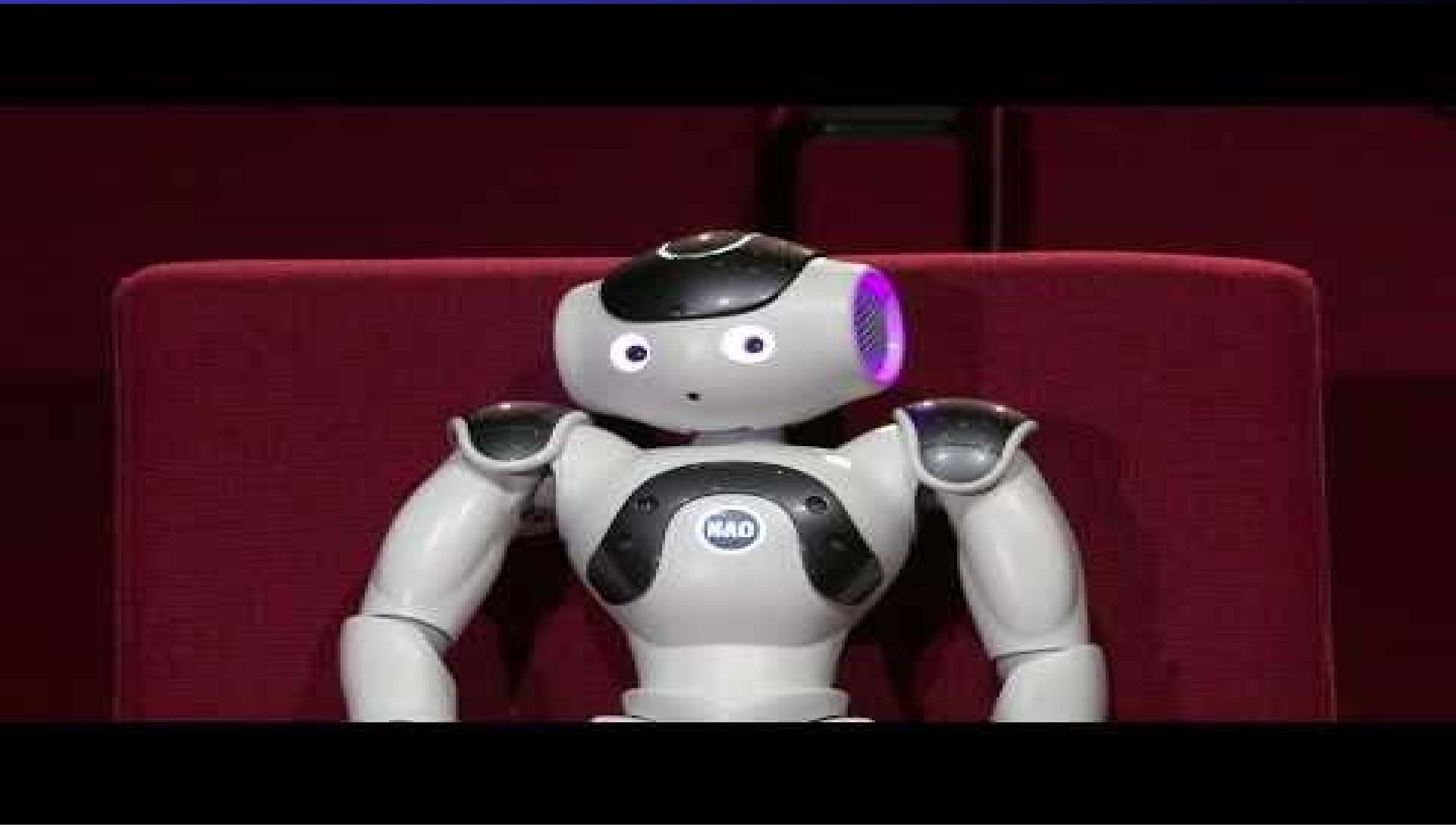
Course Overview

- Course organization
- Course assignment
- What is expected of you?
- COVID-19 guidelines

