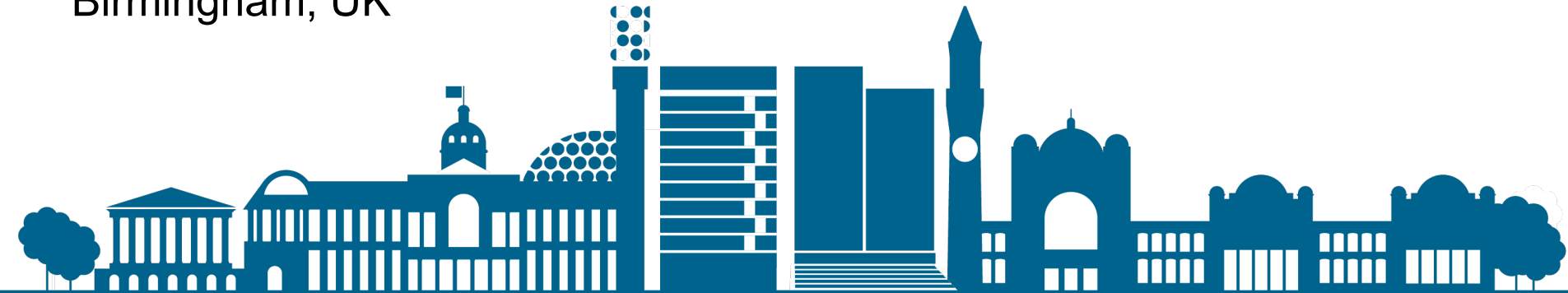# SAd-CloudSim: A Toolkit for Modelling and Simulation of Self-Adaptive Cloud Software Architectures

Maria Salama

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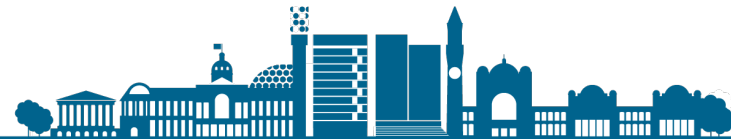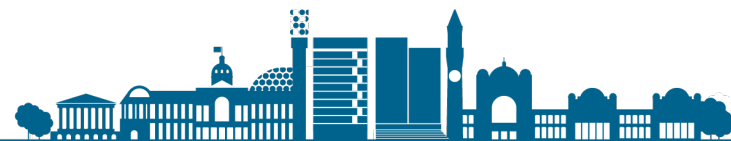University of Birmingham

Birmingham, UK

Why SAd-CloudSim?

- [ ] as a symbiotic simulation
- [ ] fill the gap between the conceptual research and the proof-of-concept implementation
- [ ] support research and development of cloud computing
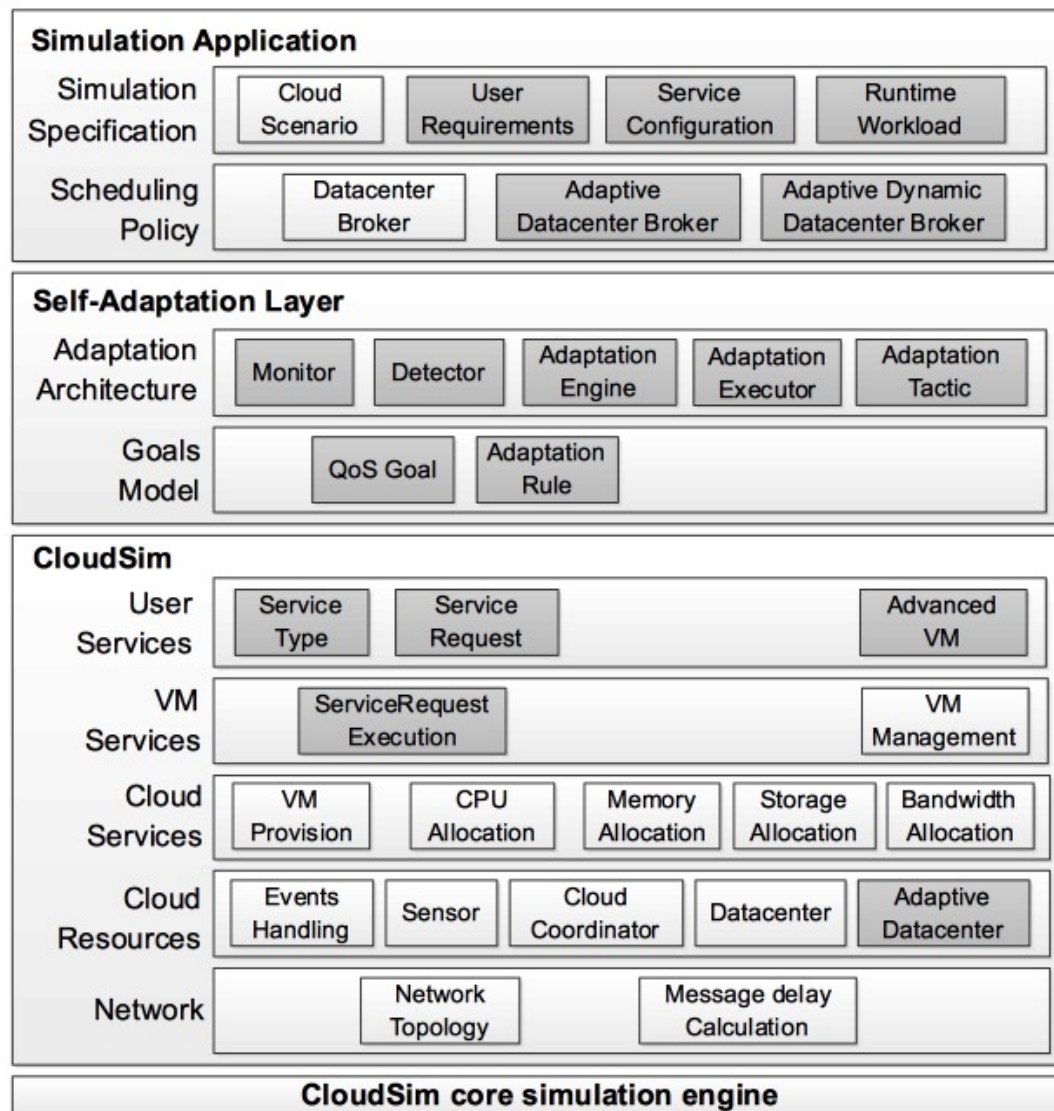- [ ] self-adaptive cloud architectures challenges

