Wallenberg Autonomous Systems Program (WASP)

Danica Kragic
Wallenberg Autonomous Systems Program

University representatives:
Lars Nielsen, Linköping University
David Sands, Chalmers
Bo Wahlberg, KTH
Karl-Erik Årzén, Lund University
Why are we doing this? (formulated by KAW)

- We will build a platform for academic research and education that can interact with leading companies in Sweden
- We will not solve the current needs for this industry but develop knowledge and competence for the future
- 1 310 MSEK (KAW) + 500M (industry + academia)
Strategic dimension

• The initiative will include:
  – Recruitment of new young researchers
  – A grad school with close interaction with Swedish industry
  – Platforms for development and demonstration in collaboration with other parties

• The strategic dimension will be important for the board and other management
Handling the strategic dimension

Strategic Areas

Thematic Areas

Tentative Projects

• Along both dimensions
WASP Organization

- Program Board
  - Industrial Reference Group
  - International Sci. Advisory Board
  - Program Management Group
    - Research Program
    - Graduate School
    - Demonstrators
WASP – Recruitment program

Strategy of recruitment
Reinforcement of existing areas
Establishment of new areas

Type of recruitment
• Recruitment of new young researchers
• Recruitment of experienced researchers

Type of offer
• Attractive package by international standards
Graduate School - Needs

Needs
Joint effort to raise knowledge level in Sweden.
Strategic perspective
PhD output, including industrial PhD students
Industrial PhD students
Financed by KAW with 50%
Goal of at least 45 over ten years. Three intakes for years 1-4, 4-7, and 7-10 means 15 industrial PhD students at the time distributed over participating industries.
WASP

Software

Recruitment program
Internationally competitive offers
Graduate School
Ambitious program, Industrial PhDs
Updates on staff matters

Gulan
New docents:

TCS
Jakob Nordström

CB
Pawel Herman
New employees

TMH
Anders Friberg, Associate Professor
Petur Helgason, Researcher

TCS
Mats Näslund, Adj. Professor
Fei Chen, Researcher
Roberto Guanciale, Assistant Professor

HPC Viz
Roman Iakymchuk, Postdoctor
Van Dang Nguyen, Ph.D Student

PDC
Cristian Mihai Cira, Application Expert

CVAP
John Folkesson, Associate professor
Hakan Karaoguz, Postdoctor

Deans Office
AnnaLena Hållner, Education administrator
Deans Office

AnnaLena Hållner, Education administrator
TCS

Mats Näslund, Adjunct professor
Who is Mats Näslund?

- Newly appointed adjunct professor at TCS/CSC “Network and System Security”
- Otherwise employed by Ericsson (Research) since 1999.
- PhD in cryptography at TCS in 1998
- Johan Håstad advisor
- Civ.ing. D-KTH, 1993
- 50 y.o., live in Bromma
Background

- Ericsson has a vision of a “Networked Society”
  “Anyone/anything that benefits from being connected, will be connected”.
- “50 Billions devices”: traffic lights, cars, trains, industry robots, shipping containers, doors/windows, smart meters, body sensors, huge “cloud data centers”, lightbulbs, …
- Applications: e-health, electricity grid, e-government, public transport/safety,…
- Public “5G” networks will replace dedicated networks, SW/virtualization will replace HW
- Enormous implications on information security, user privacy, SW security/reliability, …
- Very good fit with interest/competence at TCS!!
Research Plan Highlights

• Formally verified high assurance hypervisor
  • Vinnova project “HASPOC”, ongoing

• Automated analysis/verification of cryptographic protocols
  • Joint industrial PhD, in preparation

• Being discussed
  • E-voting (potential “Technology for good” proof of concept?)
  • New cryptographic primitives, e.g. homomorphic encryption
Civilingenjör graduated: Already a record

181 until 22 September 2015 (full years otherwise)
Civilingenjör graduated: per program

132 graduated 270hp students (deadline was 30 June 2015).

Thanks to heroic efforts by e.g.,:

Monika Lundell
Utbildningskansliet (Alicja Lissenko, Helen Lindkvist-Katz, Angelica Brink, Patrik Gårdenäs, Ulrika Hallstrand)
MSc Thesis coordinators, supervisors, examiners (Ann Bengtsson, Anders Hedman, Stefan Arnborg)
Teachers and examiners in other courses

Thank you!

