



(Short) Presentation of WASP Clusters

Karl-Erik Årzén and
Cluster Representatives



Who am I?

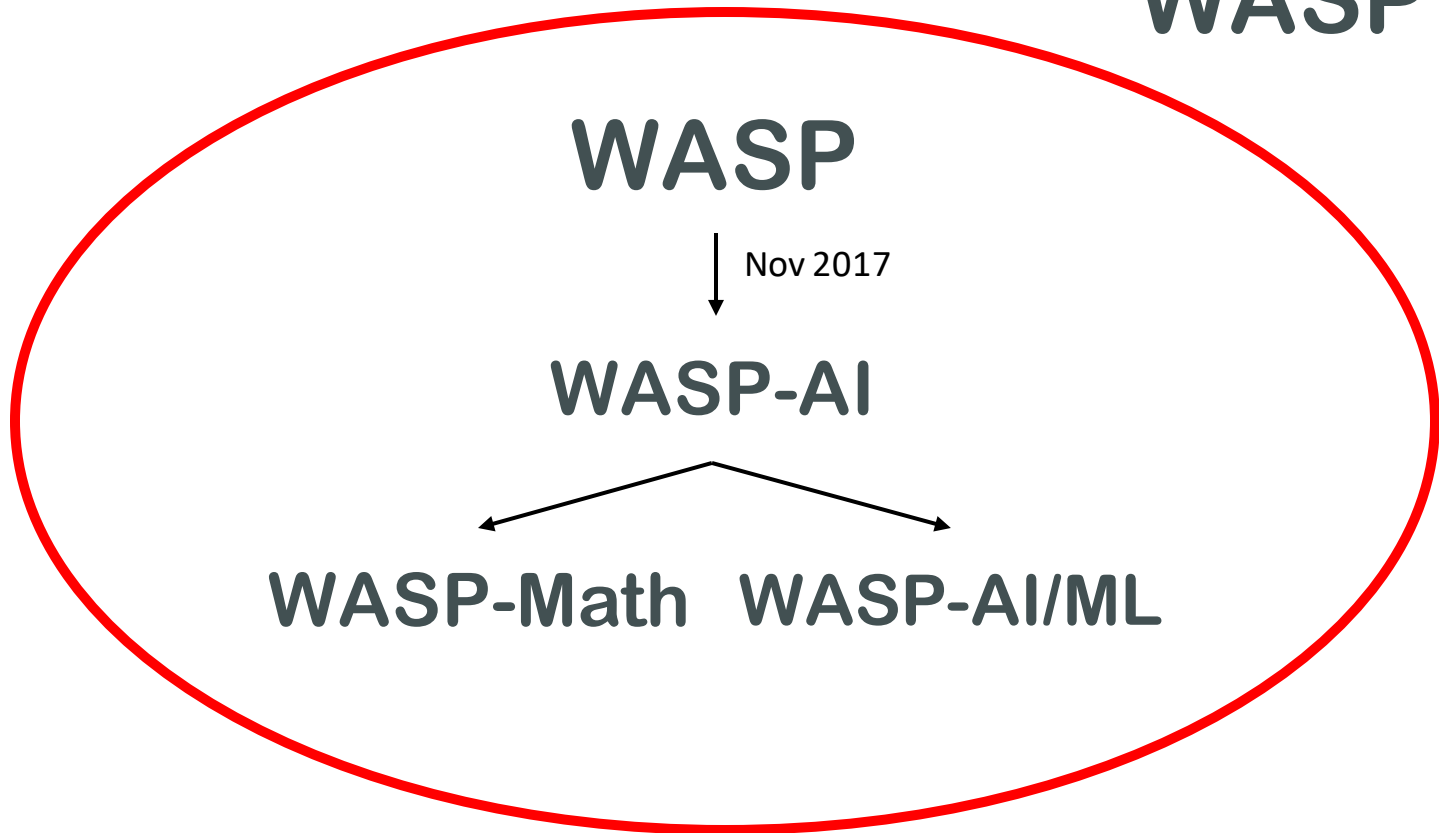
- Chair of the Program Management Group (PMG)
- Professor in Automatic Control, Lund University
- Working on applications of control to cloud infrastructures
 - 3 WASP PhD students

Outline

- Overview of the Cluster Structure
- Short (max 10 minute) presentation of each of the 10 clusters

