Designing Self-Adaptive Service-Oriented Applications

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Service-Oriented Architecture Features

1. Dynamic service discovery mechanisms:

2. Evolvable third-party services:

3. Weak service specification:

No control on the life-cycle of the integrated services
...the Resulting Problem

“Why my SOA-application sometimes works…

… and sometimes does not?”
The SHIWS Solution

- SHIWS extend SOA-applications with self-healing mechanisms that:
  - test the connected services at runtime
  - use the tested information to identify semantic mismatches
  - dynamically select adaptation/recovery components accordingly

WE DEFINED:
- A Design Methodology
- A Mismatch Taxonomy
- An Eclipse plugin
“Now, my SHIWS SOA-based application always works…”