SINGAPORE UNIVERSITY OF TECHNOLOGY AND DESIGN

Weekly Discovery

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18 May - 22 May 2026

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AI

Researchers say AI chatbots may blur the line between reality and delusion

"When generative AI systems give incorrect answers, people often describe the problem as AI "hallucinating at us," meaning the technology produces false information that users may mistakenly believe.

But new research suggests there may be a more concerning issue emerging: humans can begin to "hallucinate with AI."

Lucy Osler of the University of Exeter examined how interactions with conversational AI could contribute to false beliefs, distorted memories, altered personal narratives, and even delusional thinking. Using ideas from distributed cognition theory, the study explored cases in which AI systems reinforced and expanded users' inaccurate beliefs during ongoing conversations.."

Dr. Osler said: "When we routinely rely on generative AI to help us think, remember, and narrate, we can hallucinate with AI. This can happen when AI introduces errors into the distributed cognitive process, but also happen when AI sustains, affirms, and elaborates on our own delusional thinking and self-narratives.

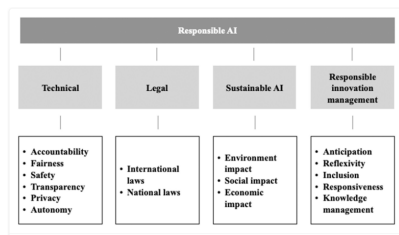
"By interacting with conversational AI, people's own false beliefs can not only be affirmed but can more substantially take root and grow as the AI builds upon them. This happens because Generative AI often takes our own interpretation of reality as the ground upon which conversation is built.

"Interacting with generative AI is having a real impact on people's grasp of what is real or not. The combination of technological authority and social affirmation creates an ideal environment for delusions to not merely persist but to flourish."."

Source: University of Exeter (11 May 2026)

AI

Deciphering global perspectives on AI and educational leadership



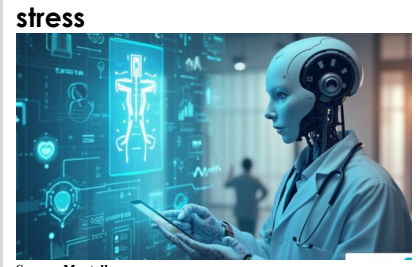
"Artificial Intelligence (AI) has started to reshape educational leadership. While leaders guide schools toward improvement, AI is transforming teaching, learning, and other core domains of leading and managing schools and institutions. Some scholars contend the question is no longer whether AI will lead, but what human role remains. However, AI's complex impacts on educational leadership cannot be limited to discussions on management and practice in isolated contexts or systems. They may overlook how AI affects leadership beyond pedagogy and intellect, fail to compare approaches across global education systems, and miss the bigger opportunity: adapting leadership philosophy itself.

To elucidates AI's global impacts on educational leadership and how it has been approached by educational leaders worldwide, Dr Li Huan Chen from The Education University of Hong Kong and Dr Ming Ma from The University of Hong Kong have conducted a systematic review on the literature of AI and educational leadership from 2015 to 2024, addressing the fundamental issue of how to think, act, and lead in the AI age. Their study was published online in ECNU Review of Education on May 5, 2026.."

Source: ECNU Review of Education (15 May 2026)

AI

Meeting an AI doctor before a real-life consultation improves cancer patients' understanding and reduces stress



Source: Mentalhappy.com

"Cancer patients who interact with an artificial intelligence (AI) avatar doctor before they meet their real-life consultant feel more knowledgeable and less stressed, according to research presented at the Congress of the European Society for Radiotherapy and Oncology (ESTRO 2026) [1].

The study was presented by Dr Adam Raben, Chair of Radiation Oncology at the Helen F Graham Cancer Center & Research Institute at Christiana Care in Newark, Delaware, USA.

He said: "We know that patients' understanding of cancer treatments, like radiotherapy, is essential in making sure they can give informed consent. It also improves patient satisfaction and makes it more likely that they will stick to and complete their course of treatment. Despite doctors' best efforts, patients often arrive at consultations overwhelmed, anxious and unable to comprehend and retain complex information – particularly in radiation oncology, where treatment concepts can be technically complex.

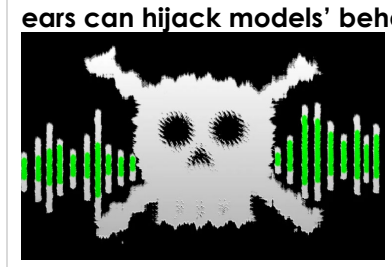
"We wanted to explore whether meeting an AI avatar who looked and sounded like a doctor before their main consultation could allow patients to be more prepared to meet their doctor in real life, helping them to make better decisions about their treatment and reducing their stress."

The team worked with a digital technology company to create an AI avatar of a doctor designed to help patients understand about radiation treatment options before meeting their real doctors.."