2015-10-07
Master thesis code mess

- KTH has P/F MSc theses from July 2015
- But students admitted 2007-2014 may demand to be graded A-F on their MSc thesis
- And some students have already started on old MSc thesis courses with A-F.
  - Heads up MSc thesis supervisors and examiners

<table>
<thead>
<tr>
<th>P/F</th>
<th>A-F</th>
<th>A-F</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA221X</td>
<td>DA224X</td>
<td>DD221X, DD225X, DD226X, DH224X, DM228X, DT220X</td>
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<tr>
<td>DA222X</td>
<td>DA225X</td>
<td></td>
</tr>
<tr>
<td>DA223X</td>
<td>DA226X</td>
<td></td>
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</tbody>
</table>

2015-10-07
Master thesis evaluation mess

- The three groups of MSc theses have different requirements and grading criteria.
- Check what course the student is registered on.
- Details on requirements and grading on: https://www.kth.se/social/group/examensarbete-vidcs/page/betygskriterier-och-bedomningsmallar/
- Note:
  - Student self-evaluation
  - Supervisor assessment
  - Forms for examiners’ grading
Student Activities at VisualizationStudio
Mario Romero, Björn Thuresson 2015-10-06

https://www.kth.se/profile/marior/
Information from HR

Maria Widlund
Martin Fält
Salary review 2015

- Negotiations at central part of KTH are done!
- Employed at KTH, 1 October 2015.
  - Excluded are employees that already have 2015 year’s salary and
  - PhDs follow the ”ladder”.
- New salaries will be valid from 1 October 2015 and earliest paid in December 2015.

Process:
All employees will be offered a discussion with their manager to evaluate last year’s performance (lönesamtal) - before 26 October.

* Members in Saco will also have an individual salary discussions (lönesättande samtal) with their managers – mid November.

* Members in ST will have the same process as last year i.e. central parts (employer and union) will negotiate their salaries.
CSC local diversity projects

An opportunity to conduct diversity and equality projects!

Submit your application during November – December to human-resources@csc.kth.se

More information will be published on the intranet and in Numera.
### Education in Fire Safety, CPR and defibrillators

<table>
<thead>
<tr>
<th>Education</th>
<th>Room</th>
<th>Language</th>
<th>Max people</th>
<th>Date &amp; time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart starter &amp; CPR*</td>
<td>527 / F0, Lindstedtsvägen 24</td>
<td>SWE</td>
<td>12</td>
<td>13 Oct 10-12</td>
</tr>
<tr>
<td>Fire safety</td>
<td>Fantum, Lindstedtsvägen 24</td>
<td>ENG</td>
<td>50</td>
<td>13 Oct 11-12</td>
</tr>
<tr>
<td>Heart starter &amp; CPR*</td>
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<td>20 Oct 10-12</td>
</tr>
</tbody>
</table>

* CPR= Cardiopulmonary resuscitation
Great work everyone, KTH got the environmental certificate!

- Information:
  External auditors from qValify will visit CSC on the 14th of October to see how our work is progressing. So if you haven’t done the environmental education yet, please do so!
Impact 3c project

Joakim Gustafson
CSC ILL
The Impact 3C project

• Operationalize Societal Impact work at KTH
• Involve the faculty at the schools
• Appointing Impact Launch Leaders (ILL)
  • CSCs  ILL Joakim Gustafson
What is Societal Impact?

Impact is defined as an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia.

Impact includes, but is not limited to an effect on, change or benefit to:

- Activity, attitude, awareness, behaviour, capacity, opportunity, performance, policy, practice, process or understanding
- An audience, beneficiary, community, constituency, organization or individuals
- Any geographic location: locally, regionally, nationally or internationally
- The reduction or prevention of harm, risk, cost or other negative effect
ILL responsibilities

• Act as executive editor for the school impact strategy
• Ensure that the strategy is agreed among the faculty
• Define metrics for assessing impact at the school / KTH
• Identify CSC impact cases
ILL activities

• Supporting the school leadership with regards to Impact issues
• Create structures for information gathering
• Perform mapping of existing partnerships within the school
• Identify impact already being created within CSC education/research
• Identify CSC activities and projects that could generate impact
• Support in creation of impact reporting to external partners
Some ILL activities in the near future