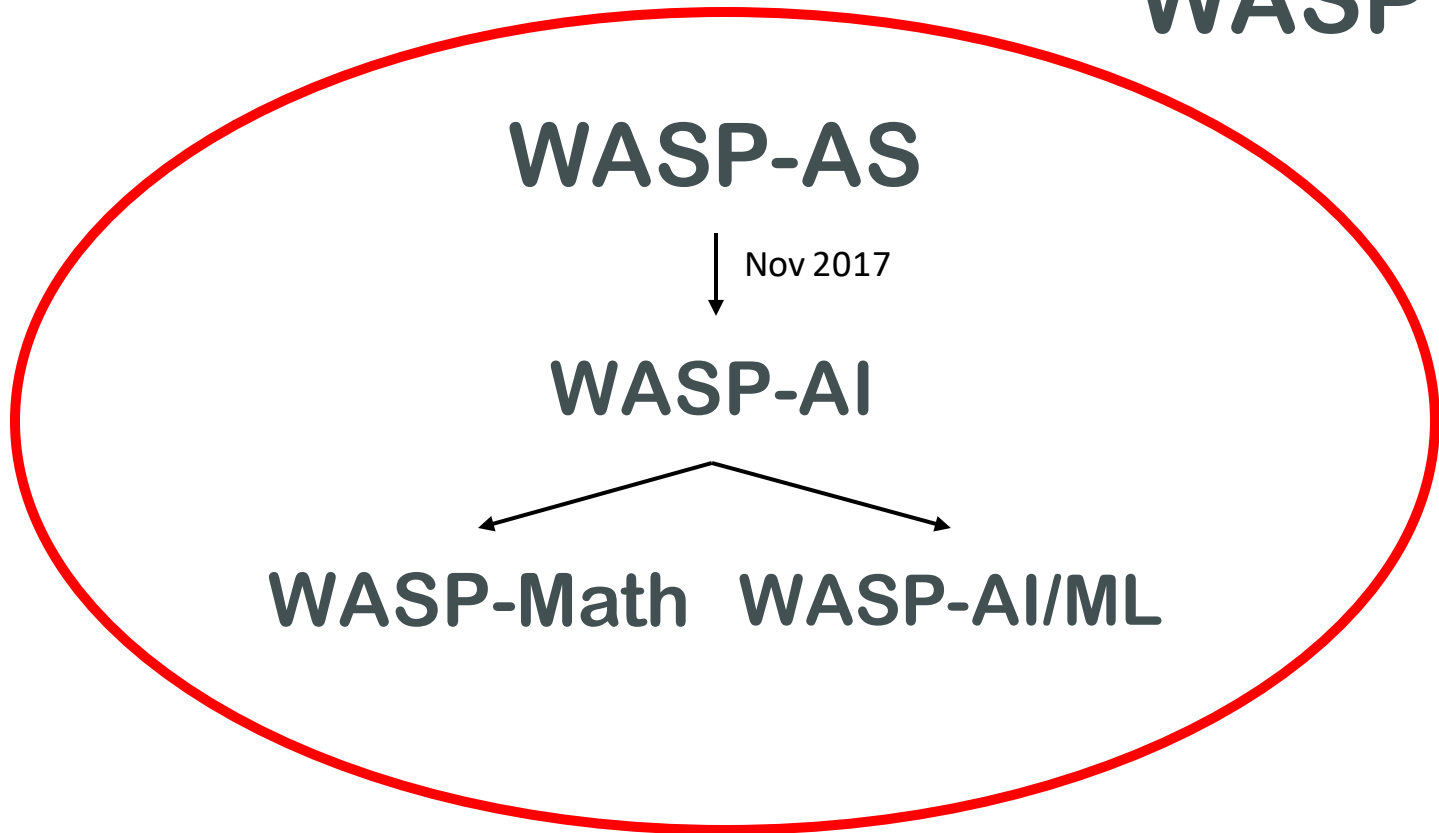
New WASP Structure

WASP



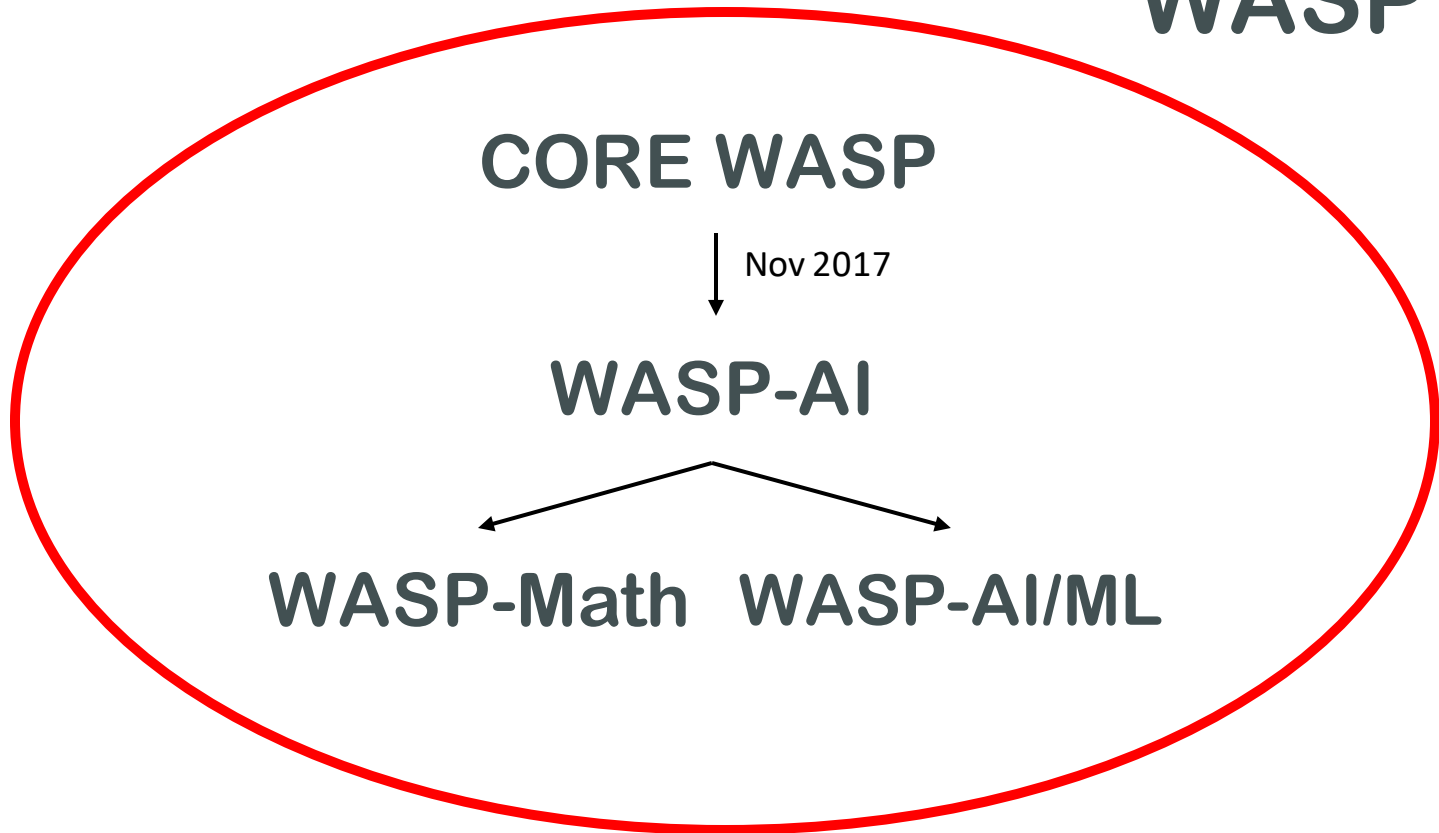