Our main character



Acting Like a Robot (Ulrike Quade Company, UU, VU)

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Introducing the Teachers

Koen Hindriks (www.koenhindriks.nl)

1996: PhD on Agent Programming Languages Utrecht University

2000: Consultant at accenture

2005: Assistant Prof. AI Radboud University Nijmegen

2006: Assist. & Assoc. Prof. Interactive Intelligence TU Delft

2016: CEO, CIO, Co-Founder Interactive Robotics

2018: Full professor Social AI VU

Research Interests

- Cognitive agent programming
- Conversational agents
- Social AI
- Social robots
- Socially aware systems

Introducing the Teachers

Kim Baraka (www.kimbaraka.com)

2016: Master in Robotics — Carnegie Mellon THE ROBOTICS INSTITUTE

2020: PhD in Robotics — Carnegie Mellon THE ROBOTICS INSTITUTE; TÉCNICO LISBOA

2021: Post-doc (Socially Intelligent Machines) — TEXAS The University of Texas at Austin

2021: Assistant Prof. (Social AI) — VU UNIVERSITY AMSTERDAM

Research Interests

- Human-robot interaction (HRI)
- Interactive robot learning
- Socially assistive robotics
- HRI x performing arts

Also has a contemporary dance background

Introducing the Teachers

Buelent Uendes

2017: Bachelor Business & Economics

2020: Master Economics & Econometrics

2021: Master Data Science

2021: Junior Lecturer in AI

Research Interests

- Machine Learning & Health
- Economics of Education/Well-being
- Social AI
- Deep Learning

Introducing Teaching Assistants

Buelent Uendes (also TA & coordinator)

Enrico Calleris

Etienne Galea

Fajjaaz Chandoe

Georgiana Juglan

Mahir Alioua

Each group (of 6 or 7 students) has its own TA

Rules of engagement:

- For all your questions, contact your TA
- Your TA will contact us if needed

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Course Objective

You are able to:

- apply basic design skills to **create an interaction design** for a social robot

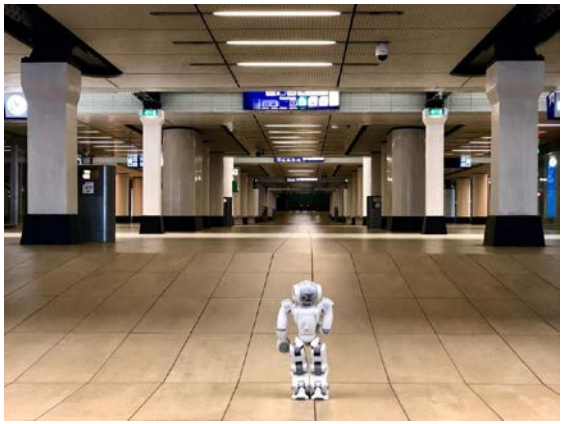
- **develop social robot capabilities** by applying AI techniques.

Learning Objectives: Able to …

1. Explain what social robot interaction design is and create a problem and design scenario for a robot
2. Explain the “what, why, and how” of each component of the social robot interaction design methodology (SR-IDM)
3. Identify, analyze, and apply relevant human-factors knowledge to a social robot design
4. Reflect upon different evaluation approaches and create a procedure to evaluate a social robot
5. Apply basic conversational design principles to create a conversational design for a social robot
6. Explain what nonverbal communication and affect are and which paramet affect expression
7. Analyze different personalization strategies, discuss how they work and w strengths and weaknesses are
8. Identify and explain basic techniques for making a robot socially aware.
9. Analyze and evaluate basic ethical dilemmas related to social robotics and your use case
10. Apply the social robot interaction design methodology (SR-IDM) while designing a social robot
11. Perform a (pilot) user study to evaluate a social robot design

Design & develop robot prototype

freedom of project topic;



but make sure you are:

- **creative** (think outside the box)
- extremely **specific** (topic narrow in scope)

Some examples to get your thinking started:

- Playing a game with robot
- Sharing memories (stories) with dementia patients
- Gaze tracking for engagement estimation
- ...

