



ARTIFICIAL INTELLIGENCE AND HUMAN CONSCIOUSNESS

Saturday 6 september
Biennale Venice - Corderie (Arsenale building)
Campo de la Tana, 30122 Venezia

You are cordially invited to an art-science installation and symposium taking place in the context of the Biennale in Venice, 2025. The event is free but you need an entrance ticket to the [Biennale](#).

There is also an additional exhibit and a workshop on Communicating about Awareness in Artificial Agents to be held on 7 and 8 september 2025 on San Servolo island.

1. Exhibition: [AM I A STRANGE LOOP?](#) AI-powered robotic Installation by Takashi Ikegami and Luc Steels at the Biennale's curator exhibition. Corderie, Arsenale. On view from 11:00 to 20:00.

The installation is based on the Android Alter3 built by the team of Takashi Ikegami at the University of Tokyo and enhanced with various AI capabilities, including a Large Language Model to support open-ended dialog in multiple languages. Visitors have great fun going into dialog with the robot about anything from practical questions to deep philosophical discussions. The internal design is based on Minsky's Society of Mind model in which the mind consists of a variety of agents that perform mental functional such as visual perception, action selection, speech understanding, dialog management, a.o. The uniqueness of this experiment is that these agents use human language as a lingua franca for internal communication, for internal memory storage, and for decision-making through argumentation among the agents. The robot has also several meta-level capacities including

the capacity to create and influence its internal bodily states, raising the question whether this android has reached some form of self-awareness.

2. Symposium: WILL THE AI-POWERED ROBOTS OF THE FUTURE BE SELF-AWARE?

Saturday 6 september 13:30 - 17:00 pm.

Location: Arsenale - Speaker's Corner.

Organizer: Luc Steels

Topic: In the near future, AI-powered humanoid robots may co-exist with us. What will these robots be like? Will they have some form of awareness of their own bodies and thinking? Will they have a personality, a narrative self, with moral and emotional facets? Can such robots ever be trusted, or will they inevitably start scheming against us?

This symposium is part of the GENS public program of the Biennale and held to discuss the inner workings of the Alter3 experiment and the deeper implications for AI, neuroscience, and the phenomenology of consciousness.

Program. Moderator: Oscar Vilarroya.

13:15 Welcome

13:15-13:45 Stanislas DeHaene. What is consciousness and could machines have it?

13:45-14:15 Takashi Ikegami. Alter3's Architecture.

14:15-14:45 Luc Steels. The crucial role of language in self-awareness.

****short break****

15:00-15:30 Thomas Metzinger. Will AI give us the illusion of another conscious self?

15:30-15:45 Stefano Nolfi. The Unexpected Abilities of Large Language Models.

16:15-17:00 Round Table.

Introductory commentaries: Ricardo Manzotti and Vittorio Loreto.

Open Discussion with all speakers.

17:00- Further discussion at the Biennale bar Le Bombarde.

Speakers:

+ [Stanislas De Haene](#) is one of Europe's top neuroscientists, working at the Collège de France in Paris. He is best known for his contributions to the study of numerical cognition, the neural basis of reading, and the neuronal workspace model of awareness.

+ [Takashi Ikegami](#), is professor of physics at the University of Tokyo and a world leading figure in the field of Artificial Life. He is also an active artist with ground breaking installations seen at Ars Electronica (Linz), Barbican centre (London), Museum of Contemporary Art (Kanazawa), World Expo (Osaka), a.o.

+ [Luc Steels](#), is professor emeritus in Artificial Intelligence from the University of Brussels (VUB). He is recognized as a leading pioneer in European AI with many frontier contributions to AI, in particular in relation to the emergence of language and cognition in robots.

+ [Thomas Metzinger](#) is a famous philosopher of consciousness associated with the University of Mainz. He developed a widely cited theory on subjectivity and has wondered about whether robots will be able to suffer once they have become self-aware.

+ [Stefano Nolfi](#) is a leader in the field of cognitive robotics and the use of evolutionary methods for developing their brains and bodies. He is director of the Laboratory of

Autonomous Robots and Artificial Life at the Institute of Cognitive Sciences and Technologies, CNR, Rome.

