



A Framework for
Application Performance Monitoring
and Dynamic Software Analysis
—*Preview for Invited Demo/Poster Presentation*—

André van Hoorn, J. Waller, and W. Hasselbring

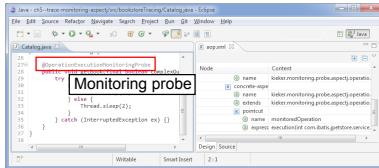
Software Engineering Group
University of Kiel, Germany

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Kieker: Example Workflow and Use Cases

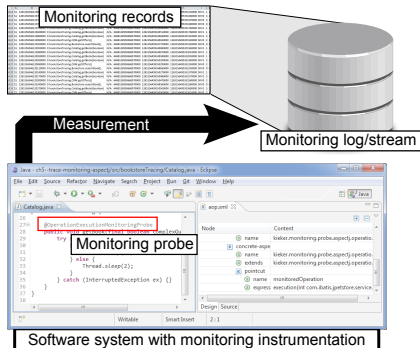
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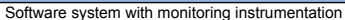
Software system with monitoring instrumentation

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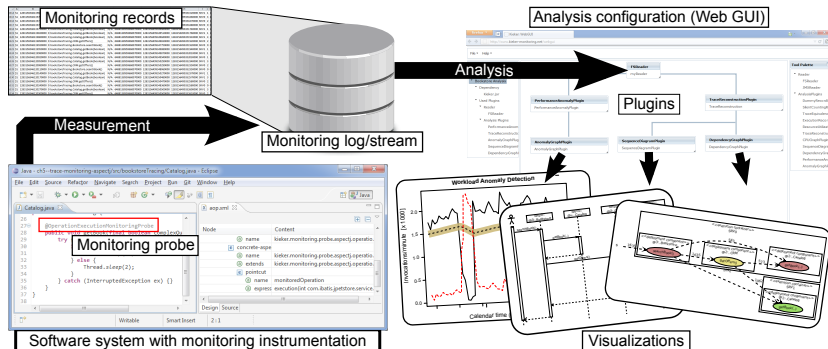


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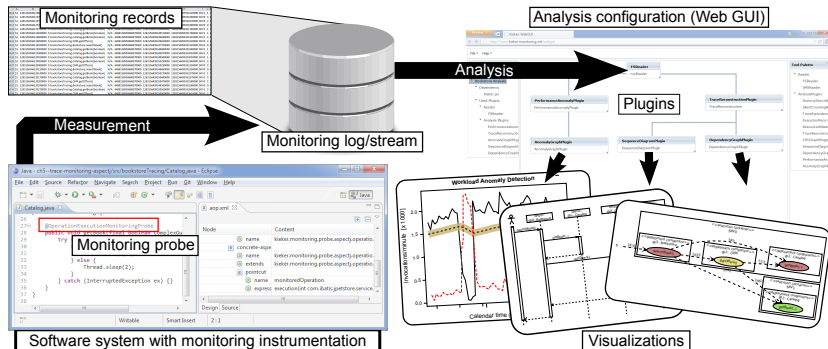
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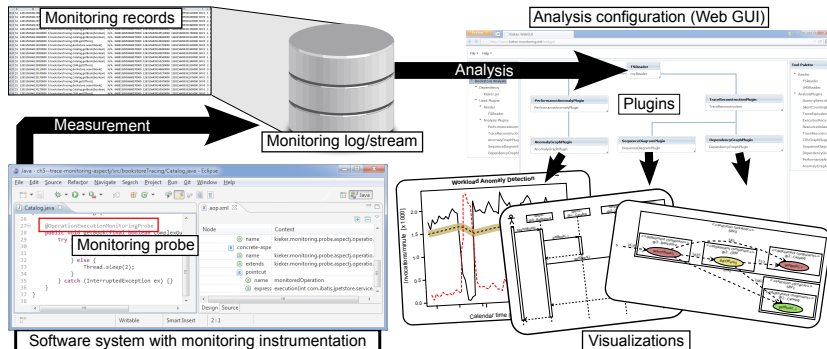
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Use cases in research and practice:

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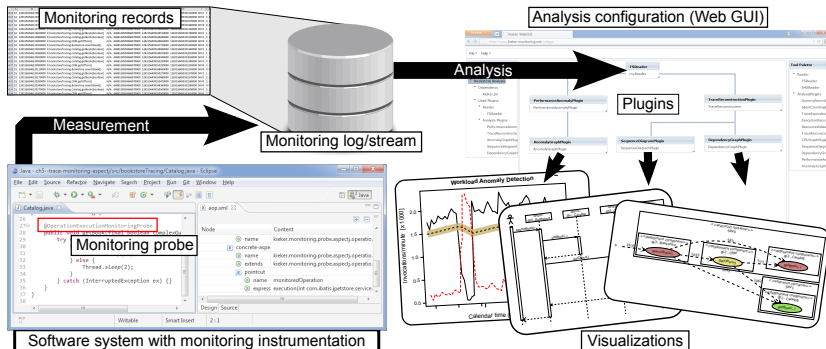


Use cases in research and practice:

