

Lightning Talk

Refactoring Contracts using Aspects: Is it Always Worthwhile?

Henrique Rebêlo
Federal University of Pernambuco
Brazil
hemr@cin.ufpe.br

ABSTRACT

It is often claimed that the implementation of design by contract features such as pre-, postconditions, and invariants are better modularized using aspect-oriented programming. However, the trade-offs involved in using aspect-orientation with this goal are not well-understood.

In this talk, we discuss preliminary results of a quantitative evaluation of the adequacy of aspects for modularizing design by contract concern using a real-life application with non-trivial design constraints code. Our evaluation is based on fundamental software attributes, such as separation of concerns, coupling, and size. Regarding crosscutting modularity of contracts, our discussion also includes a perspective analysis which comprehends: (i) the reusability of the aspectized design by contract code and (ii) beneficial and harmful aspectization scenarios involving design by contract features such as preconditions.