



# **Examen Preparation**

**Architectural Thinking for Intelligent Systems** 

Winter 2019/2020

Prof. Dr. habil.Jana Koehler





#### Written Examen

Where: HS 002 in E 1.3

When: 14.2.2020 10 - 11:30 (room opens at 9:30)

Duration: 90 Minutes = 90 Points

- Closed Book
  - We provide the paper
  - Bring your pen(s)
- No own paper, documents, mobile phones, laptops, other devices...
- Policy for leaving the room: 1 person in urgent cases with entry and exit time documented





## Definitions and Methods: know, understand, explain, apply

- Software architecture: A1:36, A9:42
- Architectural thinking: A1:48, 50-51
- UML state diagrams: A2:43-48
- Modeling with BPMN 2.0: A3:39, 44-48
- Object Lifecycles: A3:52,55
- Goal of requirements analysis: A4:6
- Types of requirements: A4:10-11
- Smart requirements: A4:12
- Concerns and architectural decisions: A4:15-18
- Architectural decision documentation: A4:20
- 7 types of decisions: A4:21-22
- Perspectives and levels: A4:24-25
- Zachman Framework: A4:33-35,38





## Ctd.

- Architectural documentation: A4:54
- Invest acronym for user stories: A5:9
- Acceptance criteria: A5:10-11
- Goal hierarchies: A5:23-26
- Use case best practices: A5:38
- Scenarios: A6:11,16
- System qualities (non-functional requirements): A6:8-9,35
- 4 things an architect must do right: A7:4
- Vision statement: A7:17
- Views and Viewpoints: A7:29,39
- 4+1 Model by Kruchten: A7:36
- Context view: A7:5-6, Component view: A7:41-42
- Runtime view: A7:46 Distribution view: A7:49





## Ctd.

- Domain-driven design: A8:11-15,17
- Architectural principles: A9:7-8,19
- Tactics: A9:31
- Architectural pattern and styles: A10:4-6, A11:4-6
- 7 architectural styles: A10:7
- EAI pattern: A11:8-9
- ATAM: A12:9-11,18-19,21,23
- Al agent: A13:3
- Shakey architecture: A13:8
- BDI architecture: A13-17
- Subsumption AFS controller: A13:22
- SOAR architecture: A13:25/26