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# Runtime Monitors for Flexible and Modular Policies

– Diploma or Master's Thesis –

<b>Motivation</b>	Runtime monitoring, also known as dynamic analysis, is a technique of observing the activities of an executing application and intervening whenever the execution is about to violate the stipulated policy. Current formalisms for runtime monitors, however, apparently do not offer possibilities for adequately specifying modular policies for evolving applications or environments.		
<b>Task</b>	Analysis of existing formalisms for describing monitor interventions into application executions; development and analysis of a novel formalism suitable for modular policies and evolving applications.		
<b>Details</b>	For more detailed information about the thesis's topic and tasks, please contact me (see below) or ask in the MAIS secretary (E318 in the Piloty building).		
<b>Prerequisites</b>	Interest in and knowledge about automata theory and formal modeling.		
<b>Supervisor</b>	Prof. Dr.-Ing. Heiko Mantel		
<b>Date of Entry</b>	As of now		
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<b>Literature</b>	Interested students may obtain further information about the research topic for example from the following sources: [BLW05] Lujo Bauer, Jay Ligatti, and David Walker. Composing security policies with polymer. In <i>ACM SIGPLAN 2005 Conference on Programming Language Design and Implementation (PLDI)</i> , 2005. [LBW05] Jay Ligatti, Lujo Bauer, and David Walker. Edit automata: Enforcement mechanisms for run-time security policies. <i>International Journal of Information Security</i> , 4(1–2):2–16, 2005. [Sch00] Fred B. Schneider. Enforceable security policies. <i>Information and System Security</i> , 3(1):30–50, 2000.		