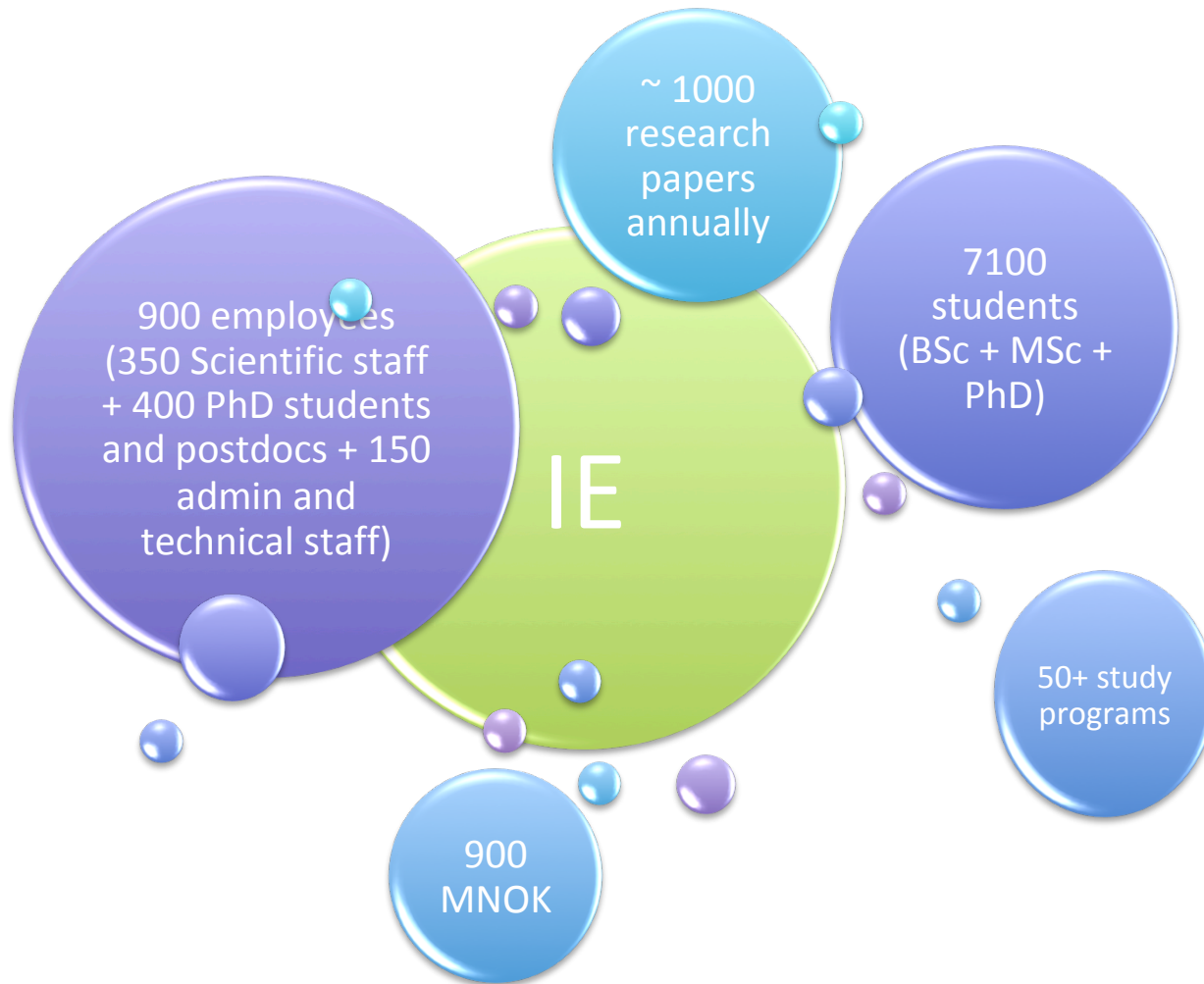


# IIR Research Strategy

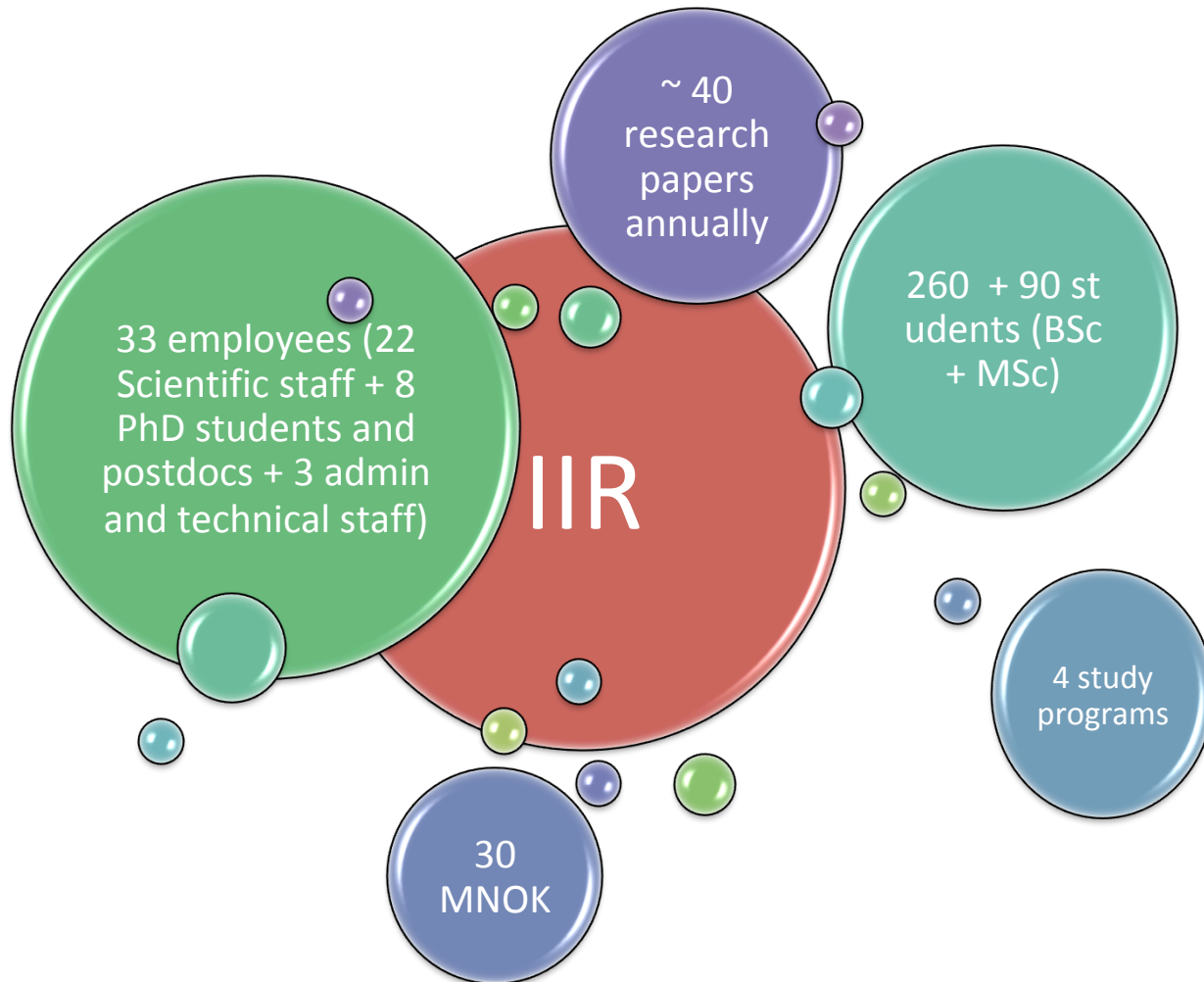
Ibrahim A. Hameed

2018

# WHO is IE

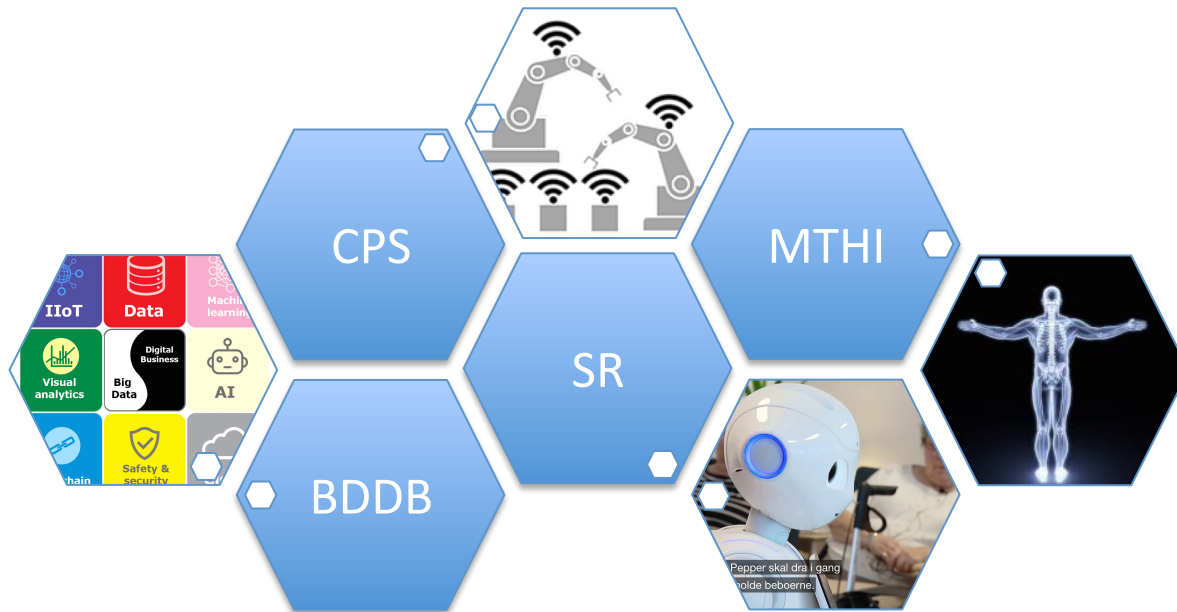


# WHO is IIR



# IIR Research Activities

Simulation and Visualization



Electrical Power  
Systems

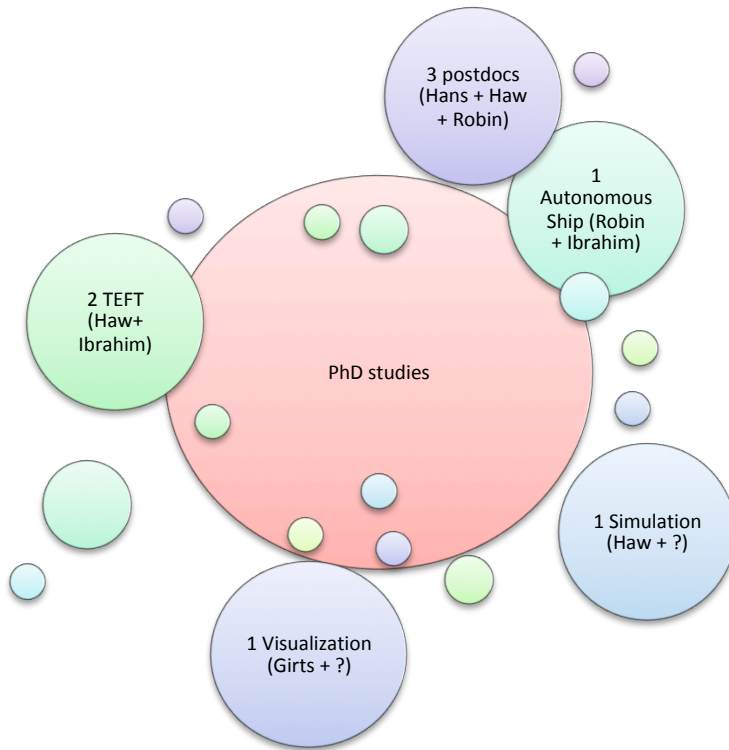
Automation  
Engineering

Computer  
Engineering

CPS: Cyber-Physical Systems  
SR: Social Robots

BDDB: Big Data and Digital Businesses  
MTHI: Medical Technology and Health Informatics

# PhD studies at IIR



**Competences:**  
 Machine learning  
 Optimization  
 AI  
 VR  
 Virtual Prototyping  
 Visualization  
 Big Data  
 Cybernetics  
 Software engineering  
 Cyber security

**Projects:**  
 Onsite  
 Social robots in omsorgsenter/  
 Newton Room  
 Many VRI  
 TEFT  
 Autonomous ship

**Data:** 3 PhD + 2 postdoc  
**Automation:** 2 PhD + 1 postdoc

# Strategy

- AI and machine learning
- Automation
- Robotics/social robots
- Autonomous systems (drones, ships, underwater)
- S&V
- ...



We are here!



Where do we want to be?

## To be more connected with industry:

- invite companies to present their problems to researchers (it will be part of the weekly research seminar – twice a month)
- Arrange a visit to a different company every month

## Establish a PhD study at IIR in S&V:

- Increase number of academic PhD students through external funding
- Increase number of industrial PhD students through collaboration with industries.

Take advantage of S&V MSc program and try to use it in projects such as: S&V of production lines, process improvement, smart city, intelligent transportation, etc.

# Goals

- Fewer research groups
- Strength S&V master program
- Establish a PhD program in S&V
- More laboratories in S&V
- Secure 40% of institute budget through industry, regional and international fund
- Choose hot topics such as smart cities, smart grid, intelligent transportation, etc.

