

# A U S H A N G

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## FREIE UNIVERSITÄT BERLIN Fachbereich Mathematik und Informatik

Promotionsbüro, Arnimallee 14, 14195 Berlin

# DISPUTATION

**Freitag, 28. November 2014, 15 c.t. Uhr**

**Ort: Raum 046, Takustr. 9, 14195 Berlin**

**Disputation über die Doktorarbeit von**

**Herrn Kia Teymourian**

**Thema der Dissertation:  
A Framework for Knowledge-based Complex Event Processing**

**Thema der Disputation:  
Introduction to Semantic Complex Event Processing**

Die Arbeit wurde unter der Betreuung von **Prof. Dr. A. Paschke** durchgeführt.

Abstract: Detection, prediction and mastery of complex situations are crucial to the competitiveness of networked businesses, the efficiency of internet of services and dynamic distributed infrastructures in manifold domains such as finance/banking, logistics, automotive, telecommunication, e-health and life sciences. Complex Event Processing (CEP) is an enabling technology to achieve actionable, situational knowledge from high throughput event streams almost close to the real-time.

In this talk I will give an overview on the main concepts and technologies of complex event processing and introduce my research about the combination of event processing with semantic technologies which leads to semantic-rich event processing engines. I will present the main research problem on utilization of background knowledge about events and other relevant concepts for enabling knowledge-based complex event processing. This integration enhances the expressiveness of event processing semantics and facilitates the specification of event patterns based on the relations of events in the background knowledge graph. I will describe our approach for the specification and processing of complex events based on domain background knowledge that are included from external knowledge bases.

Die Disputation besteht aus dem o. g. Vortrag, danach der Vorstellung der Dissertation einschließlich jeweils anschließenden Aussprachen.

**Interessierte werden hiermit herzlich eingeladen**

Der Vorsitzende der Promotionskommission  
Prof. Dr. A. Paschke