Invited Talk

Aspects at the crossroads of SE?!

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ABSTRACT

Crosscutting concerns are ubiquitous in large-scale software systems: aspects interact with many other concepts relevant for the definition and execution of such systems. Hence, the foundations of aspects should benefit from formal methods developed in other domains but should also contribute to related domains (and, more generally, to the foundations of SE as a whole). While the former is a cornerstone within the aspect community, the latter has enjoyed much less popularity.

In this talk, we first present some issues on the frontier of the foundations of AOP and related research domains that illustrate their manifold relationships. We consider, in particular, calculi and formal properties of aspects, types, and events, both for sequential as well as concurrent and distributed systems. We then discuss some current and open issues that point to a more general role of aspects within the theory of SE.