+ [Vittorio Loreto](#) is full professor of Physics of Complex Systems at La Sapienza university in Rome and director of the Sony Computer Science Laboratory in Rome. He published ground breaking work on the complex dynamics of social systems and sustainable cities.

+ [Ricardo Manzotti](#) is a roboticist and philosopher associated with IULM in Milan. He is well known for his original ideas on consciousness and his prolific writing about AI and mind.

+ Moderator: [Oscar Vilarroya](#) is a professor of neuropsychiatry at the Autonomous University Barcelona and active at the IMIM Hospital del Mar in Barcelona. He published widely on the social brain and on fundamental questions in cognitive science, particularly concerning the nature of representations.

SPEAKER REFERENCES (in order of appearance):

- De Haene, S. (2014) *Consciousness and the Brain. Deciphering How the Brain Codes our Thoughts*. Viking Press, New York.

- De Haene, S., H. Lau and S Kouider (2017) What is consciousness, and could machine have it. *Science* 358(6362) pp. 486-492.

- Yoshida, T., A. Matsumori, T. Ikegami (2025) From text to motion: grounding GPT-4 in a humanoid robot "Alter3". *Frontiers in Robotics and AI*. *Frontiers in Robotics and AI*. 12:1581110.

- Steels, L. (ed) (2010) *Experiments in cultural language evolution*. John Benjamins, Amsterdam.

- Metzinger, T. (2010) *The Ego Tunnel: The Science of the Mind and the Myth of the Self*. Basic Books, New York.

- Nolfi, S. and D. Floreano (2001) *Evolutionary Robotics: The Biology, Intelligence, and Technology of Self-Organizing Machines*. The MIT Press, Cambridge Ma.

- M. Bruno, H.P. Monteiro Melo, B. Campanelli, V. Loreto (2024) A universal framework for inclusive 15-minute cities, *Nature Cities*.

- Manzotti, R. (2025) *Sono libero, o non sono*. Liberilibri, Macerata.

- Manzotti R., A. Chella (eds) (2007) *Artificial Consciousness*, Imprint Academic, Exeter.

- Vilarroya, O. (2024) *Neuroscience without representations. Building a Brain-in-a-World view*. Elsevier, Amsterdam.

3. Extra-exhibition: N-ODES. San Servolo Island Venice.

Sunday 7 September 4:00 - 9:00 pm: Launch and Aperitivo.

[Sabine Hauert](#) and team, Swarm Engineering, University of Bristol.

N-Odes is an interactive sound and light installation that invites audiences into a shared dialogue with a swarm of intelligent orbs. Each orb responds to movement, expressing its orientation through shifting patterns of light and sound. As visitors engage -spinning, tilting, or synchronising their actions - the orbs react both individually and collectively, communicating with one another to reflect the emerging harmony or dissonance within the group. Suspended overhead, a large canopy of orbs dynamically interacts with and shapes the collective audio-visual experience. Powered by evolutionary algorithms, the system generates an immersive, continuously evolving experience shaped by the dynamic interplay between the participant and artificial entities. The installation functions as both an artistic expression and a living research environment - intended to adapt and grow over time. It

serves as a showcase for insights from the research and as a platform for further experimentation and public engagement.

4. Workshop: COMMUNICATING THE SCIENCE OF AI

San Servolo Island, Venice.

Monday 8 september 9:30 - 17h

It is necessary to register for this event, [here](#)

This full-day workshop on science communication of awareness brings together experts in philosophy, art, AI and robotics, along with experts in science communication and the public to brainstorm how we can communicate complex topics such as awareness in natural and artificial agents through art, play, and narratives. We expect the workshop will be exciting for early-career researchers (MSCs, PhD students and Postdocs) as well as experts in science communication and the public interested in art and AI awareness.

These initiatives are part of the portfolio activities of the EIC 'Awareness Inside' program of the EU Commission, specifically through [VALAWAI](#) and [EMERGE](#) projects. The activities at San Servolo are in cooperation with Venice International University.