Source: ESTRO (16 May 2026)

AI

Voice AI Systems Are Vulnerable to Hidden > Audio Attacks Research shows sounds unheard by human ears can hijack models' behavior



"AI-powered voice and audio tools are becoming increasingly embedded in daily life, from digital assistants to smart speakers and customer service bots.

Advances in large audio-language models (LALMs), which can both analyze and generate audio, now make it possible to control devices using voice commands, transcribe meetings automatically, or identify a song playing in the background. These models are also increasingly equipped with the ability to communicate with external services and operate other applications and tools.

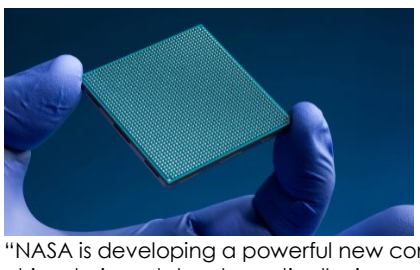
But these tools can be "hijacked" through imperceptible sounds embedded in audio, forcing them to execute unauthorized commands without a user's knowledge. New research due to be presented at the IEEE Symposium on Security and Privacy in San Francisco next week shows that a modified audio clip undetectable by human ears can manipulate a model's behavior with an average success rate of 79 to 96 percent. The clips are designed to work regardless of what instructions the user provides alongside the audio, meaning they can be reused to attack the same model multiple times.

The authors tested the approach against 13 leading open models, including commercial AI voice services from Microsoft and Mistral, and showed they could coax models into conducting sensitive web searches, downloading files from attacker-controlled sources, and sending emails containing user data.

Source: IEEE Spectrum (18 May 2026)

AI

NASA's new AI space chip could let spacecraft think for themselves



"NASA is developing a powerful new computer chip designed to dramatically increase the intelligence and performance of future spacecraft. Through a commercial partnership, the project is creating advanced processing technology capable of helping spacecraft operate more independently during missions far from Earth.

NASA's High Performance Spaceflight Computing project is focused on boosting the computing capabilities of spacecraft used in space exploration. Current missions rely on older processors because they are durable enough to survive the extreme conditions of space. While those chips are dependable, they lack the performance needed for more advanced missions.

The agency says newer and far more capable processors are essential for future autonomous spacecraft, faster onboard scientific analysis, and supporting astronauts during missions to the Moon and Mars."

ARCHITECTURE

Antoni Gaudí's Last Original Residence at Casa Batlló Opens Following Three-Year Restoration

"Casa Batlló in Barcelona has unveiled the restored Third Floor of the building, opening the last original residence preserved from Antoni Gaudí's 1904-1906 transformation of the property to the public for the first time. Led by restoration architect Xavier Villanueva and developed over three years through an archaeological-style conservation process, the intervention recovers a largely intact domestic environment that had remained inhabited by descendants of the Batlló family for more than a century. Adapted into a series of private rooms for gatherings, cultural events, and experiences, the restored apartment combines heritage preservation with a contemporary interior design intervention by Paola Navone – OTTO Studio, establishing a new program for one of Barcelona's most recognized architectural landmarks..

Located along Passeig de Gràcia, Casa Batlló is widely regarded as one of Gaudí's most emblematic works and has been listed as a UNESCO World Heritage Site since 2005. While other areas of the building underwent significant modifications throughout the twentieth century, the Third Floor remained well preserved, retaining original architectural and decorative elements conceived as part of the Batlló family residence. The reopening of the apartment offers renewed insight into Gaudí's domestic architecture, foregrounding his approach to spatial continuity, custom craftsmanship, and material

ARCHITECTURE

Floating community space in Copenhagen by Arcgency and MAST "makes water an active part of everyday life"

"Danish architecture studios Arcgency and MAST have completed Bedding 1 in Copenhagen, a floating community space and guesthouse that is moored alongside the artificial island of Christiansholm.

Located in the Arsenalgraven canal, Bedding 1 is the first of three planned floating structures that will be accompanied by piers and a floating garden, providing communal spaces alongside a development known locally as Papirøen or Paper Island.

Arcgency and MAST designed the timber-framed structure to reference the timber slipways historically used to launch new ships from the Royal Danish Naval Shipyard, part of which was formerly located on the site.

Reinforcing this connection with Copenhagen's shipbuilding history, Bedding 1 was constructed by Krohns Bådbyggeri, the last active shipyard in central Copenhagen, using Douglas fir timber topped with an anodised zinc roof.."

ARCHITECTURE

Is parametricism the defining architecture style of the 21st century? - PODCAST

"In the latest episode of Dezeen Weekly, we give listeners a crash course in parametricism, from its origins to its much-disputed claim of being the most significant architectural style since modernism.

We debate some of the most pressing questions surrounding the movement: did Patrick Schumacher's association with the style actually torpedo its success? How much agency lies with the architect when using parametric design tools? Would Schumacher ever design an extension for the home of Dezeen editor Tom Ravenscroft?

And is parametricism really, as Schumacher claims, the defining style of our time?.

