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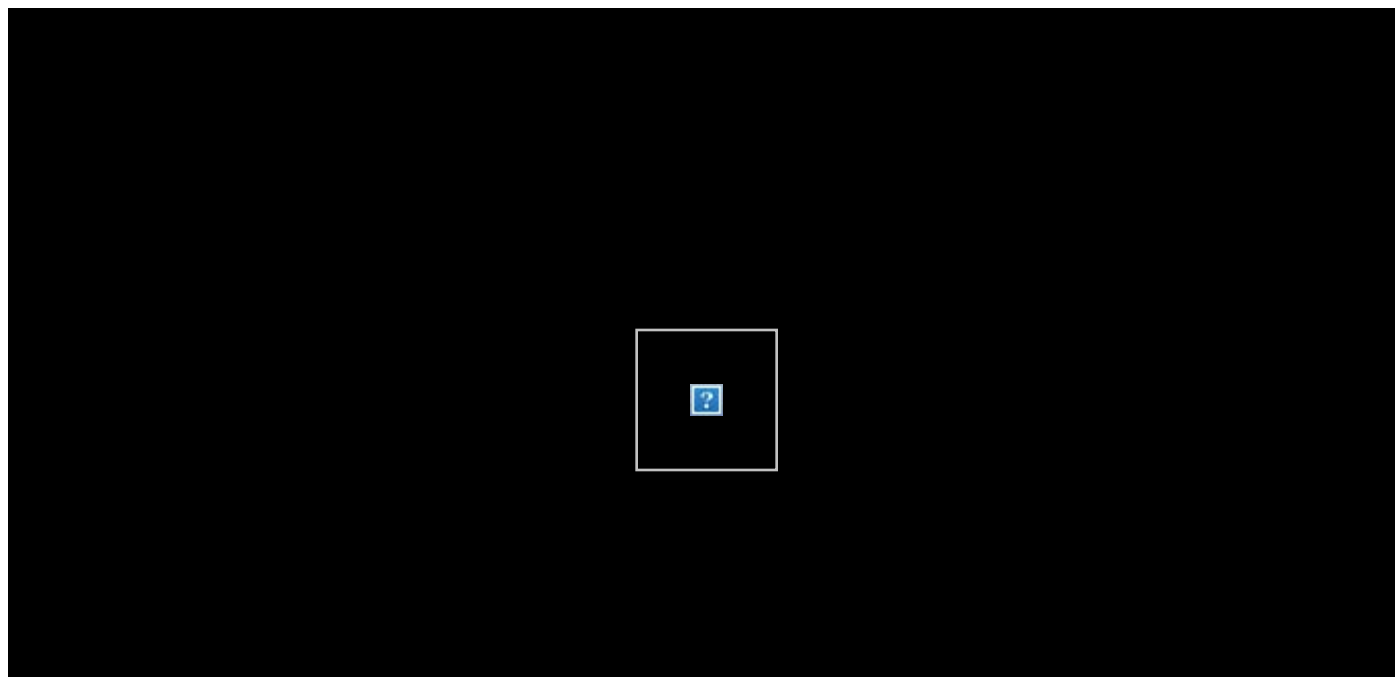
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A waste of dough? EU spends millions building robot that makes pizza

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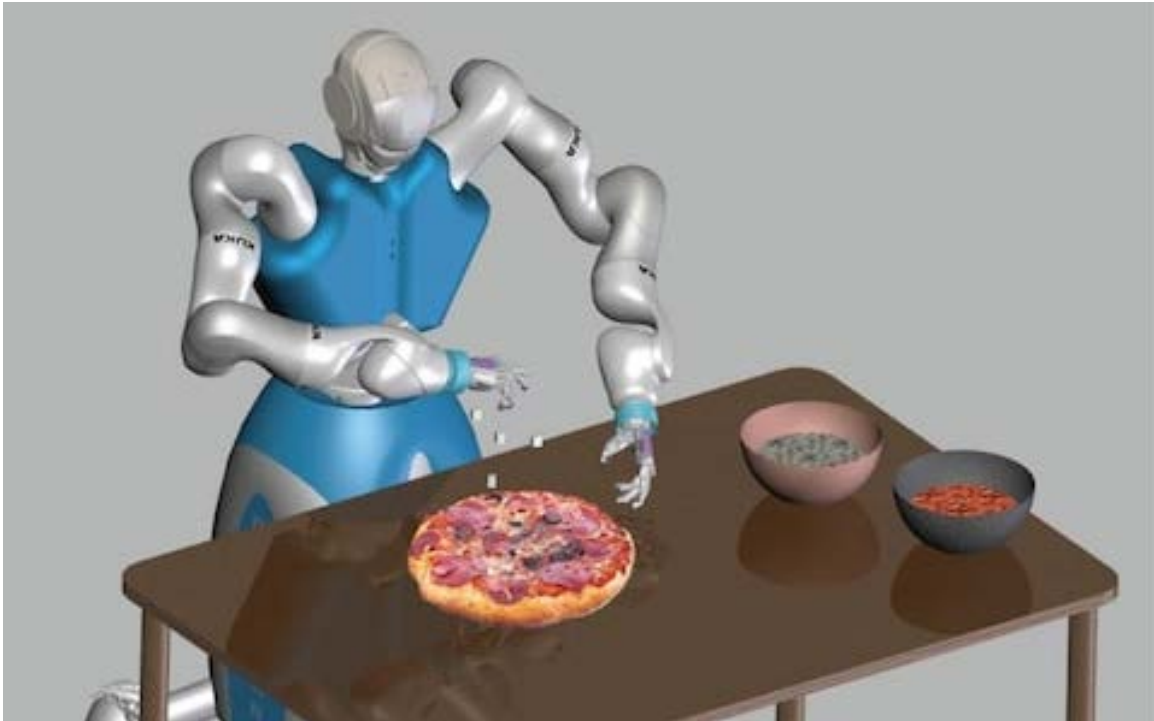
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By **James Crisp**, BRUSSELS CORRESPONDENT

