CSC Information meeting
December 16th, 2015

Departments:
CVAP
Silvia Cruciani, Ph.D Student
Filomena Polzanny, Researcher
Yanru Zheng, Postdoctor

TCS
Andrea Lindström, Ph.D Student
Sandra Varela, Researcher

HPCViz
Erik Dahlström, Research Engineer
Bård Stenek, Researcher

PDC
Mikael Eriksson, Educational Developer

New employees
Welcome!!!

New faculty positions:

TCS
Jakob Nordström, Associate professor

CVAP
John Folkesson, Associate professor

New assistant professor in Software-intensive systems
Jana Tumova
CVAP or TCS
Starting date June 1st, 2016
Currently: Postdoc at the EES school
Czech republic

New professor at TMH
Jonas Beskow
From January 1st, 2016
New department – CST

From January 1st, 2016
Computational science and technology
Beräkningsvetenskap och beräkningsteknik
CB and HPCViz seize to exist by this date
Head of department: Erwin Laure
Assistant HoD: Erik Fransén
Planned co-location in close proximity to the visualization studio

Salary review 2015

This Monday, 14 December, the final agreement was signed.
- New salaries – valid from 1 October 2015 – paid in December 2015.
  - SACO members: You already have the information
  - ST and unorganized members: Your closest manager will provide info about your new salary.

Note! The PhD-ladder is also negotiated and new salaries, valid from 1 October, was paid in November 2015.

Process in short:
- All employees have been offered a discussion with their manager to evaluate last year’s performance (lönesamtal)
- SACO Members: Individual salary discussions (lönesättande samtal) with their managers.
- ST Members: employer and union have negotiated the salaries.

Reminders from HR

- Report side line activities (bisysslor) before January 20th.
- More information on the intranet.
- Remember to use your health care allowance for 2015, you find it in the KTH for me portal.
- Add or update your home address in the self reporting system if needed. The annual income statement will be mailed to your home address by the end of 2015.

Conference, event and meetings 2016

Please register all conferences, events and meeting during 2016 as soon as you have the information via this link:
https://intra.csc.kth.se/servicecenter/moten-gaster/konferenser-event-o-

The service center will contact you for a shorter planning meeting to discuss the arrangements in more detail.

Don’t forget to check out our updated pages:
https://intra.csc.kth.se/servicecenter/moten-gaster/

BIT

Johan Hoffman, Mattias Wiggberg, Christian Smith
BIT (b-it@csc.kth.se)
2015 (remaining ITA centralisations)
AFS cell migration
Servers and IT-services (RAPP etc.)
2016
Reinvestments, CSC it-strategies, influence general
KTH it-strategy...
BIT: Mattias Wiggberg (stab), Christian Smith
(education), Johan Hoffman (research)
ITR/GRU-ITR: representation of faculty/GRU

Economical situation
CSC is doing great – detailed report at the next meeting
But... a few teasers
• IT costs 2015 are significantly lower than 2014 but the
  quality remains and develops
• We are not growing as quickly as we should – the base
  for research is not increasing 2015 compared to 2014... this will need to develop more...
• % overhead will decrease 2016 compared to 2015
• Costs for facilities will be moved from central costs to
  department costs (real facility costs will be booked on research projects) not as overhead costs
• From 2017 we will need a new model for distribution

Rector contract 2015
Rector’s strategic funding (12 assistant professorships):
• Assistant professorship in Socially Aware ICT
  (awaiting decision)
• Assistant professorship in Big data and eScience
  (about to be sent to reviewers)
• Assistant professorship in Software intensive systems
  (awarded to Jana Tumova)

Rector contract 2015
Rector’s steered funding:
• 6 postdoc positions (all employed, final one
  undergoing negotiations)
• Associated professorship in Computer Science spec.
  software (34 applicants, 5 to be interviewed today!)?
• Assistant professorship in Media Technology (eLearning)
  (31 applicants, interview to be booked)
• Assistant professorship in Speech Communication (22
  applicants, interview January 21, 2016)
• VIC studio support
  Extra
• Associate professorship in Computer Science (35
  applicants, reviewers to be appointed)
• Associate professorship in Computer Vision (18
  applicants, reviewer to be appointed)

Rector contract 2016
Rector’s steered funding:
• Assistant professorship in Human Computer Interaction
  w. a sustainability profile
• Seed funding projects for CST
• CSC labs

KTH Research Office – Availability during the holidays 2015/16
KTH Research Office will during the period of December
23 until January 8 have a limited possibility to provide
services, including signing of documents or advisory tasks
due to the holiday period.

As of December 28 until January 6, KTH Research
Office will be closed. During this period we will not be
able to provide services, such as signing of documents etc.
CSC information for the Christmas holidays

During the Christmas holidays of 2015, administrative staff at CSC are available according to the information in intra:

Generally, incoming queries are handled in incoming order during the Christmas holidays and that response times are longer than usual. Judgements are made of what queries are rescheduled to be solved when permanent staff are back and what queries are to be handled immediately.

