

Weekly Discovery

We SHARE to inspire and ignite ideas!

21 September – 25 September 2026



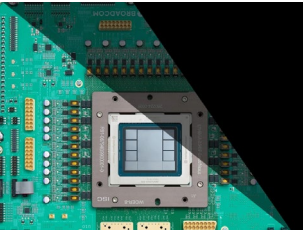
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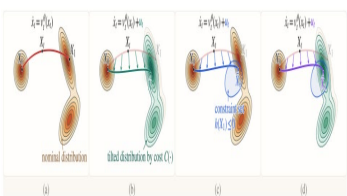
AI | Semiconductors | Engineering
[How OpenAI Used Its Own LLMs to Design Its Jalapeño Chip](#)



OpenAI used large language models throughout the front-end design and software optimisation of its Jalapeño AI accelerator. The project illustrates how generative AI can shorten chip-development cycles, automate design exploration and increasingly participate in hardware engineering workflows.

IEEE Spectrum | 15 September 2026

AI | Robotics | Safety-Critical Systems
[New method enables AI for safety-critical situations](#)



MIT researchers developed an approach that constrains AI decision-making so learned systems can satisfy safety requirements while still adapting to complex environments. The work is relevant to autonomous machines and other applications where an AI error can have physical consequences.

Massachusetts Institute of Technology | 14 September 2026

AI | Agentic Systems | Automation
[Why Andon Labs Puts AI Agents in Charge of Real Businesses](#)



Andon Labs is testing autonomous AI agents by giving them responsibility for real commercial operations such as budgeting, ordering and management decisions. The experiments expose both emerging capabilities and failure modes as agentic AI moves from software tasks into consequential real-world activity.

IEEE Spectrum | 15 September 2026

Architecture | Digital Design | Materials
[Digital Worlds and the Limits of Frictionless Space: Rethinking Scale and Materiality](#)



This essay examines how CAD, virtual environments and AI-generated imagery can distance design from gravity, thickness, construction and bodily scale. It argues for digital workflows that preserve meaningful material and spatial constraints rather than reducing architecture to frictionless imagery.

ArchDaily | 10 September 2026

Architecture | Sustainability | Materials
[How Architectural Fabrics Are Expanding the Role of the Building Envelope](#)



Composite architectural fabrics are being used as lightweight shading, acoustic and environmental-control layers. Case studies show how responsive textile envelopes can complement glazing and ventilation strategies while reducing material loads and improving building performance.

ArchDaily | 18 September 2026

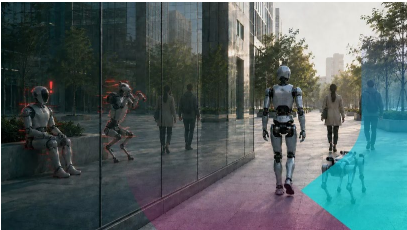
Architecture | Materials | Sustainability
[Seven buildings that demonstrate the versatility of bamboo](#)



A selection of recent buildings demonstrates bamboo as structure, enclosure and crafted finish across varied climates and scales. The projects highlight a rapidly renewable material whose low mass and local availability can support lower-impact construction when detailing and durability are carefully resolved.

Dezeen | 20 September 2026

Cybersecurity | AI | Robotics
[Rethinking Robot Safety in the Age of AI](#)



Physical AI systems can be compromised without obvious mechanical failure when attackers alter perception, models or decision pathways. The article argues for security practices that combine model scanning, vulnerability testing, simulation and continuous monitoring across a robot's lifecycle.

IEEE Spectrum | 17 September 2026

Health Tech | Smart Devices | Accessibility
[AI-powered alarm for deaf people wins UK James Dyson Award](#)



An assistive alarm concept uses AI to recognise important environmental sounds and translate them into alerts accessible to Deaf users. The award-winning design illustrates how machine listening and product design can improve situational awareness without requiring users to monitor audio directly.

Dezeen | 16 September 2026

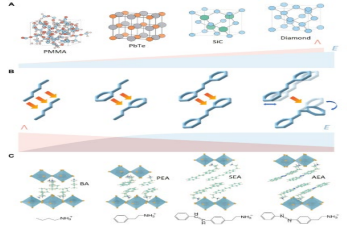
Health Tech | Sensors | Optics
[This Prosthetic Armband Senses Muscles With Light](#)



A prototype prosthetic armband replaces conventional electrical muscle electrodes with optical and infrared sensing. The approach aims to remain reliable during sweating, reduce motion artefacts and improve comfort, potentially addressing common reasons users abandon upper-limb prostheses.

IEEE Spectrum | 18 September 2026

Materials | Sustainability | Thermal Engineering
[New thermal insulator outperforms any material found in nature](#)



Researchers report an engineered insulating material with exceptionally low thermal conductivity and a form compatible with manufacturing. The work could enable lighter, more efficient thermal management in buildings, industrial systems and devices where conventional insulation is bulky or performance-limited.

North Carolina State University | 18 September 2026

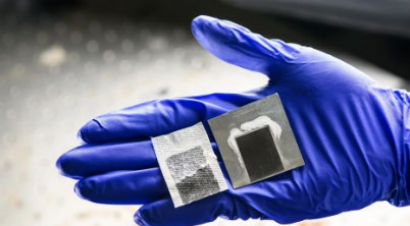
Optics | Robotics | Automated Science
[Robotic lab sets up and runs optics experiments on demand](#)



MIT researchers built a robotic laboratory able to configure and execute optical experiments with reduced human handling. The platform points toward autonomous scientific facilities that can translate experimental goals into physical setups, collect measurements and accelerate iterative discovery.

Massachusetts Institute of Technology | 17 September 2026

Sustainability | Water | Engineering
[Scientists turn seawater into fresh water without harmful brine](#)



A solar-powered desalination approach converts seawater to fresh water while recovering most remaining salt as a solid instead of discharging concentrated brine. The design targets one of desalination's major environmental problems while using renewable heat.

University of Rochester | 16 September 2026

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