- Impact day for young faculty in collaboration with the *ICT platform*
- Pilot project in collaboration with the *Spaces for Impact* project
- Development of a process for identifying of impact cases
The ICT-platform day

WHAT ARE YOU DOING TO MAKE THINGS BETTER?
The ICT platform day 2015

Theme: Impact and engagement with society
When: November 24, 2015
Where: T.B.A (not KTH campus!)
Participants: Young faculty (incl. PhDs at the end of their PhD periods)

Preliminary program

– “Impact success stories”
  • participants from both academia and industry
– How to commercialize a research idea
  • talks from KTH Innovation, funding bodies, and business incubators.
– Demo and poster session
  • Our young faculty present how their research can have an impact on “society”
– Food and networking in a fun and inspiring environment!
What is an impact case?

- The foundation is always excellent research!

- The research have been taken further by somebody
  - Lead users (existing businesses, the researcher in the form of start-up, authority, organization, municipality, etc.)
  - To be a successful Impact Case - scientists should have had further contact with lead users?! Should scientists have been engaged in public debate, other commitments?

- The research has made a difference in society
  - used by end users (private individual, company, government agency, organization, etc.)
  - *KTH Pathways to Impact?*
<table>
<thead>
<tr>
<th>KTH Pathways to impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify key bottlenecks in the future for industry and society and direct research groups to this work</td>
</tr>
<tr>
<td>Commercialisation and exploitation</td>
</tr>
<tr>
<td>Improving health and well-being</td>
</tr>
<tr>
<td>Enhancing the research capacity, knowledge and skills of public, private sector and 3rd sector organizations Publishing, conferences etc.</td>
</tr>
<tr>
<td>Enhancing the effectiveness and sustainability of organisations including public services and businesses</td>
</tr>
<tr>
<td>Improving social welfare, social cohesion and/or national security</td>
</tr>
<tr>
<td>Carrying the industry frontier forward, give rise to new technologies</td>
</tr>
<tr>
<td>Improving the framework and efficiency on which progress is made in public and private bodies Standards, flagships etc.</td>
</tr>
<tr>
<td>Environmental sustainability, protection and impact</td>
</tr>
<tr>
<td>Solve &quot;real&quot; problems in industry and society on a hands-on level Master theses, ind. doctoral students</td>
</tr>
<tr>
<td>Evidence based policy-making and influencing public policies</td>
</tr>
<tr>
<td>Enhancing cultural enrichment and quality of life</td>
</tr>
<tr>
<td>Provide highly skilled and analytical personnel to society</td>
</tr>
<tr>
<td>Changing organisational culture and practices</td>
</tr>
<tr>
<td>Increasing public engagement with research and related societal issues</td>
</tr>
<tr>
<td>Bring academia, industry and public sector stakeholders together</td>
</tr>
<tr>
<td>Development of tools and infrastructure for innovation</td>
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Activities within the area of Impact Cases

- Discuss impact case framework: time scales, headings and scope
- Discuss a impact case development process
- Identify the actors the need to be involved
- Test drive the process. produce a small number of Impact Cases
- Evaluate the framework and process
- End results in May 2016
  - at least 2 cases per school
  - at least one coupled to education
Election of new rector for KTH

Ann Lantz
Nomination committee for new rector at KTH

- Börje Ekholm chairman of the board of KTH and in the committee
- Ann Lantz and Bo Wahlberg are teacher representatives
- Sanny Shamoun for the other employment categories
- Elin Malmgren and Arash Safari Nick represents the students
- Helene Biström represents the public interests
- Seija Natari secretary of the committee
The work up until October 14, 2015 when the board decides on the requirements profile for the next rector

- Proposing the contents of the employment profile
- Comments on the draft employment profile
- After October 14 the possibility for everybody (staff and students) to nominate candidate starts
- **Who = Everybody at KTH**
- **How: Individual meetings with** e.g., FR, FK, AU, THS, TAS, KTH Social
- Interviews with the management group both on the faculty side and on the administrative side
- **Schools:** One contact person per school has been appointed (a teacher in the strategic board). For CSC this was Kia Höök
Information from the nomination committee is available on the KTH intranet