New WASP Structure

WASP

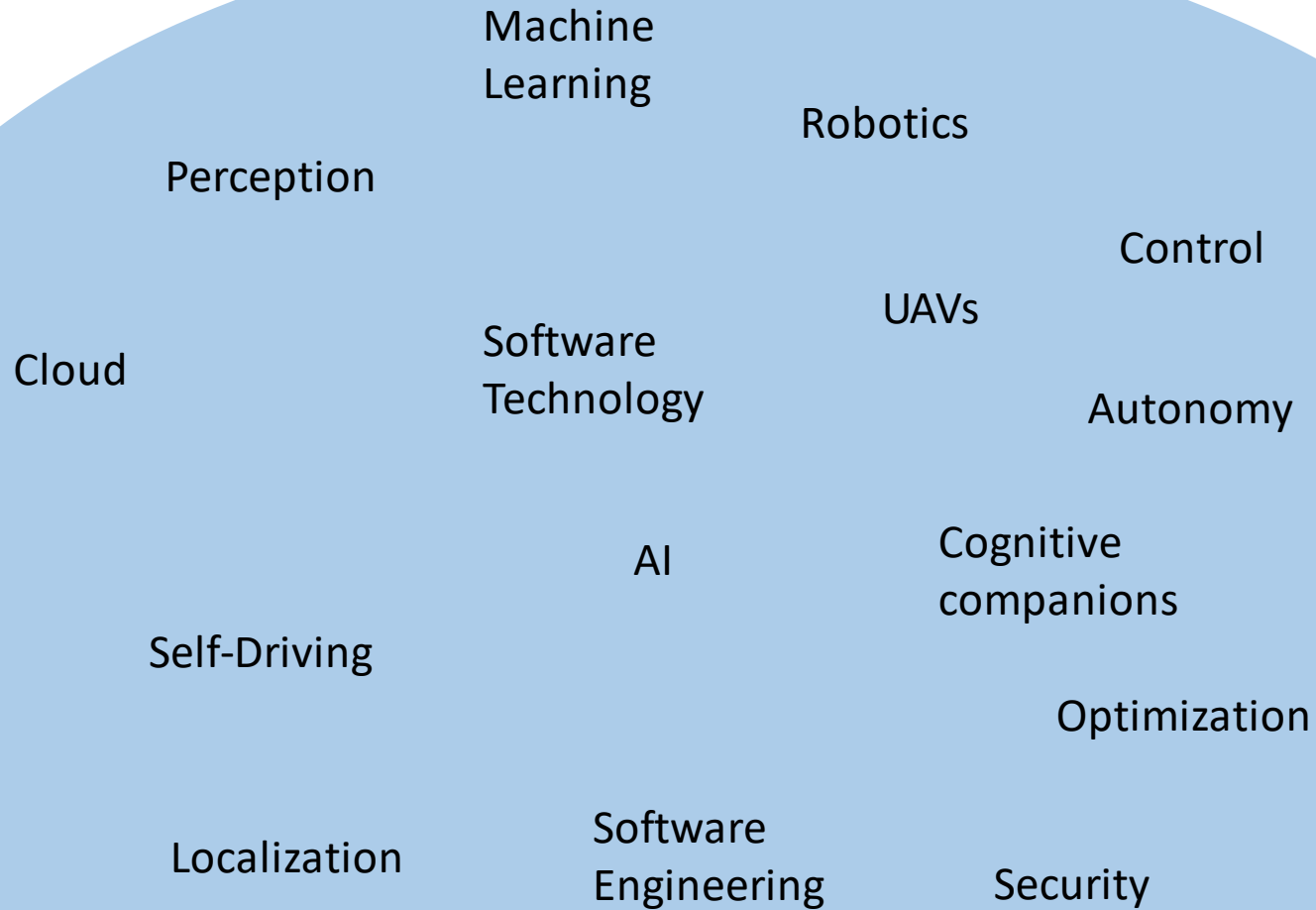


New WASP Structure

WASP

