

In the Spotlight

■ Dance, dance, dance

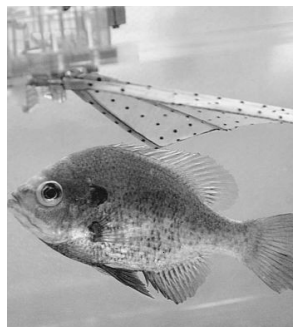
HRP-2 – (Humanoid Robotics Project) is the robot produced by Kawada company (Japan). Scientists from Tokyo University took the robot in their hand and taught it a Japanese folk dance called Aizu-Bandaïsan. Traditional dances are vanishing from people's memory and such moving, interactive library seems to be optimal solution. The main problem in research like this is a balance. Imitation of hands and arms motions is easily for robots, but they have serious difficulties in moving legs. Dance Aizu-Bandaïsan is based on motions of the hand and the trunk. The next step is faster dancing.



Source: http://www.kawada.co.jp/global/ams/hrp_2.html

■ Mechanical perch

Perch (*Perca fluviatilis* L.) have appeared an excellent model of AUV. Autonomous Underwater Vehicles are irreplaceable for deep-sea researches, exploitation of the wrecks, as well as in sea rescue. MIT's scientists under Prof. Ian Hunter noticed that perch swims differently from other fishes. Perch moves forward perpetually, without pulling back part of the trunk. Researchers inspired by perch's way of swimming constructed fin's model from polymer conducting electricity, as a computer control casting. Constructors want to understand principles of the nature to inspire them. The purpose is design automatic moving robots.



Source: <http://bioinstrumentation.mit.edu/>

■ Mechanical cuddly

Followed of Canadian seal PARO (personal robot) can demonstrate feelings, moreover – it is much more clean and patient than original. Its hair has antibacterial qualities. Takanori Shibata created PARO for relax and stimulation. Robot seems to have its own character. PARO behaves like living animal turning to side from the voice comes, squeals when one strokes it, yells tremendously when one hits it and closes its eyes when one touches its mouth. It works everywhere where pets are forbidden like hospitals and senior's houses.



Source: Japan's National Institute of Advanced Industrial Science and Technology

■ Inspector robot

Inspecting and neutralizing robot is able to travel in difficult terrain and to overcome its uneven surface (smooth movements on stairs) and high obstacles. Inspector was created for support for counter terrorist operations, hazardous environments missions, as well as for protection and supervision of the buildings. Can cooperate with other robot. The manipulator is able to lift 30 kg on extended arms and 60 kg on folded arms. Constant spatial orientation of the object placed in the gripper, irrespective of the movement of other manipulator arms, enables precise manipulation of hazardous devices. Special driving system reduces recoil effect when firing the pyrotechnical disrupter or in case of explosion of the load placed in the gripping device or its vicinity.



Source: www.antiterrorism.eu