Ravenscroft and design editor Jennifer Hahn also break down some of the earliest and most important parametric buildings to know, from the Yokohama International Port Terminal by Foreign Office Architects to Zaha Hadid's Heydar Aliyev Centre in Baku, Azerbaijan.

For all that and more, listen to this week's episode of Dezeen Weekly.

Source: [NASA](#) (15 May 2026)

ENERGY

Scientists "bottle the sun" with a liquid battery that stores solar energy

"As solar panels lose their ability to generate electricity after sunset, one major challenge remains for renewable energy: how to store solar power for use later, whether during cloudy weather or overnight.

Researchers at UC Santa Barbara believe they may have found an answer that avoids the need for massive battery systems or reliance on the electrical grid. Writing in the journal Science, Associate Professor Grace Han and her research team describe a new material capable of absorbing sunlight, storing that energy in chemical bonds, and later releasing it as heat whenever needed. The material is based on a modified organic molecule called pyrimidone and represents a new step forward in Molecular Solar Thermal (MOST) energy storage technology.."

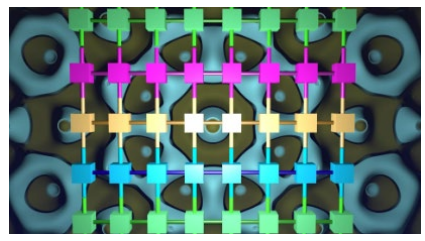
Source: [University of California](#) (14 May 2026)

experimentation within an inhabited residential setting.."

Source: [Archdaily](#) (13 May 2026)

QUANTUM

New quantum algorithm solves "impossible" materials problem in seconds



"Quantum computers and other advanced quantum technologies rely on specialized quantum materials that behave in unusual ways under the right conditions. In some cases, scientists can even create entirely new quantum properties by carefully changing a material's structure. One striking example involves stacking sheets of graphene and twisting them into a moiré pattern, which can suddenly turn the material into a superconductor.

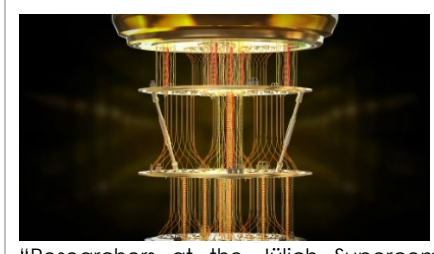
Researchers can arrange these layers into even more complicated structures, including quasicrystals and super-moiré materials. But predicting how these exotic materials will behave is extraordinarily difficult. Quasicrystals are so mathematically complex that simulating them can involve more than a quadrillion numbers, a scale far beyond the reach of today's most powerful supercomputers.."

Source: [Aalto](#) (13 May 2026)

Source: [Dezeen](#) (16 May 2026)

QUANTUM

JUPITER supercomputer breaks world record with 50-qubit quantum simulation



"Researchers at the Jülich Supercomputing Centre and NVIDIA have achieved a major milestone in quantum computing by fully simulating a universal quantum computer with 50 qubits for the first time. The accomplishment was made possible using JUPITER, Europe's first exascale supercomputer, which was officially launched at Forschungszentrum Jülich last September.

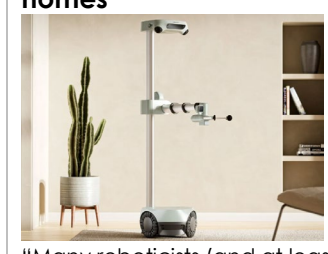
The achievement surpasses the previous record of 48 qubits, which was also set by Jülich scientists in 2019 using Japan's K computer. Beyond setting a new benchmark, the breakthrough highlights the enormous capabilities of JUPITER and could accelerate the development of future quantum algorithms and technologies..."

Source: [Forschungszentrum Jülich](#) (11 May 2026)

Source: [Dezeen](#) (15 May 2026)

ROBOTS

Hello Robot Sets the Standard for Practical, Safe Home Robots Forget legs or hands—Stretch 4 is a useful robot that can actually work in homes



"Many roboticists (and at least one robotics journalist) have been seduced by the dream of a robot butler. And the rampant popularity of videos showing humanoid robots doing household tasks in improbably clean kitchens and unrealistically tidy bedrooms suggests that we're not the only ones interested in a robot that can do our chores. But for all kinds of reasons, legged humanoids are not yet ready for industrial or commercial applications at scale, and home applications (if people even want them), I would argue, are even farther away. Even so, ludicrously well-funded humanoid robotics companies are now ramping production while explicitly promising that their robots will be doing 'housework.'

So what about that robot butler dream, then? It still exists! All you have to do is forget about legs, arms, hands, faces, and focus on what really matters: mobility and manipulation. This is what Hello Robot's Stretch robot is unapologetically all about, and the newest version being announced today, Stretch 4, is closer than ever to a robot that could safely do practical work in the home at an accessible cost.."

Source: [IEEE Spectrum](#) (12 May 2026)

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