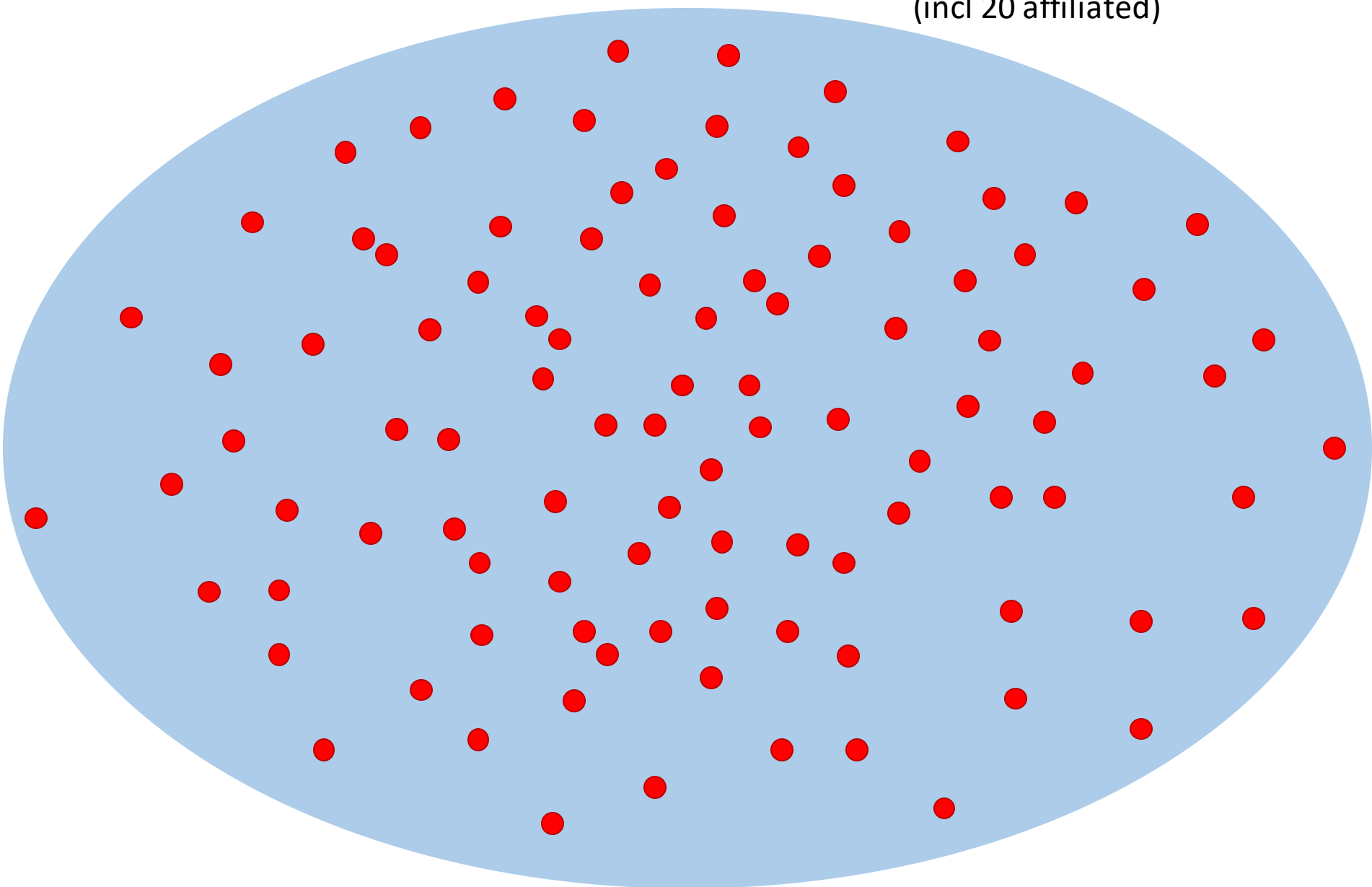


CORE-WASP



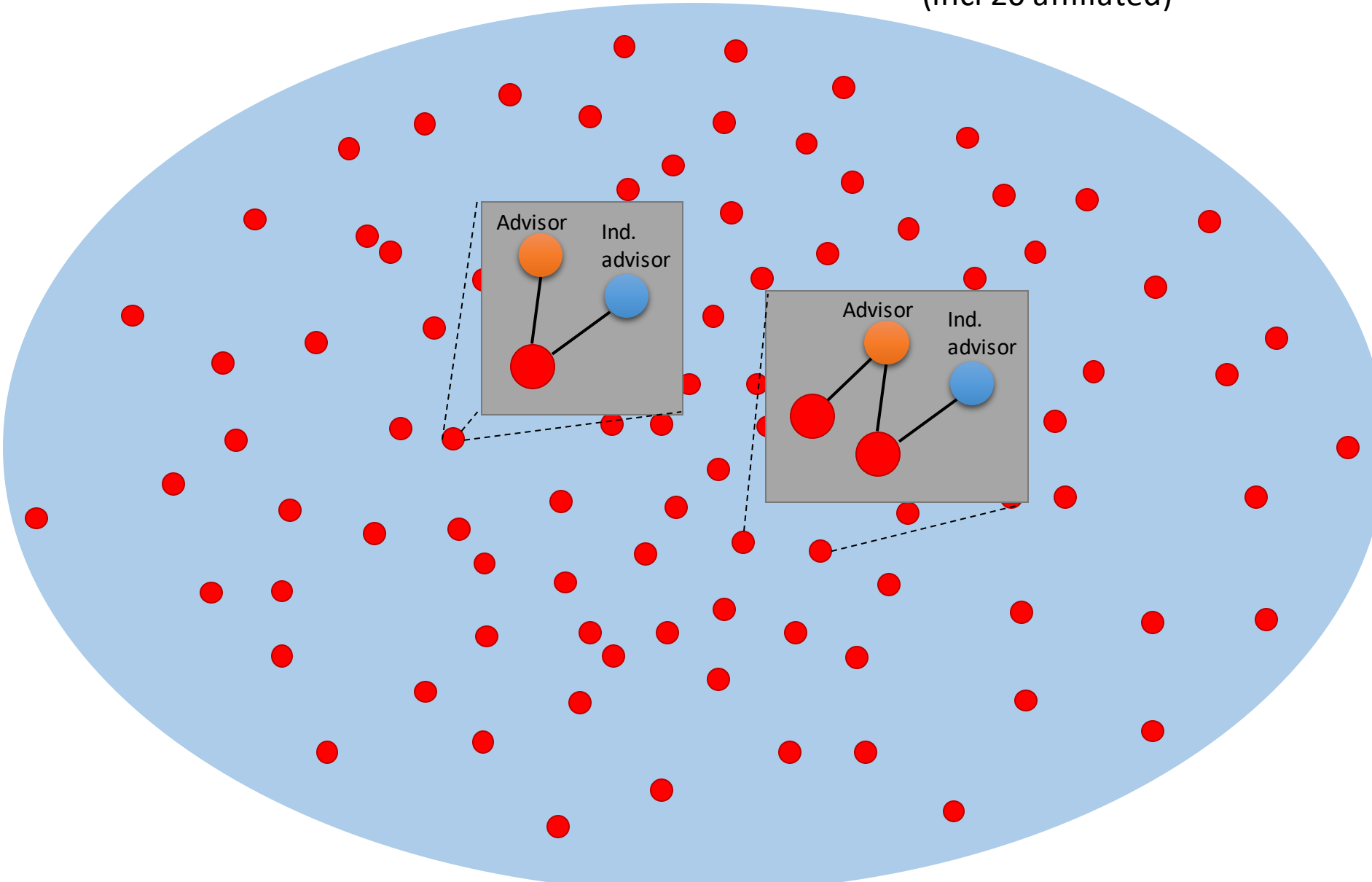
