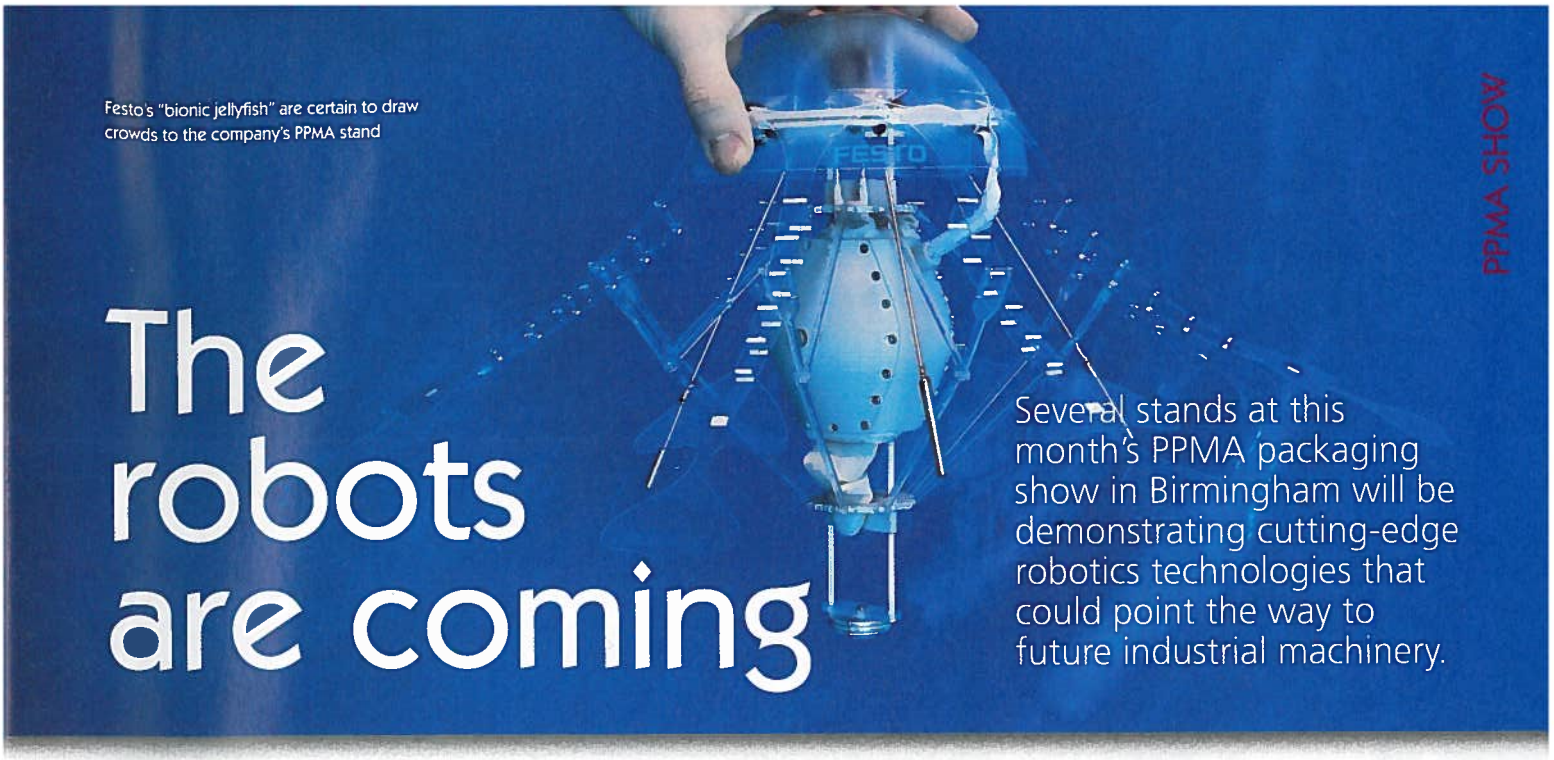

Festo's "bionic jellyfish" are certain to draw crowds to the company's PPMA stand

The robots are coming

Several stands at this month's PPMA packaging show in Birmingham will be demonstrating cutting-edge robotics technologies that could point the way to future industrial machinery.

