



## Context-oriented Programming for Software Variability at Runtime

Robert Hirschfeld

Hasso-Plattner Institut, Potsdam, Germany

Most if not all software systems need to be changed after their initial deployment, possibly on demand, at runtime, without disruption of service. Adjustments or extensions need to be made to reflect new perspectives on domain concepts, to deal with changed requirements, or to just offer a pleasant user experience.

Context-oriented Programming, or COP, provides programmers with dedicated abstractions and mechanisms to concisely represent behavioral variations that depend on execution context. By treating context explicitly, and by directly supporting dynamic composition, COP allows developers to better express software entities that adapt their behavior late-bound at runtime.