CORE-WASP

≈117 PhD student projects
(incl 20 affiliated)



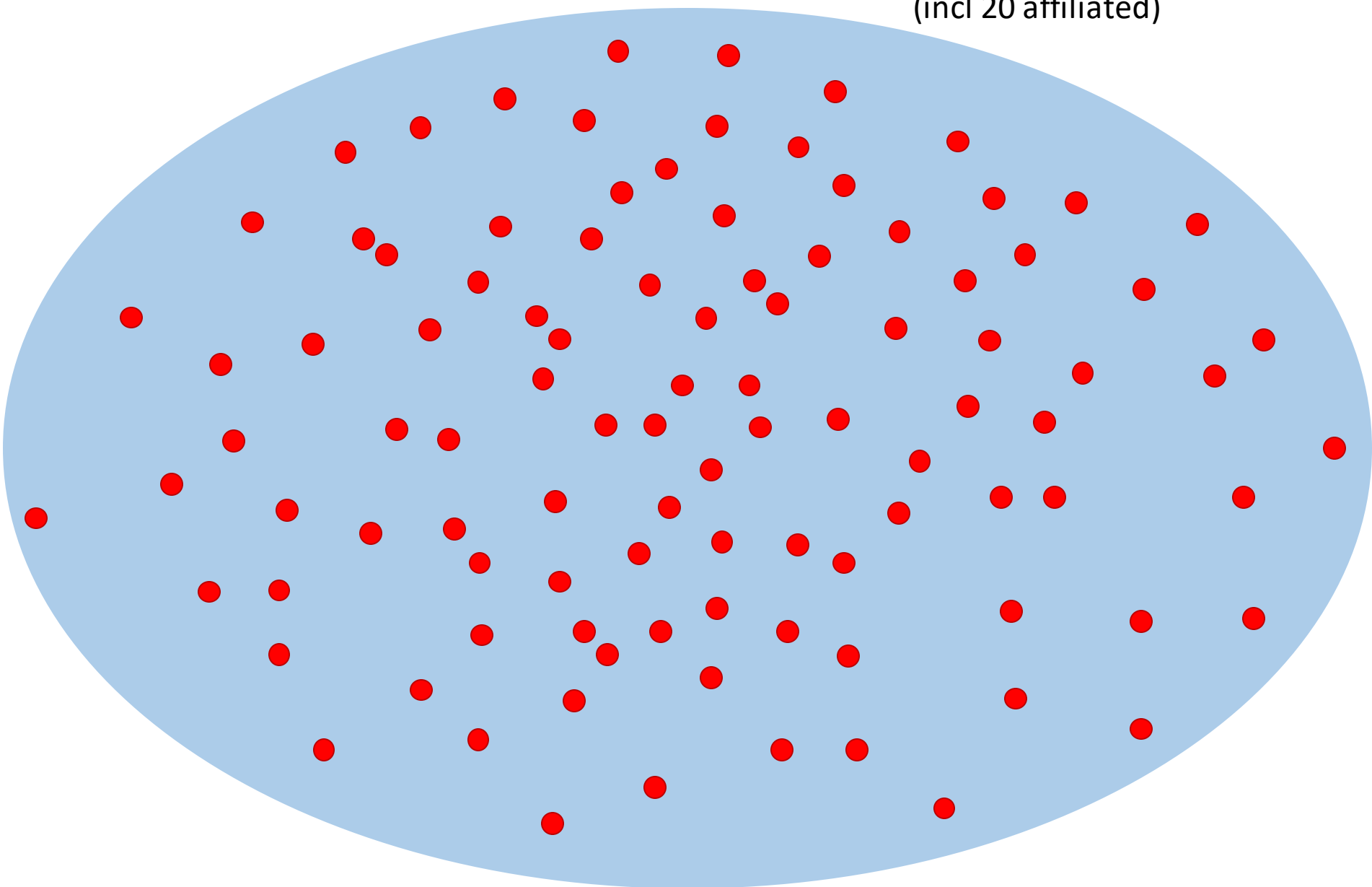