11 AUGUST 2017 • 11:34AM

The European Union is spending millions of euros on developing a robot that can make pizza.

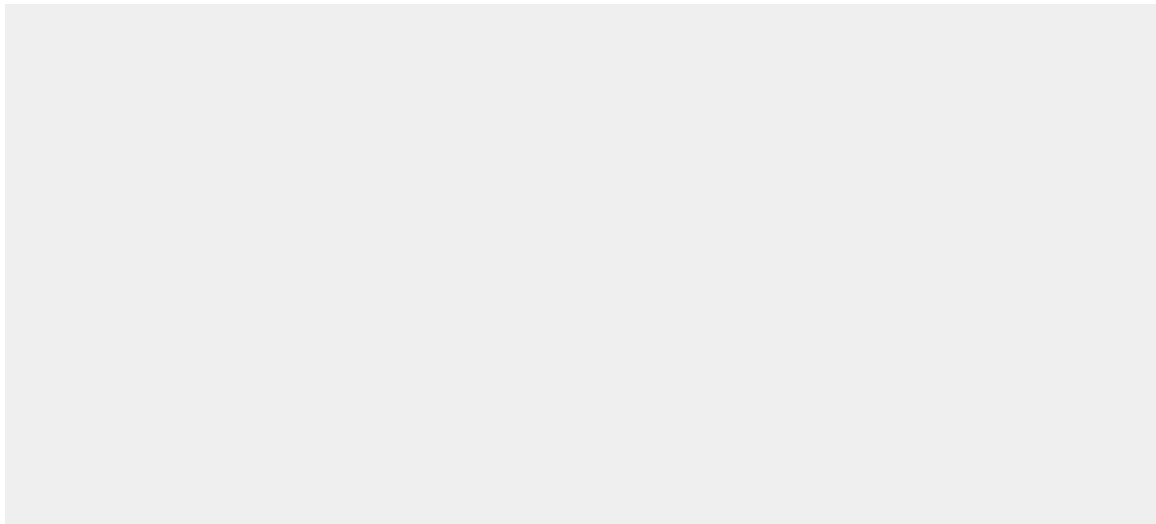
The robot has visual sensors in its head to “see” in real time and uses software to train itself to act like a pizza chef. It is learning how to knead, stretch, toss and twirl dough, add ingredients and slide the pizza into an oven.



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RoDyMan, which is short for Robotic Dynamic Manipulation, is a five-year project supported by a €2.5 million grant from the European Research Council. The Council was set up by the European Commission in 2007 and funds scientific and technological research.

“Preparing a pizza involves an extraordinary level of agility and dexterity,” Bruno Siciliano, who directs the robotics research group at the University of Naples Federico II told *Scientific American*.