For more information, please visit:
https://intra.scs.kth.se

Small Visionary Projects 2016

Aim: is to increase the collaboration between CSCs departments
- Short term seed funding (6-12 months)
- Should include min two faculty from min two departments
- Deadline for applications: January 31st 2016
- Grant: Ca 500-600 kSEK
- More info:
  https://www.kth.se/csc/forskning/small-visionary-projects/svp2016-1.379700

SVP – 1 page application!

- Title: 
- Timeframe: n-o 2016 - n-o 2018 (a 6 months)

Budget table:

<table>
<thead>
<tr>
<th>Name (responsible)</th>
<th>Department</th>
<th>% of fulltime</th>
<th>Cost with overhead</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example 1 (profes)</td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Example 2 (doctor)</td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Research plan (should not exceed this page!!!)

1. Aim: What you set out to do?
2. Strategic importance and impact: Why is this important for CSC and beyond?
3. Future plans: How does research continue after this project terminates?
4. Justification of budget and involved personnel: Why you?

THS pedagogical prize 2015 to Carl Henrik Ek, CSC

GRU

Olov Engwall

Updates on GRU issues

- Record number of Master of Science degrees awarded,
- THS has selected Carl Henrik Ek as teacher of the year,
- Peter Arvai, former Media technology student, was elected the KTH alumni of the year,
- Three KTH student projects got C-awards 2015,
- CSC clearly surpasses the goal set by KTH on the number of paying students, etc

You should be proud of belonging to CSC’s teaching staff and your own contributions to the achievements this year.
January 12, KTH president visit

KTI will present our undergraduate education. I would like to focus on the real highlights of the last year, and I therefore need your help.

Have you had:
- a really cool student project in your course,
- an excellent exchange with industry or society in some area,
- a tremendously successful pedagogical make-over of a course,
- media attention for CSC education,

or something else that you think that the President of KTH should know about?

Do tell me, so that I can include it in my presentation!

(short text explanation as well as visual illustrations (pictures or video snippets) to help me prepare the presentation)

Faculty assembly – Fakultetskollegiet

and

The school's pedagogical developers

Viggo Kann

Faculty assembly-fakultetskollegiet

- Advisory group to the faculty council (fakultetsrådet)
- Consists of 10% of the faculty
- Meets 6 times a year to discuss important issues such as
- Employment profile of the new president
- New ethics policy
- Investigation of new educational program structure
- Refugee engagement of faculty

CSC representatives in the Faculty assembly

- Christian Bogdand, MID
- Viggo Kann, TCS
- Arvind Kumar, CB
- Gabriel Skantze, TMH
- Christian Smith, Cvap
- Tino Weinkauf, HPCViz

One week before each meeting we put the information on the group web Teachers at CSC. Please read and discuss with us!

The school's pedagogical developers

Björn Hedin

Viggo Kann

Reintroduction of course analysis discussion meetings
Examples of what we do

• Organizing teacher teams, sometimes as a Reflective teaching in a subject perspective course
• Giving workshops on teaching (for example Student motivation, Help your students to study, Intended learning outcomes and course syllabus)
• Helping KTH to choose a new LMS (done!)
• Improving the classrooms, new AV standard, plans for flexible use of D34 and D35

and much more, look at our group web.

CSC pedagogical development

Exascale Projects at PDC/HPCViz
Erwin Laure

Exascale Computing (10¹⁸) a Priority in H2020

• Main Challenges:
  • Algorithms
  • I/O
  • Programming models, tools
  • Hardware/Power consumption
  • Software support

FET-HPC Projects

• ExaFLOW
  • Coordinated by HPCViz, other KTH partner: FLOW
  • New algorithmic approaches for fluid dynamics
  • Efficient implementations

• SAGE
  • Coordinated by SEAGATE
  • New I/O hardware and models

• AllScale
  • Coordinated by Univ. of Innsbruck
  • Task-based programming models & performance tools

• Interweave
  • Coordinated by EPCC
  • Programming model interoperability

HPC Centres of Excellence

• Coordinated by PDC, KTH Partner: SciLifeLab
• 11 European Partners
  • KTH Royal Institute of Technology – Sweden
  • University of Utrecht – Netherlands
  • University of Edinburgh - UK
  • BCS and IRB – Spain
  • MPG and Juelich – Germany
  • EMBL-EBI – Germany
  • University of Manchester – UK
  • Forward Technologies – Sweden
  • HPC/Paloska Alliance – UK

• MAX – Material Science
  • Coordinated by CMH

Blicken i samtalet
Jens Edlund
Blicken i samtalet

VRs stora utlysning
Tvärvetenskaplig forskning
1½ MSEK/år över 4 år
Med SU (Mattias Heldner, Marcin Wlodarczak)
Det fjärde i en serie (nu klonad)

Blicken i samtalet

Kvantifiera blick-beteenden i trepartssamtal
Timing gentemot samtalsrelevanta händelser, till exempel
Adressering
Turtagning
Återkoppling
Bygger på modell av samtalsakteenden sedan tidigare
Lägger till automatisk registrering av blickar
Parallel med "Andning i samtal"