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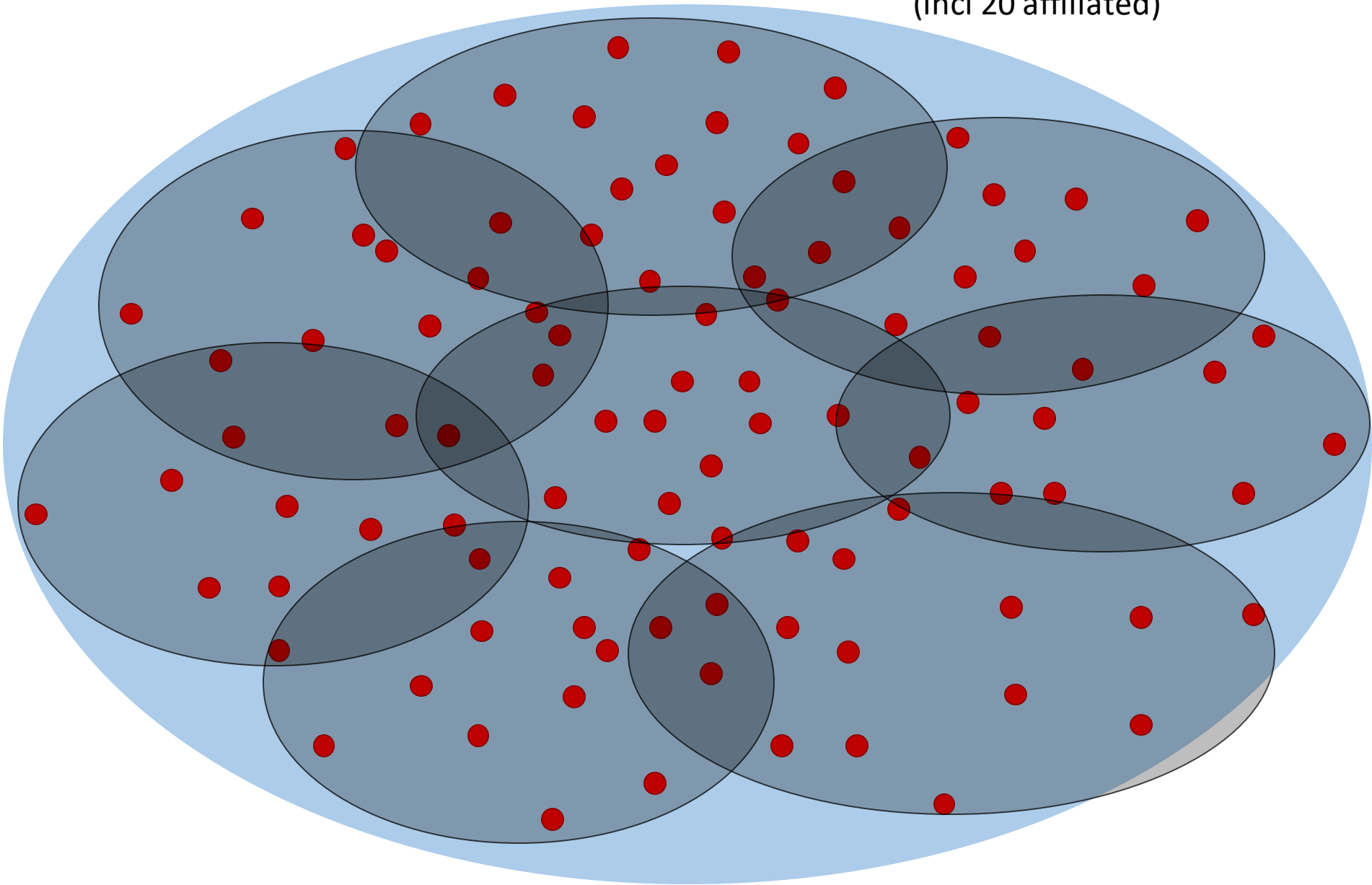
CORE-WASP

