

Shielding

Policy Synthesis Algorithm



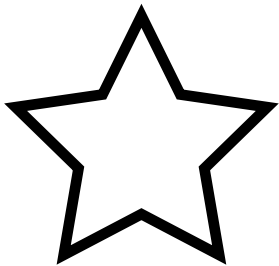
Input

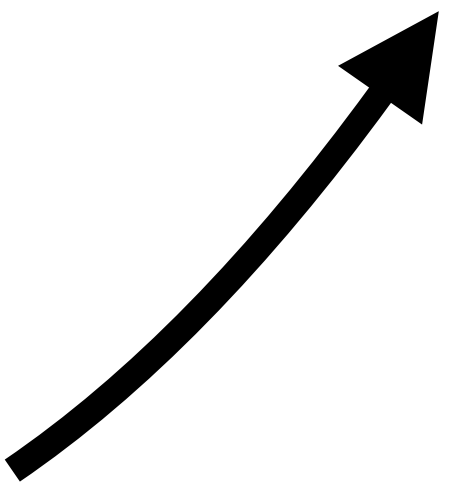


Output Policy

Critical Specification

Shield





Synthesis Algorithms







Modified Output Policy

Safety!!!



1. M. Alshiekh, R. Bloem, R. Ehlers, B. Könighofer, S. Niekum, and U. Topcu (AAAI'18): Safe reinforcement learning via shielding

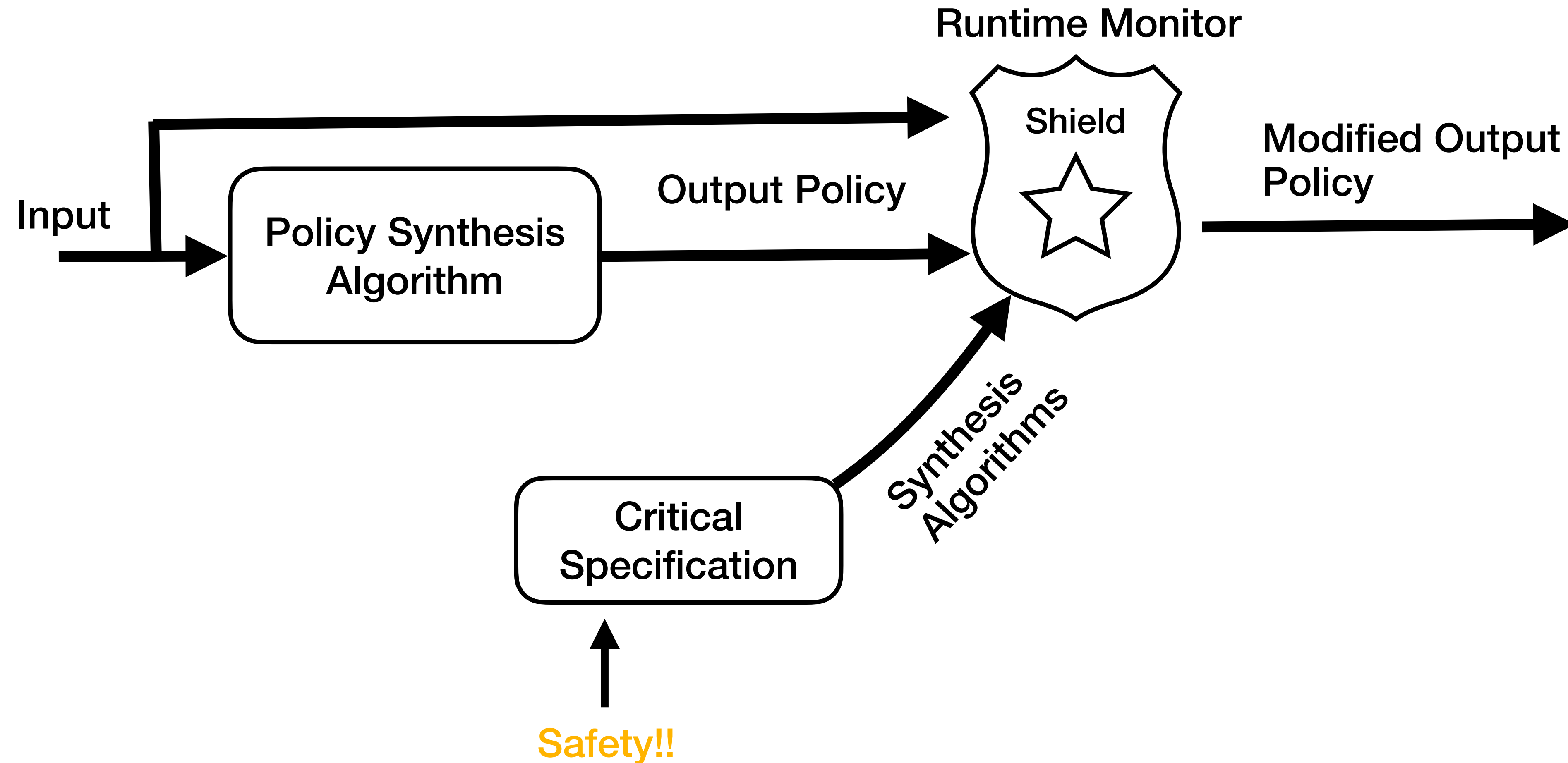
2. B. Könighofer, J. Rudolf, A. Palmisano, M. Tappler, and R. Bloem (ISSE'23): Online shielding for reinforcement learning

RuntimeMonitor

3

8

Shielding



1. M. Alshiekh, R. Bloem, R. Ehlers, B. Könighofer, S. Niekum, and U. Topcu (AAAI'18): Safe reinforcement learning via shielding
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ω -Regular Shielding

