Magnus Almgren

DAT300: LECTURE 1
ADMINSTRATIVE DETAILS

Support Team

- Examiners
  - Magnus Almgren
  - Olaf Landsiedel
  - Marina Papatriantafilou

- Course Support Team
  - Zhang Fu   (PhD)
  - Georgios Georgiadis(PhD)
  - Vincenzo Gulisano   (PhD)

Details on web page:
http://www.cse.chalmers.se/edu/course/DAT300/

Course Slots

- Tuesdays   = presentations, talks by externals

- slot 2   = project updates, discussions

- Most instances taking place in room 3364 (the EDIT room), next to Linsen

Tuesday presentations

- Vincenzo Gulisano, "Introduction to Data Streaming"
- Georgios Georgiadis: adaptiveness / scheduling
- Olaf Landsiedel: Wireless communication "Wireless communication"

- Stefan Lundberg (Chalmers): Power Systems (2 parts)

- Joris van Rooij, Gothenburg Energy; "Advanced Metering Infrastructure"
- Per Andersson, GoalArt.
  2014-05-07 Wednesday (13--14)

plus presentations by you

Produkter och priser | Projekt och etableringar | Kundservice

Sök

VINN **STARTPLATSER** TILL **LILLA** OCH **MELLAN** GÖTEBORGSVARVET!

< >

Logga in

Mina energisidor ▾   Ok

Vad kan vi hjälpa dig med?

> Har du frågor om fakturan?
> Vill du ha e-faktura?
> Vill du göra felanmälan?
> Dags att flytta?
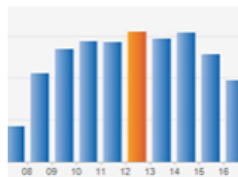> Lediga jobb
> Vill du köpa el?

Som Västsveriges ledande energiföretag erbjuder vi **el**, **elnät**, **fjärrvärme** och **gas**.

Bra Miljöval

> **När du vill minska din miljöpåverkan**

Nu har du genom vårt erbjudande Fjärrvärme märkt med Bra Miljöval möjlighet att ytterligare markera att du vill minska din miljöpåverkan.

> **Följ din elanvändning på timnivå**

Genom den kostnadsfria tjänsten "Din elanvändning" kan du nu följa din elförbrukning per månad, dygn eller timma

> **GoBiGas - en biogassatsning för ett hållbart Göteborg**

Här ska vi producera biogas genom förgasning av skogsråvara. Se filmerna och läs mer om projektet här.

> **Dags att teckna nytt elavtal?**

Hos DinEl kan du sätta ihop ditt eget avtal, efter dina egna preferenser och boendesituation.

Nyheter & pressreleaser   > Fler nyheter

2013-02-27 > Information om rivning och ombyggnation av Rosenlundsverket

2013-02-26 > Vinnare av EM-biljetter i februari

2013-02-26 > Göteborg Energi deltar i nationellt forskningsprogram inom elkraftteknik

Avbrottsinformation

> Elnät

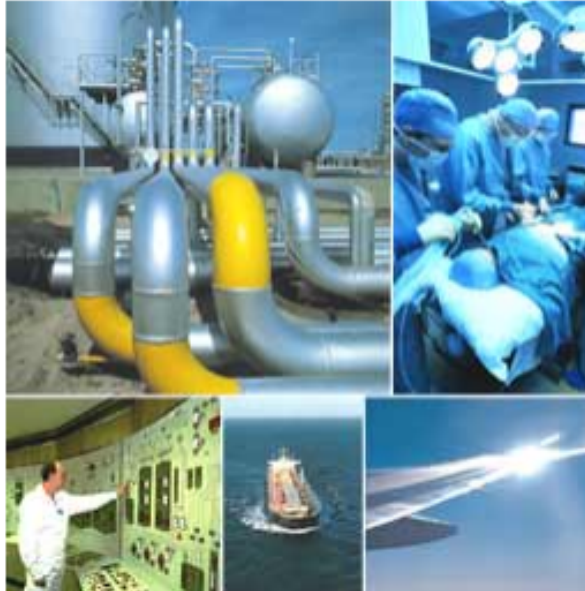> Fjärrvärme

> Fjärrkyla

> Gas

GoalArt®

Knowledge for Safe Operation

PEACE OF MIND

"What we actually sell is understanding of complex fault situations. In this way, we offer increased safety, quality, and more reliable operation. Or simply put, we offer peace of mind for operators, engineers, and system owners."

Jan Eric Larsson
President and CEO

NEWS

Croatian Grid Project
ESS Project
Teracom Project

Swedish Champion in
Europe Business Awards

Process Nordic Article
IBC Energy Seminar
Alarm book

GoalArt provides software systems, which help operators and service technicians to understand fault situations and handle these quickly and correctly. This increases both productivity and safety, and speeds up fault diagnosis and repair. We can reduce the number of alarms in a control system drastically, through alarm cleanup, state-based alarm priority, and root cause analysis.

READ MORE

Conventional power plants, nuclear power, aviation, airport ground systems, cars and vehicles, food processing, chemical and petrochemical plants, pulp and paper, steel mills, medical equipment, power grids, Internet management.

GoalArt, Scheelevägen 17, 223 63 Lund, Sweden, Ph: +46 46 286 4880, Fax: +46 46 286 4882, E-mail: info@goalart.com, Web www.goalart.com.

Passing the course

- Seminars & Reading papers
  - Reading list
    - Each person chooses one paper (approved by us)
      Easy paper ➜ take two
    - All people in the course read all these papers
  - Presentation
    - Each person presents their paper
    - Another team actively prepares questions to "oppose"
- Participation for industry lectures and course activities.
- Projects
  - Successfully completed project
  - Written report

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- Seminars & Reading papers
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- Participation for industry lectures and course activities.
- Projects
  - Successfully completed project
  - Planning report, written report + demo.

Projects

- **Online processing of smart grids' data.**
  - Security applications in the context of smart grids demand for online data processing in order to spot threats in a real-time fashion. This project explores how processing paradigms such as data streaming can be leveraged in this context.
- **Smart grid data gathering networks**
  - What kind of data gathering networks in Smart Grids are possible with today's technology, such as embedded platforms (ie Raspberry Pi), wireless antennas (ie Zigbee) and open-source hardware (ie Arduino)? How can consumers get and process data from their own smart meters in order to change their behavior?
- **Visualizing data for the smart grid**
  - How can data from the smart grid best be visualized and what patterns can be determined? Use tools such as Spotfire, Gephi, and your programming skills.

Projects (part 2)

- **Intrusion detection for the smart grid**
  - How can a de facto IDS such as snort be adapted for protocols found in the smart grid. This project is about understanding snort rules and how these can be adapted to DLMS/COSEM or MBUS traffic.
- **Smart grid data correlated with other sources**
  - Many government agencies and other organizations provide open datasets. How can such datasets be used to extend our understanding of enery consumption, or other patterns in the smart grid datasets? One source for open data is found at the hack for Sweden site.
- **New services in the smart grid**
  - What services would be useful for consumers and companies to have in the smart grid? Are the data available sufficient to create such services? See for example the following service from E.On to save energy.

Problems

- Too many courses this period
  - ➔ Possible to postpone project execution but need to participate on industrial lectures
- Finding times which fit all students (activity)
  - Tuesday slot ok?
  - Second slot?
- Contact info, conflicting courses