

Over the years the software architecture community has developed a number of different languages (ADLs) for describing architectures of systems, with different goals and characteristics. Two main approaches emerged - one offering to describe architectures as a set of connected components only, and one describing architectures as a set of components that were interacting through connectors (abstractions of protocols), so as to make designs more modular and reusable. Some work we did on protocol choreography realization made us revisit the early decisions around the connector basic notion, which had been introduced back in 1996 and used ever since in all ADLs supporting connector elements. We believe that while the initial drive behind connectors so as to increase modularity and reuse in specifications is correct, their treatment so far by the community has ignored the protocol realizability issue (and isn't as modular as it should be either).

We have developed the first version of a new language (Xcd), which attempts to rectify this - support connectors that are always realizable and where the component and connector specifications are actually modular. At the same time, Xcd should make it easier for practitioners to write formal specs, as it is extending the design-by-contract approach for component-based systems and making specs look more like a usual programming language, instead of using process algebras directly, which practitioners find particularly difficult to work with.

For more information on Xcd, please visit http://staff.city.ac.uk/c.kloukinas/Xcd/index.html

Speaker Bio

Christos Kloukinas received his PhD from the University of Rennes 1, in France, while working on the composition of software architectures at INRIA. He then worked as a researcher at the Verimag CNRS lab

in Grenoble - working on the formal analysis and control of Real-Time Java applications for safety-critical systems and their execution on off-the-shelf real-time embedded operating systems. He is currently a Senior Lecturer (roughly equivalent to Associate Professor in the US) at the Computer Science department of City University London, which he joined in 2005, where he has also been working on run-time monitoring among other things.

For more information see http://staff.city.ac.uk/c.kloukinas/