≈117 PhD student projects
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CORE-WASP CLUSTERS

≈117 PhD student projects
(incl 20 affiliated)



Old WASP Clusters

1. Software Engineering for Smart Systems
2. Autonomous Cloud
3. Integrating Perception, Learning and Verification in Interactive Autonomous Systems
4. Interaction and Communication with Autonomous Agents in Sensor-Rich Environments
5. Smart Localization Systems
6. Large-Scale Optimization and Control
7. Automated Transport Systems

New WASP Clusters

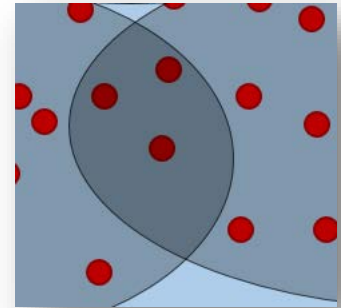
- The PhD student calls for Batch 2 had
 - Larger focus on AI and ML
 - Opened up for security projects
- Many of the new WASP recruitments are in software or are related to software (Monperrus, Baudry, Reichenbach, Seger, Yan, Krüger,...)
- New cluster structure needed

WASP New Clusters

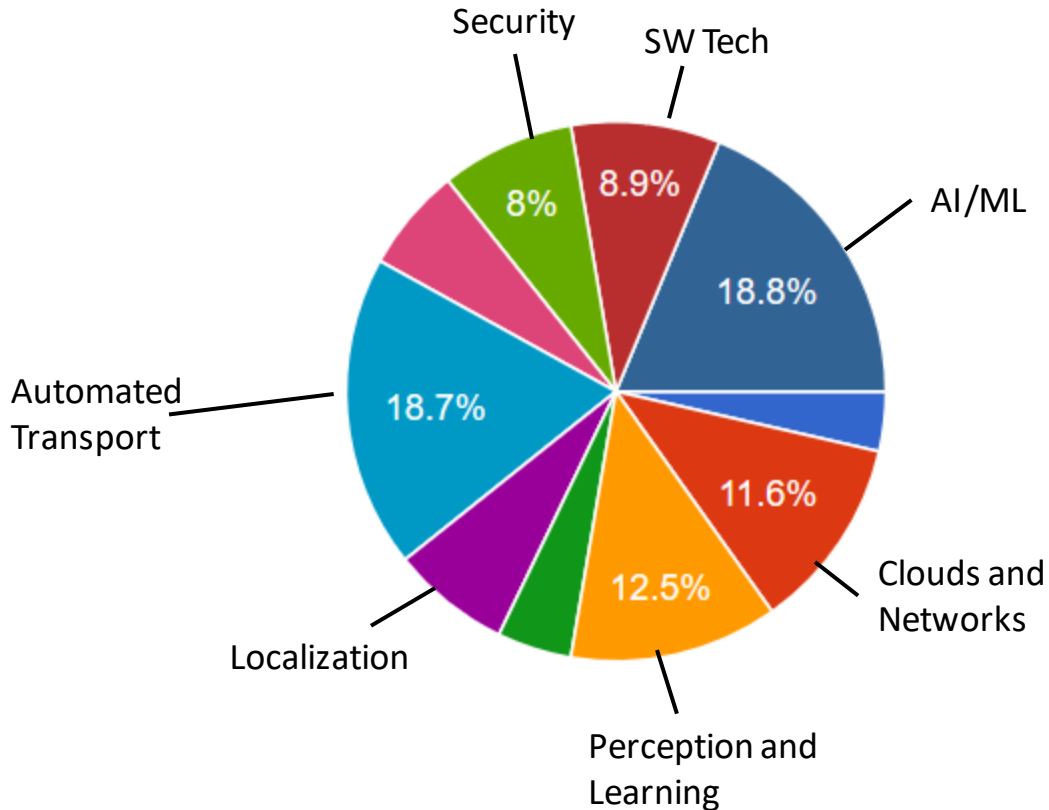
1. Software Engineering for Smart Systems
2. Autonomous Clouds and Networks
3. Perception and Learning in Autonomous Systems
4. Interaction and Communication with Sensor-Rich Autonomous Agents
5. Smart Localization Systems
6. Large-Scale Optimization and Control
7. Automated Transport Systems
8. Security for Autonomous Systems
9. Software Technology for Autonomous Systems
10. AI and Machine Learning

Major and Minor

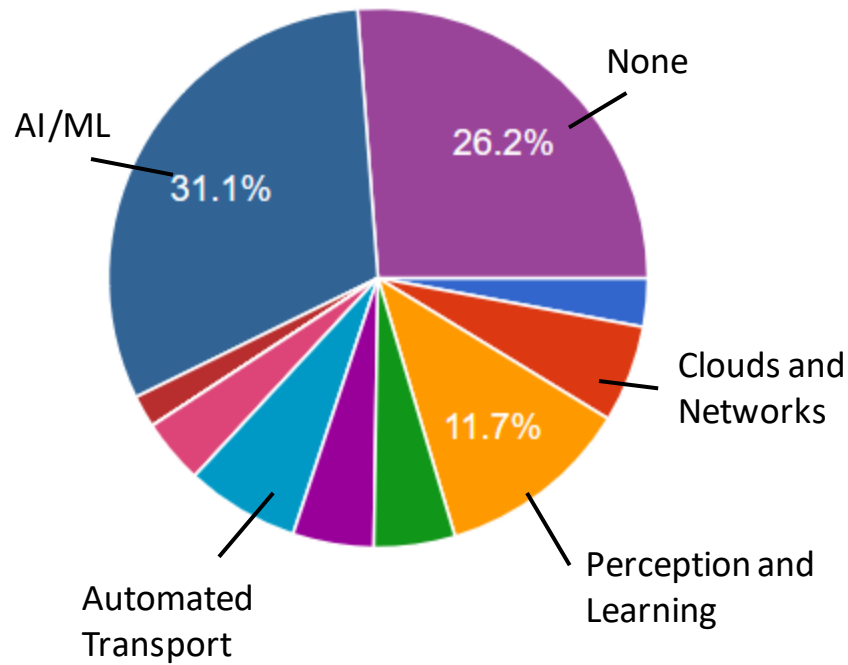
- A PhD student may belong to more than one cluster
 - Major cluster
 - Minor cluster
- Reasons
 - Overlap between clusters
 - PhD students typically are working on one thematic area (e.g., machine learning) and then applies this to an application area (e.g., transportation)



Major Cluster Size



Minor Cluster Size



Cluster Coordinators

1. Jan Bosch, Chalmers
2. Erik Elmroth, UmU
3. Kalle Åström, LU
4. Anders Ynnerman, LiU
5. Fredrik Gustafsson, LiU
6. Mikael Johansson, KTH
7. Bo Wahlberg, KTH
8. Sonja Buchegger, KTH
9. Martin Monperrus, KTH
10. Hedvig Kjellström, KTH

Cluster Coordinator Role

- To have a broad overview of the research questions and research methodology of the PhDs students that have the cluster as their major cluster
- To identify and initiate connections among the PhDs that may lead to collaborations
- To gather the PhDs in the cluster at least once per year for a meeting. It is recommended that also a second meeting is held each year with focus on collaboration.
- To report the cluster progress to WASP PMG and ISAB
- To organize cluster activities in connection with WASP events such as the winter conference and WASP courses
- Maintain a cluster webpage that is part of www.wasp-sweden.org
- The coordinator may appoint a vice coordinator
- The coordinator is compensated at a level of 5% of the salary (with some exceptions). This may be split so that part of it goes to a vice coordinator, e.g., 3% + 2%.