Later this month, the PPMA Show, the showcase for the UK's packaging and processing machinery industry, returns to the Birmingham NEC. The organisers are promising that there will be more than 300 exhibitors, including many of the leading companies in the field of processing and packaging machinery, including suppliers of components and systems.

New this year is a series of seminars, called the Manufacturing Forum, where visitors can hear industry leaders talking about hot topics in the world of processing and packaging. There will also be opportunities to join in the debate with the speakers and other attendees.

A highlight on **B&R Automation**'s stand will be a high-performance packaging machine which integrates some of the latest machine concepts for handling, image processing, safety technology, control and monitoring. The machine, called the Packer, will be demonstrating how individual axes, cam profiles and robotics can be synchronised with high precision.

The machine incorporates three different types of robot – an articulated arm, a tripod robot and a Cartesian co-ordinate robot – with different kinematic characteristics, synchronised along a rotary table to pick up and package golf balls. The complete system, including 15 axes as well as control and visualisation functions, will be operated by a single-CPU industrial PC.

On its stand, **Yaskawa** will be demonstrating its new Motoman MPP3 delta picking robot with an integrated vision system and conveyor tracking. It claims that the four-axis parallel kinematic robot delivers best-in-class performance in terms of speed and handling capacity. The wrist axis is stronger than in comparable models, allowing it to handle payloads of up to 3kg at 140 cycles per minute. For 1kg payloads, the robot can perform at 233 cycles per minute.

Yaskawa will also be showing its Sigma-5 servodrives aimed at the automation of production lines in the packaging industry. Their precise and fast positioning, high speed and vibration-free motion control at any speed, ensure high performance.

Another company promoting robots at this year's PPMA Show is **Fanuc Robotics** whose stand will host a quirky demonstration of a machine that uses a vision system to locate randomly placed £1 coins and then inserts them into a piggybank while counting them.

Fanuc will be emphasising how robots have reduced in price over the past 20 years, relative to increases in operational costs, making them highly affordable. With high duty-cycle robots costing £16–17,000, one-year returns on investment begin to look realistic, especially if they operate three shifts. Fanuc will be demonstrating a variety of robots, capable of handling payloads up to 700kg.

The central focus on the **Omron** stand will be a working demonstration of a recently introduced Scara robot, complemented by vision systems. Visitors will not only see the robot in operation, but will also discover how vision and conveyor-tracking functions can be added to robotic systems, and can be integrated with automation and supervisory systems via communications options including Ethernet, DeviceNet and Profibus.

Omron will also be showing its latest vision systems at PPMA with a particular focus on automated checking of human-readable text. The company offers both OEM and turnkey packages designed to ensure that users avoid the risks of fines or damage to their reputation because of illegible or non-conformant human-readable text.

Festo will be demonstrating how automation technology of the future could use principles adapted from nature. Its stand will feature three innovative and dynamic exhibits, showing physical and behavioural properties that the company believes are key enablers for tomorrow's robots. All three form part of the company's research into bionic automation technology.

For example, Festo's "bionic jellyfish" – known as AquaJellies – will be showing how they can sense and respond to their environment, and communicate and co-operate as a group.

Nearby, Festo's small mobile robot called RobotinoXT will be on display, equipped with a compact version of its "bionic handling assistant", based on an elephant's trunk. Capable of manoeuvring in cramped spaces, the robot has 12 degrees of freedom. Festo's third exhibit is a high-speed egg-handling robot using adaptive gripper fingers. This will provide a practical demonstration of these bionic elements, which have potential applications in pick-and-place, handling and sorting machines.

Other exhibitors at PPMA 2011 include **ABB Robotics, Bosch Rexroth, Drummotors & More, HepcoMotion, Lafert Electric Motors, Laidler Associates, Panasonic Electric Works, Phoenix Contact, Quin Systems, RA Rodriguez, SMC, Wenglor Sensoric** and **Wittenstein.**

Show Facts

PPMA 2011
27–29 September
NEC, Birmingham, UK
www.ppmashow.co.uk

Where:
National Exhibition Centre, Birmingham

When:
27 September, 10.00–17.00
28 September, 10.00–17.00
29 September, 10.00–16.00

Parking: £8

Web site and pre-registration:
www.ppmashow.co.uk