

Hello AQUILAnauts and Happy New Year! I hope you've all had time to recharge your batteries because we're back. And this time we're bringing the BUZZ, with our very special rampaging **ROBOTICS** issue.

Did you know that the world's first proper humanoid robot was built by a company called Westinghouse Electric Corporation, in 1938, in time for the 1939 New York World's Fair. Its name was Elektro. It stood 2.1 m tall, could walk, talk, and had a vocabulary of 700 words, all of which were stored on old-fashioned records to simulate conversation. Elektro also 'smoked' stinky cigarettes – a behaviour we'd regard as dangerously unhealthy (and not to mention, gross) today.

These days many of our humanoid robots tend to be geared towards good health and wellbeing. Take Tomatan, for example. Tomatan was invented by Japanese art unit **Maywa Denki** in 2015. It's a humanoid robot that a marathon runner can wear on their back. When the runner feels it's time for a nutritious snack, the robot feeds them a tomato. Tomatan is actually an artwork, rather than a commercially available product, but then again, so was Elektro, in its own way. It seems the type of robots we choose to build reflects our priorities as a species, and so change, depending on our ideas about ourselves.

Freya Hardy, ed

We hope all you AQUILAnauts have a jovial January, whatever is going on where you are. Join us back here in February as we take to the skies with our **Brilliant Birds** issue.



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**Q: What do ancient Greek robots use on their joints?**  
**A:** Olive oil.  
 That's just a (completely terrible) robot joke, but did you know that the first robots are thought to have been built around 2,000 years ago? No, neither did we. **Aquila** peers into the past at the birth of AI (sort of).

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**Vroominous vehicular ventures**  
**Harvey's** learning all about **amazing motors** this month. Can you build yourself a riveting **robocar**? I bet you can.

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**It's a zoo out there!**  
**Q: When is a bat NOT a bat?**  
**A:** When it's a silicone membrane stretched over a lightweight, multi-jointed, metal framework and enhanced with cutting edge surveillance technology, of course! Meet a menagerie of animal-inspired AIs, here!

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**Weird Science**  
 Welcome to the **Uncanny Valley**, where nothing looks or feels quite *right*. Enter if you dare, and don't say we didn't warn you, okay? It's proper strange.

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**Short Circuit**  
 Can you spot the only right robot in a cog\* of wrong 'uns? Here's this month's **Brainfeeders!**  
 \*Yes, a group of robots is called a cog. I looked it up and everything.

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It looks like you're trying to explore **instrumental convergence**. Our philosophical twins, Philip and Phoebe, are grappling with Nick Bostrom's thought experiment: **The Paperclip Maximiser**. That's when a robot is given the task to manufacture as many paperclips as it can, and then it goes on to slowly but efficiently destroy the entire world.  
*Can the robot move its arms and legs? Ed*  
 No. It's entirely STATIONERY! Geddit? Because papercli...?  
 Okay. Yep. Not the right time.

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**Robots rule!**  
 No one loves an excellent question more than a science fiction writer. And, as excellent questions go, 'what rules should robots follow?', is a pretty good one. What would your robot rules be?  
**Wordworm** investigates **Isaac Asimov's Laws of Robotics**, here.

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**Grinding my gears**  
 Have you ever shouted at a mechanical object? Have you pleaded with a printer? Bellowed at a Bluetooth speaker? Lampooned a laptop? Did you know that, apart from being a Very Angry Squirrel, you were also practising something called **anthropomorphism**? No? Then, this one's for you.

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**AQUILAnews**  
 and Ian!

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**Supermarket Bleep**  
 They put the AI in AI-sles, but can you use your powers of deduction to **escape from Spaghetti Sal and the rest of Smartbot's super intelligent but ultimately DERANGED robots**? The secret code is hidden in tricky puzzles around the store. Good luck, and for heaven's sake, DON'T make them angry!

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**Bright sparks**  
**Polly's** making a **marvellous moving matchbot** from matchboxes and so can you!

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**Pup starts**  
 When a stray pup arrives at Molly's family bakery, she's happy to help find its true owner. But when the dog starts helping her in unexpected ways, an aWOOFully wonderful tail unfurls. Find out what happens next in **ADA**, a charming new short story by **Josette Reeves**.

Illustration: Yulia Sirotna