Working with a Nao Robot

Turning Nao on & off

Checkout the assignment page on confluence, week 1.

Working with a Nao Robot

Charging Nao

Working with a Nao Robot

Putting Nao into Rest Mode

Documentation from Softbank: http://doc.aldebaran.com/

Working with a Nao Robot

Handling Nao

Documentation from Softbank: http://doc.aldebaran.com/

Course Schedule Overview

- Week 1-2: **first design ideas** and **problem statement**
- Week 3-4: **inspiration sources** from theatre students
- Week 4: first prototype ready
- Week 5-6: **finish implementation** (code)

  specify **evaluation procedure**
- Week 7: **other** group evaluates your robot
- Week 8: finish **design document**

  final **live presentation**

no exam

Multidisciplinary collaboration

Work together with UU theatre students who follow the *Expanding Performance* course

Each group matched to 3 theatre students

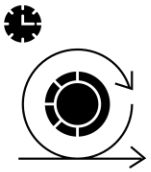
- Online session: use case presentation (you)
- On campus session: moodboard (them)
- Final review of your demo video

Related to Acting like a robot project

Deliverables that will be graded

- **Use case presentation**: peer review & online session with UU theatre students in *week 3*
- **Robot software** (code): work on this in *first six weeks* (not just in practical sessions!); provide working code to **2 other groups** for evaluation *end of week 6*
- **Design document**: extend & update every week, feedback from your TA each week, deadline *beginning of week 8*
- **Demo presentation**: final presentation on Wednesday 22-12

See deliverable overview in assignment doc for details



- *Also*: reading assignments (bonus/penalty)

Software & Tools used

Confluence wiki for all details on the course:
https://socialrobotics.atlassian.net/wiki/spaces/SIR2021/

Software:

- Social Interaction Cloud (**SIC**) infrastructure
- Google Dialogflow

Each group:

- **Github** classroom: **code** repository
- **Google folder**: design document, use case presentation, moodboard, final presentation materials

Use **Slack** for **communication** with group members, students, teacher, TAs

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Actively participate in sessions

- Practical sessions @ VU:

  weekly meetings with your TA.

- Online sessions:
  - peer review
  - meet UU theatre students

- Final demo presentation @ VU

Update agenda, schedule on confluence

Teamwork

- **Tight** *schedule*: heavy workload, access to robot only two slots a week: use practical session for coding and testing! continue coding without robot at home, plan & divide tasks & communicate(!!!) with group members

- **Competition**: Ranking of your final demo presentation by other groups
  - Bonus for about 4 groups

- *Check out assignment doc on confluence*

- **Have fun !**

Individual Contributions

We expect each of you to **contribute** to:

- Design document (ideas, text writing, etc.)
- Code (ideas, code writing, testing, etc.)
- Presentation (online presentations, videos)
- Organization (e.g., planning, meetings, …)

Will be monitored by your TA

May result in different grades within a group

HRI Student Design Competition

- Deadline for HRI SDC: 10-12
- Deadline for your final demo presentation: 22-12

- Fine to use Nao robot as a platform
- Groups of 6 are also ok
- Result can certainly be interaction design
- SDC really is about the **creative design process**: submissions will be assessed based on how students were able to develop and evidence a coherent creative design/creative thinking process. You should have a mature **reflection on your own creative process**.

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Practical sessions @ VU: BE SAFE, STAY HEALTHY

- **stay home when you have covid-related symptoms and get tested ASAP**
- **try to keep 1.5m distance from each other**
- **sanitize your hands** before entering the room

Check out confluence wiki page for more.