



[a]social creatures lab



[a]social creatures --> mission

- The [a]social creatures lab focusses on understanding social interaction with and between artificial creatures.
- Research on social interaction with artificial creatures is typically performed with anthropomorphic robots that have human characteristics, such as speech, emotions, gestures and other nonverbal behaviors.

However, what makes an interaction social and how important is anthropomorphism?

- We study the boundaries of what social interaction with artificial creatures means by **varying form, complexity and function** including humanoids, abstractly shaped robots, intelligent virtual agents, avatars, non-playing characters, conversational agents, and swarm robots. To understand the role of robots in society, we also investigate less favorable impact of human robot relationships on people and the society of the future.
- We question to what extent the behavior of our creatures can be classified as (a)social by studying **human perception** of the behavior of our creatures, **effects on humans** induced by the behavior of our creatures, as well as the **emergence of interaction patterns** between our creatures as a model for social interaction in nature.



social creatures --> people

- **Joost Broekens**
Affective Computing, Human Agent Interaction
- Tessa Verhoef
Language Emergence, Synchronization in HRI
- Thomas Bäck
Swarm processes and Optimization
- Mike Preuss
Games, Optimization
- Peter van der Putten
Artificial Creatures, Speculative Design
- Max van Duijn
Language, Mental Models
- Catholijn Jonker (tentative)
Hybrid Intelligence, Human-Agent Cooperation
- Roy de Kleijn (tentative)
Cognitive Science, Adaptation
- Rob Saunders
Artificial Creativity, Human Robot Interaction



[a]social creatures --> topics

- Human perception of mood and emotion in virtual agents and robots
- Simulation and expression of social signals
- Evolution of language and communication in bots and humans
- Explainable AI, transparency, and shared mental models
- Team AI: collaboration between and with artificial creatures
- Curiosity, personality and emotion in non-playing characters
- Robots as teachers and tutors
- Human-in-the-loop robot Learning
- Team-based optimization

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- Location:
 - Room 404 , Snellius Building, Niels Bohrweg 1, Leiden.
- Robot resources:
 - Pepper robot
 - 2xNAO robot
 - 1xAlpha Mini
 - 16xMBot robots
 - Cubes
- Computing resources for virtual characters and simulations
 - 1 freely usable 2xGPU workstation for real-time interaction, processing and deep learning prototyping.
 - LIACS Cluster access
- Network
 - In-lab dedicate WIFI for testing with robots and workstations.
 - Uplink through LIACS own wlan3 network, or wired connection.