Online learning of turn-taking behaviour in spoken human-robot interaction"

Gabriel Skantze

Turn-taking in multi-party interaction

Online learning from interaction

VR Grant (Young Researchers): Algorithms and Complexity for Dynamic Graph Problems

Danupon Nanongkai
### Purpose and Aims

- **Dynamic graph algorithms**: The main interest is to analyze large-scale rapidly-changing graphs with small time guarantee.
- **Focus on basic graph problems**: shortest paths, minimum cut, and maximum matching.
- **Main Goal 1.** Improve the existing algorithms in terms of (i) the time complexity, (ii) the approximation guarantee, and (iii) the need for randomness.
- **Main Goal 2.** Show the limits of dynamic graph algorithms; i.e., prove conditional or unconditional time lower bounds for solving dynamic graph problems.

### Budget & Plan

- ~ 3.7 million Kr. for 2016-2019
- Will be used to hire a postdoc for 24 months and a student for another 24 months.

### VR Project: Learning Semantic Grammars over Decidable MRLs

*Michael Minock*

### Natural Language Interfaces

“What are the flights from Stockholm to Los Angeles leaving tomorrow”

How do we acquire the Semantic Grammar?

Equivalent rewriting? Can you rewrite q using the MRL expressions in a given set Q as ‘building blocks’?

### Decidable logical properties of (some) MRLs

**Containment?**

**Equivalence?** If you can decide containment you can decide equivalence

**Equivalent rewriting?** Can you rewrite q using the MRL expressions in a given set Q as ‘building blocks’?

### The Three Central Questions of the Project

1. How do logical properties of an MRL assist the learning of semantic grammars under supervised, weakly-supervised and unsupervised conditions?
2. Can we identify new, more expressive MRLs that preserve key logical properties?
3. Can pure or hybrid learning approaches beat hand-built Natural Language Interfaces w.r.t. total cost, quality, etc.?
**FACT - Factories of the Future:**

**Human Robot Cooperative Systems**

Joakim Gustafsson, Danica Kragic, and Patric Jensfeldt

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**Facts about FACT**

New joint SSF CVAP-TMH project from the call "Generic Methods and Tools for Production 2014"

Spin off from joint SVP and SRA-TNG project "SAVIR"

22.8 MSEK for the period 2016-2020

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**More about FACT**

Objective:

The focus is on providing safe and flexible feedback in unforeseen situations, enhancement of human-robot cooperation and learning from experience.

Who is doing what:

- Dani (PI) – collaboration in object handling
- Jocke – natural and embodied interaction
- Patric – interaction via mobility

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**Vision**

Green Leap

A research group with the goal to act as a catalyst for change by engaging design in sustainable development.
How could the city be designed to welcome car-free families?

- Healthier
- Less stress
- More together
- Cargo-bikes in the city
- Kids in public transport
- Transports FROM your home
Bridging the gap between sustainability research and society / business
Solceller - Varför inte?
Det blir för dyrt...

Contact:
Teo Enlund
Senior Project Manager, Green Leap Industrial Designer MFA
www.greenleap.kth.se
toeoe@kth.se

Centre for Sustainable Communications (CESC)
VinnEx 2007-2017
Mattias Höjer

CESC – Centre for Sustainable Communication
A Vinnova Centre of Excellence focusing ICT for sustainable development
Interdisciplinary centre with people from mainly MID and fms (ABE) and our six other partners

Etapp 3 – 2012-2015
135 personer (71 män, 64 kvinnor)
64 arbetsår (49,5% män, 50,5% kvinnor)
ca 25 Mkr., varav hälften inkind.
75 referee-granskade publikationer
9 avhandlingar
Utåtriktade aktiviteter i form av workshops, föredrag, konferenser, Almedalen...

Four projects 2012-2015 (Stage 3)
From Data to Sustainable practices - D2S
Scenarios and Sustainability Impacts of ICT societies – Scenarios and Impacts
ICT for Sustainable Cities – ICIT
Methods for Sustainability assessments of ICT – Methods
Tre nystartade projekt (2015-2017)

Sustainable practices and data
ICTUS – ICT for urban sustainability

Samt övriga projekt, bl.a. trafik
Och andra aktiviteter – presentationer och deltagande i expertgrupper, initiering av aktiviteter, Green hackathon…

Thanks and welcome to…

Filmrelease och panel om trafik, digitalisering och miljö, 13 jan kl 17 på CESC, Lindstedtsvägen 5
Anders Guilberg et al har gjort en kort animerad film om digitalisering och stadstrafik. Den släpps under en debattkväll på CESC med bl.a. Roger Mogert, stadsbyggnadsborgarråd

Green Hackathon, 12-13 februari på Sweco, och mingel 26/1 kl 17 på CESC för kontakter inför Green Hackathon.

Merry Christmas everyone!
God Jul