SAd-CloudSim novel extensions

- ☐ modelling and simulation of adaptation mechanisms for large-sale cloud-based systems,

- ☐ self-contained platform for modelling and testing self-adaptation mechanisms,

- ☐ support for testing the performance of cloud systems under varying dynamic workloads and with different quality goals,

- ☐ support extensions for modelling and testing self-adaptation frameworks and techniques.

SAd-CloudSim architecture

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Simulation using SAd-CloudSim
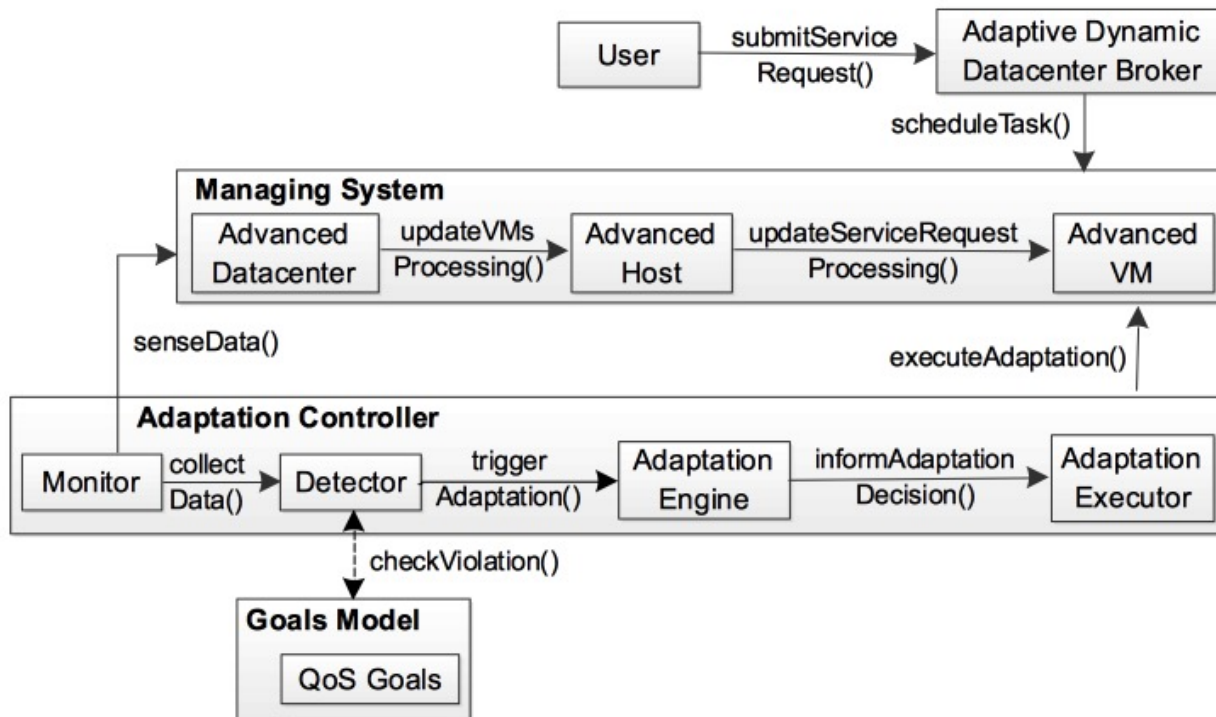
SAd-CloudSim open source

- https://github.com/m-salama/SAdSAwCloudSim

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