

Robots – permanent exhibition

2 april 2019

Cité des sciences et de l'industrie, Paris

“Robots sometimes fascinate us, they sometimes worry us, but they always intrigue us. Robots were mainly used at first in the industrial field; now they are everywhere, even in our homes. It was time therefore to give them their rightful place in the Cité des sciences et de l'industrie, which is precisely what the permanent exhibition Robots does. It provides a moving panorama of modern robotics, bringing the museological expertise of our establishment to new summits, more than ever in the service of enhancing our understanding of the contemporary world.”

Bruno Maquart, president of Universcience.

Robots. This is the evocative and intriguing title of the new permanent exhibition at the Cité des sciences et de l'industrie, which opens its doors April 2, 2019. In 900 m², situated at the core of the building's exhibition space, Robots questions the very definition of robotics. The term, charged with fantasies and standing in itself for a futuristic projection, derives from the Czech word “robota”, meaning labour.

The notion of robotics today is packed with many preconceived notions, phobias, and utopias, all fed by literature and a rich film culture. The real challenge of the exhibition is the presentation of authentic working robots that raises visitor awareness of their relationship to these singular machines.

How do they work? What are they for? What are their performances today and what will they be tomorrow? The exhibition lays bare the actual capabilities of robots and provides insight into the current issues.

TROBO, a commissioned work by artist and choreographer Aurélien Bory, on view at the centre of the exhibition, poetically illustrates these questions. Two industrial robots try to put the letters of the word robot in the right order. Broot? Orbot? Rbtoo? Hard at their task, they work with or against one another, in a series of burlesque and fascinating movements.

Robotics, what is it?

Robotics is part of the history of machines. It develops artefacts that physically interact with their environment and do tasks requiring different degrees of autonomy. For this purpose, they must be able to sense, move, manipulate, and communicate. Their margin of autonomy is greater than ordinary machines.

VISIT TO THE EXHIBITION

The five main sections of the exhibition examine issues raised by humanoid and non-humanoid robots, and their growing presence in our everyday lives.

Robot, or not?

In a single museological element, visitors are given to understand what a robot is! A set of technical characteristics distinguishes a simple machine from a real robot. C3P0 and R2D2 correspond in every aspect to the image of the robot in the collective imagination but they are not in fact robots. On the other hand, a very everyday object, such as an elevator door with sensors that keep it from shutting unexpectedly, is a robotic machine. So, what is a robot and what isn't?



In partnership with CNRS
In collaboration with INRIA
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Trilingual (French, English, Spanish).
Ages 11 and up.



Robot HRP2 - There are fifteen copies of this robot in the world, including the one presented in the exhibition.

Draw me a robot

The second part of the exhibition introduces the fundamentals of robotics and its main functions, namely sensing its surroundings and influencing them. This section is made up of twelve displays: from the birth of robotics to the performance of contemporary robots. Exploded views of robots, robotic exhibits to evaluate a machine's degree of autonomy, a collection of sensors and more provide visitors with an understanding of how robots work!

Robots in the lab!

In industrial robotics, a robot's every movement is programmed and controlled. A robot vacuum, on the other hand, does not require such programming to perform its task. And this makes its use easier. Of course, making such autonomous robots still involves prior research and development, trial and error, and a significant investment of technical, financial and human resources. Eight exhibits in this section illustrate this paradigm shift. What are the sources of inspiration for robotics? What is the best way for a robot to walk? Presented here is a swarm of robots that can communicate with one another, the human/robot collaboration, emotional interactions, the contributions of artificial intelligence and more.

Living with robots?

The development of robotics raises many economic, societal, ethical or cultural issues. Gains in autonomy (or the delegation of control) have opened up new possibilities for new robots, including collaborating with human beings or with other robots, emotional communication, helping out with everyday tasks and even, why not, becoming indispensable in this regard. Evolution opens up great prospects for collaboration between robots and humans, beyond fears of "machines having control" over humanity. So where exactly are we in this regard? Through three exhibits, including a show about the forms and uses of robotics, visitors take stock of the present state of robotics in the world and the levers of its development and find answers to the questions they may have about the place of robots in contemporary society.

The robotics show

This part concludes the exhibition and prompts visitors to question their representations of robotics and its degree of psychological and social acceptability. What relationship does the visitor have with the world of robotics? Lastly, visitors learn about careers in robotics and amateur robotics practices.

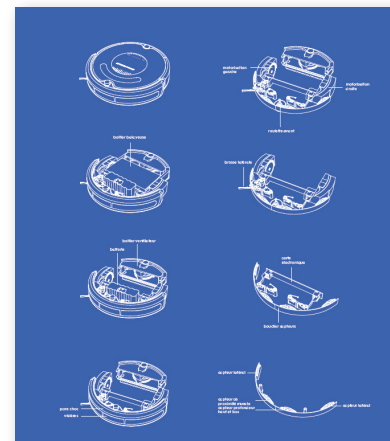
TROBO by Aurélien Bory

Two KUKA industrial robots try to put in order the big letters that make up the word ROBOT. To no avail. As they grasp the letters and move them around, they perform a dance of unlikely balances, inversions, and superimpositions. During the performance, the two robots work with or against one another. Their movement look impressive at times, burlesque at others, in a dance in which the precision of machines stands in contrast to imperfection and nonsense.

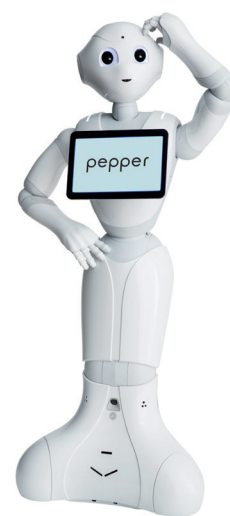
Beyond the entertaining aspect of the installation, the choreography grapples with a technology in search of its identity, seeking either to get closer to human behaviour or, on the contrary, to get as far away from it as possible by enhancing performance and capabilities.

The production of this work was made possible by private donations.

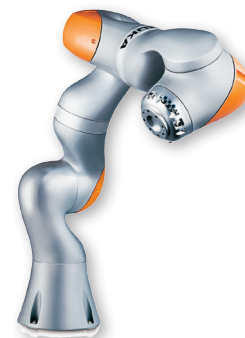
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Exploded drawing of Robot Vacuum cleaner



Pepper by SoftBank Robotics



Robot KUKA



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Opening hours

Everyday except Monday

from 10am to 6pm, and until 7pm on Sunday.

01 40 05 80 00

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Admission

Full price 12€ - Reduced price: 9€

(65 and over, teachers, 25 and under, familles nombreuses, students).

Ticket includes the Argonaute and the planetarium.

> Free for children 2 years and under, the unemployed, disabled persons and their companions.