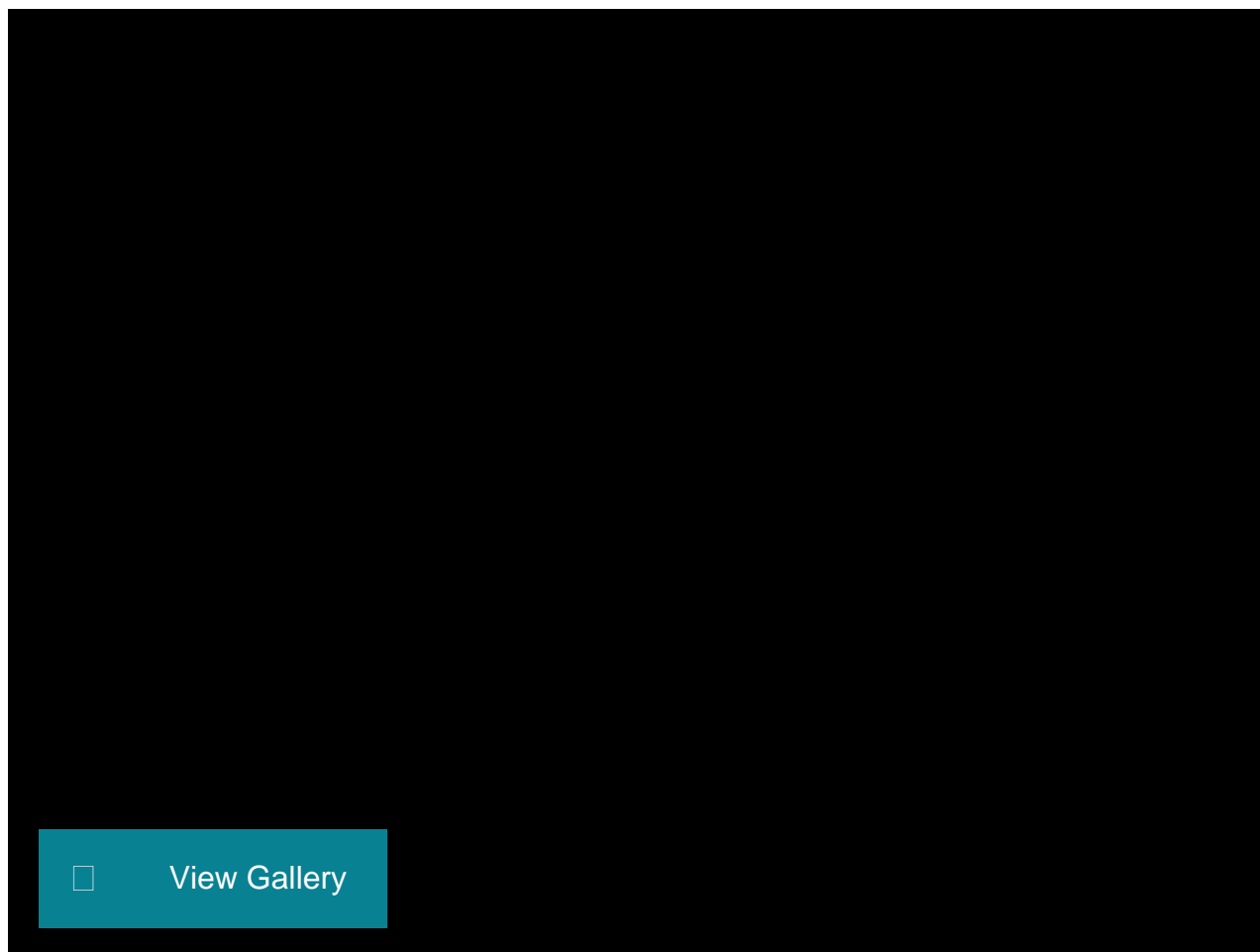
Researchers hope the project will lead to a more precise and responsive generation of robots.

RoDyMan is learning how to toss and spin pizza dough, without tearing it. The more it practices, the better it gets at the delicate technique, which is beyond the abilities of existing technology.

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To guide the robot, Mr Siciliano's team recruited master pizza chef Enzo Coccia to wear a suit of movement-tracking sensors.

The jobs being overtaken by robots: in pictures



RoDyMan will make his public debut at the Naples pizza festival in May 2018 but, according to Mr Siciliano, will never replace the real thing.

“I would never eat a pizza made by a robot,” he said. “It would not have the taste a real pizzaiolo, with his soul, would put in it.”

How to| Make perfect pizza

Don't lay toppings to the very edge of the pizza or it won't crisp up.

Use whole, peeled tinned tomatoes, instead of chopped, as they're generally better quality.

Best herbs: for basil, sweet *Ocimum basilicum* 'Napoletano' (lettuce leaf basil), followed by *Ocimum minimum* (Greek basil).

Franco Manca also recommends Japanese flat-leaf parsley.

Keep to the seasons with your veg: asparagus, leeks, potatoes, spinach in spring; wild mushrooms, butternut squash in autumn; pumpkin, broccoli, radicchio in winter; courgettes, aubergines, cherry tomatoes in summer.

Store sourdough out of the fridge at 18C in an airtight container.

Giuseppe recommends Cann Mills flour (from stoatesflour.co.uk).

When working dough, dip your fingers in water to keep it from sticking to your hands. To clean it off, rub flour between your palms.