Software Engineering

Aleksander Fabijan	Helena Holmström Olsson
David Issa Mattos	Jan Bosch
Harrand Nicolas	Benoit Baudry
Rasmus Ros	Per Runeson
Rebekka Wohlrab	Patrizio Pelliccione

Autonomous Clouds and Networks

Alexandre Martins	Karl-Erik Årzén
Amir Roozbeh	Dejan Kostic
Chanh Nguyen	Erik Elmroth
Claudio Mandrioli	Martina Maggio
Haorui Peng	Maria Kihl
Joel Scheuner	Philipp Leitner
Johan Ruuskanen	Anton Cervin
Joris van Rooij	Marina Papatrantafileou
Per Skarin	Karl-Erik Årzén
Tobias Sundqvist	Erik Elmroth
Tommi Nylander	Karl-Erik Årzén
Victor Millnert	Johan Eker

Perception and Learning in Autonomous Systems

Abdelrahman Eldesokey	Michael Felsberg
Apostolia Tsirikoglou	Jonas Unger
Bertil Grelsson	Michael Felsberg
David Gillsjö	Kalle Åström
Emil Brissman	Michael Felsberg
Gustav Häger	Michael Felsberg
Joakim Johnander	Michael Felsberg
Johan Ludde Wessén	Danica Kragic
Lucas Brynte	Fredrik Kahl
Martin Danelljan	Michael Felsberg
Mia Kokic	Danica Kragic
Mikaela Åhlén	Fredrik Kahl
Shahbaz Abdul Khader	Danica Kragic

Interaction and Communication with Sensor-Rich Autonomous Agents

Martin Pallin	Petter Ögren
Martin Svenson	Anders Ynnerman
Mårten Lager	Jacek Malec
Veronika Domova	Jonas Löwgren
Yuting Xie	Ingrid Hotz

Smart Localization Systems

Andreas Bergström	Fredrik Gustafsson
Håkan Carlsson	Joakim Jaldén
Jiexiong Tang	Patric Jensfelt
John Svensson	Fredrik Gustafsson
Kristin Nielsen	Fredrik Gustafsson
Marcus Greiff	Anders Robertsson
Martin Larsson	Magnus Oskarsson
Martin Lindfors	Rickard Karlsson
Per Boström-Rost	Fredrik Gustafsson
Xuhong Li	Fredrik Tufvesson

Large-Scale Optimization and Control

Christian Rosdahl	Bo Bernhardsson
Fredrik Hagebring	Bengt Lennartson
Hamed Sadeghi	Anders Rantzer
Kristoffer Bergman	Daniel Axehill
Max Åstrand	Mikael Johansson
Oskar Ljungqvist	Daniel Axehill
Sarit Khirirat	Mikael Johansson
Shervin Parvini Ahmadi	Anders Hansson

Automated Transport Systems

Arian Ranjbar	Jonas Fredriksson
Carl-Johan Hoel	Krister Wolff
Christian Nelson	Fredrik Tufvesson
Dirk van Dooren	Karl Henrik Johansson
Goncalo Collares Pereira	Jonas Mårtensson
Ivo Batkovic	Paolo Falcone
Joakim Gustavsson	Mattias Nyberg
Johan Karlsson	Jonas Sjöberg
Lars Svensson	Martin Törngren
Linnea Persson	Bo Wahlberg
Masoud Bahraini	Paolo Falcone
Mladen Čičić	Karl Henrik Johansson
Mohammad Ali Nazari	Henk Wymeersch
Naveen mohAN	Martin Törngren
Pavel Anistratov	Lars Nielsen
Rui Oliveira	Bo Wahlberg
Samuel Scheidegger	Lennart Svensson
Sofie Andersson	Dimos Dimarogonas
Takuya Iwaki	Karl Henrik Johansson
Tommy Tram	Jonas Sjöberg
Victor Fors	Lars Nielsen
Yuchao Li	Jonas Mårtensson

Security for Autonomous Systems

Alexander Nilsson	Thomas Johansson
Georgia Tsaloli	Aikaterini Mitrokotsa
Iulia Bastys	Andrei Sabelfeld
Joakim Brorsson	Martin Hell
Karl Norrman	Mads Dam
Md Sakib Nizam Khan	Sonja Buchegger
Nikita Korzhitskii	Andrei Gurtov
Pegah Nikbakht Bideh	Martin Hell
Shahab Ghasemi-Goojani	Panagiotis Papadimitratos
Tomasz Kosinski	Morten Fjeld

Software Technology for Autonomous Systems

Alfred Åkesson	Görel Hedin
Diarmuid Corcoran	Christian Schulte
Gustaf Waldemarson	Michael Doggett
He Ye	Martin Monperrus
John Törnblom	Simin Nadjm-Tehrani
Jonas Krook	Martin Fabian
Long Zhang	Martin Monperrus
Maximilian Algehed	Mary Sheeran
Noric Couderc	Christoph Reichenbach
Piergiuseppe Mallozzi	Patrizio Pelliccione

AI and Machine Learning

Caroline Svahn	Mattias Villani
Christopher Blöcker	Martin Rosvall
Erik Gärtner	Cristian Sminchisescu
Erik Jakobsson	Erik Frisk
Erik Lindén	Alexandre Proutiere
Fredrik Prántare	Fredrik Heintz
Hannes Eriksson	Christos Dimitrakakis
Hector Rodriguez-Deniz	Mattias Villani
Jens Henriksson	Christian Berger
Johan Källström	Fredrik Heintz
Lissy Pellaco	Joakim Jaldén
Martin Isaksson	Seif Haridi
Mattias Tiger	Fredrik Heintz
Mina Ferizbegovic	Håkan Hjalmarsson
Olivier Moliner	Kalle Åström
Olov Andersson	Patrick Doherty
Peter Varnai	Dimos Dimarogonas
Samuel Murray	Hedvig Kjellström
Timotheus Kampik	Helena Lindgren
Vidit Saxena	Joakim Jaldén
Xuechun Xu	Joakim Jaldén

Students that have not yet selected

PhD Student	Advisor
Takuya Iwaki	Karl Henrik Johansson
Shahab Ghasemi-Goojani	Panagiotis Papadimitratos
Jiexiong Tang	Patric Jensfelt
John Svensson	Fredrik Gustafsson
Alexandre Fabijian	Helena Holmström Olsson/Jan Bosch
Karl Bäckström	Marina Papatriantafilou
Noric Couderc	Christoph Reichenbach

Please do so as soon as possible!

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