

**T-86.5170**

**Service-Oriented Architecture and Software Engineering**

**Exam 13.12.2011**

Write on every paper:

- T-86.5170 Service-Oriented Architecture and Software Engineering
- Family name, First names
- Student ID
- Department
- Signature

1. Shortly (1-2 sentences) explain each term. (6p)

- a. WS-I
- b. REST
- c. Service contract vs. service interface
- d. Choreography
- e. Business vs. infrastructure service
- f. Service granularity

2. List and describe six (6) SOA service design principles. (6p)

3.

- a. Describe the three core Web Services (WS) technologies. (3p)
- b. What are WS extensions? Why they are needed?  
Give some examples ? (3p)

4.

- a. Describe the different actors and their roles in a simple SOA architecture model. (3p)
- b. Describe the concepts of SOA and Software as a Service (SaaS).  
How do they differ and how do they fit together? (3 p)

5. Essay question (6p)

Write a short essay (1-2 pages) about **one** of the following topics:

- **SOA and Cloud Computing.**  
Explain what kind of issues need to be addressed in combining SOA and Cloud Computing.  
Is Cloud Computing useful for SOA? Why or why not?
- **SOA Governance.**  
What is SOA Governance about and what is it good for? What kind of models and viewpoints are typically identified in relation to SOA Governance?
- **SOA Security.**  
Explain what kind of issues are involved in SOA Security. Are specific SOA Security approaches needed compared to traditional security approaches? Why or why not?