- Online/offline performance evaluation and feedback, e.g.,

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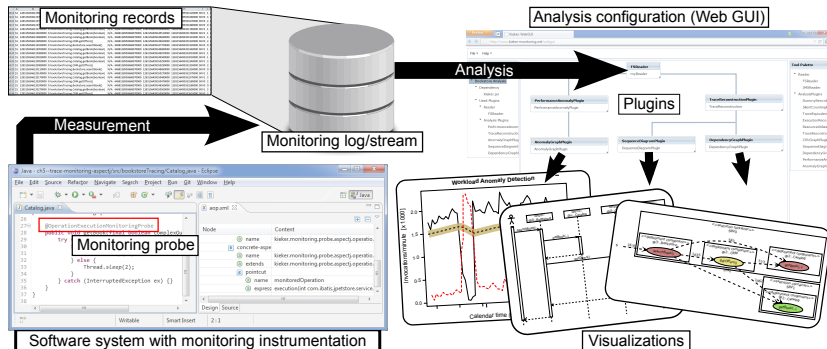


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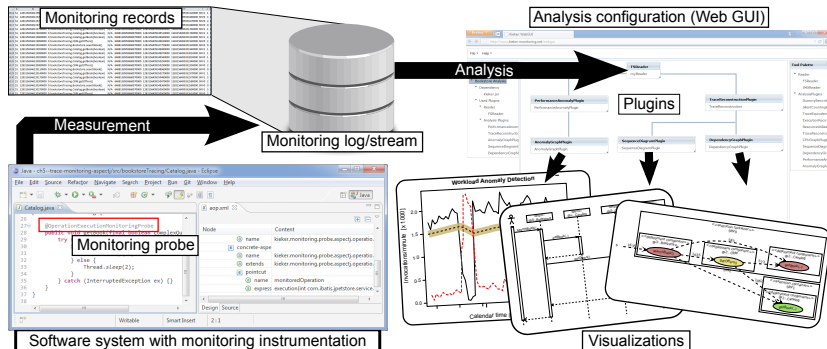


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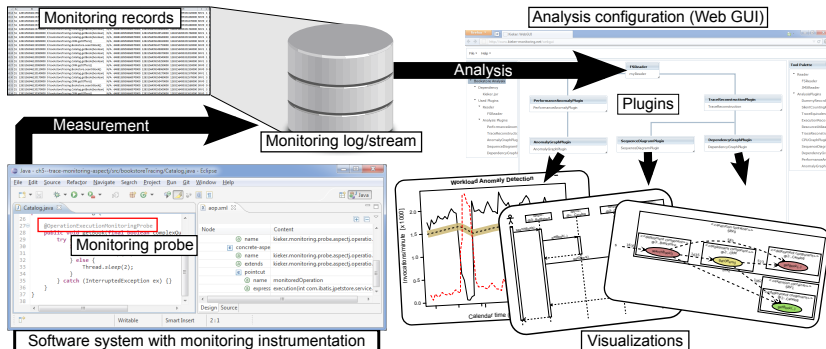


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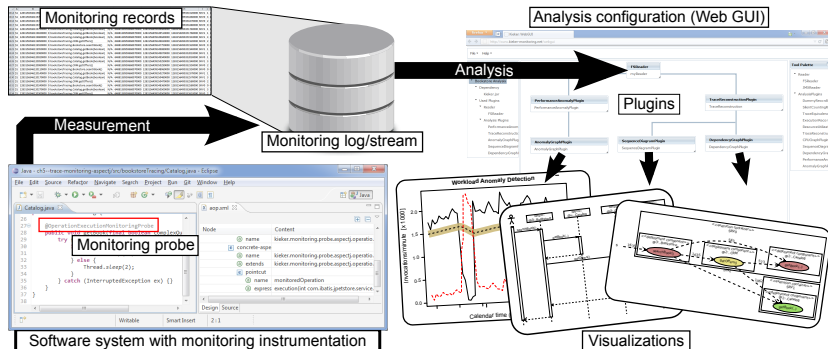


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- Extraction of software architectural (performance) models and visualizations

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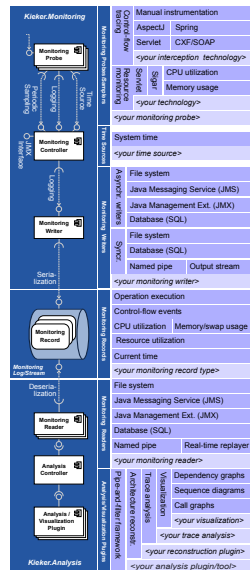


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 - Continuous monitoring of application behavior and usage
 - Performance anomaly detection and diagnosis
 - (Self-)adaptation control
- Extraction of software architectural (performance) models and visualizations
- Simulation (replaying previously monitored stimuli; measurement, logging, and analysis)

Kieker Framework

- Modular, flexible, and extensible architecture (Probes, records, readers, writers, filters etc.)
- Pipes-and-filters framework for analysis configuration
- Distributed tracing (logging, reconstruction, visualization)
- Low overhead (designed for continuous operation)
- Evaluated in lab and industrial case studies (since 2006)

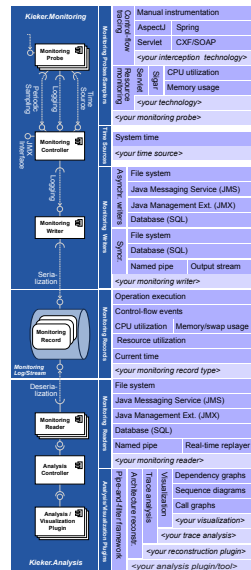


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