

**FDA073**

## **Distributed algorithms for fault-tolerance (ECSEL)**

### **Lectures:**

20 h.

### **Recommended for**

PhD students with a basic background in computer algorithms, logic and discrete mathematics.

### **The course was last given:**

Fall 2001.

### **Goals**

The course will give an overview of distributed systems with a focus on problems appearing in distributed computations in presence of faults. Major algorithms and results for achieving fault-tolerance are covered.

### **Prerequisites**

Undergraduate course in distributed systems.

### **Organization**

Lectures, self study sessions, and invited seminars.

### **Contents**

The course begins with models and notions for distributed systems and goes on to study well known algorithms for fault-tolerant broadcast, consensus and related problems, as well as replication management including group services and quorum systems. Other related topics such as self-stabilising algorithms are also reviewed.

### **Literature**

Articles, selected chapters from books by Muellender, Tel and Lynch, to be decided.

### **Teachers**

Simin Nadjm-Tehrani, Ulf Nilsson.

### **Examiner**

Simin Nadjm-Tehrani.

### **Schedule**

Spring 2003.

### **Examination**

Home assignments or term paper.

### **Credit**

4 credits.