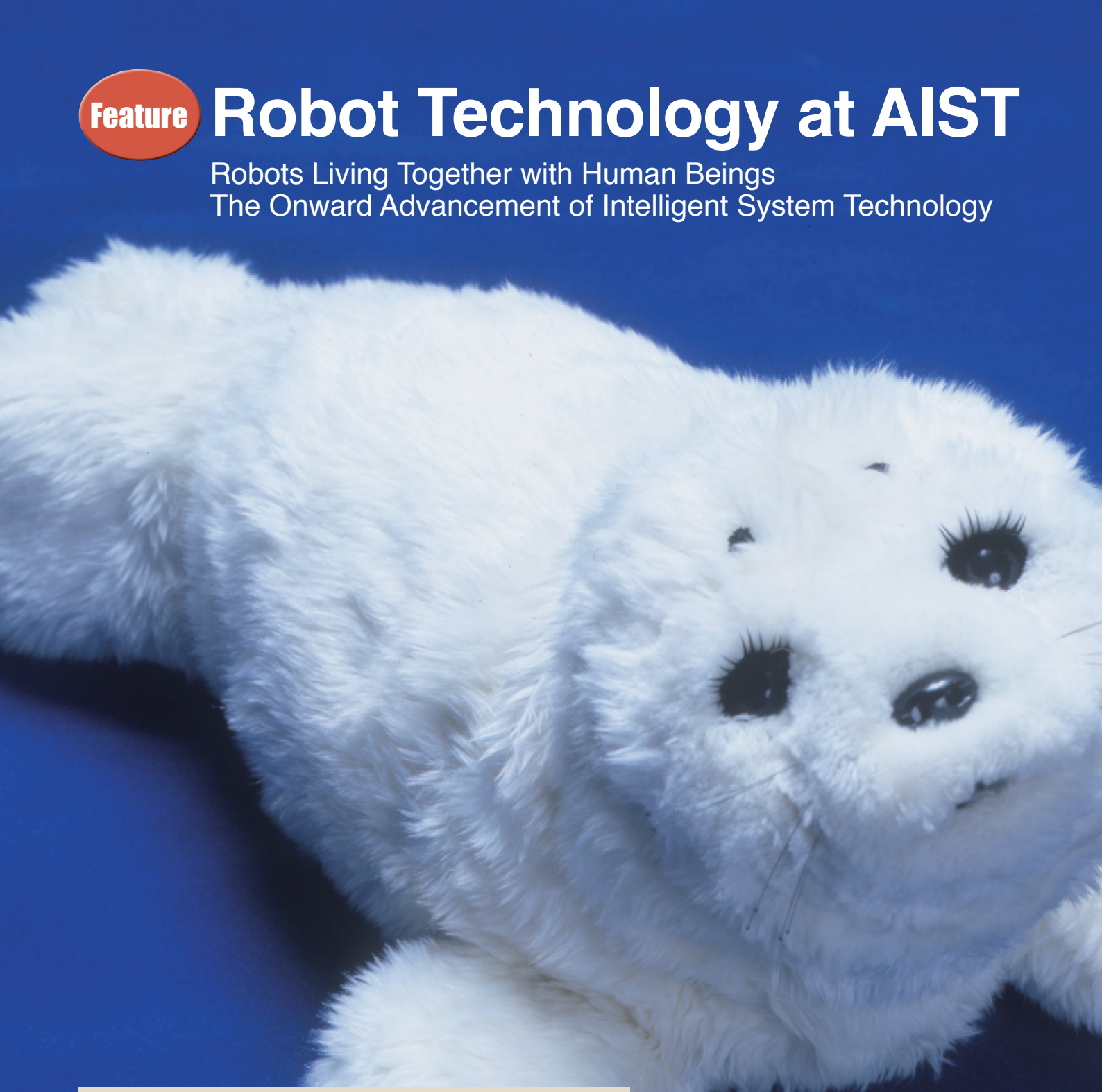
Feature

Robot Technology at AIST

Robots Living Together with Human Beings
The Onward Advancement of Intelligent System Technology



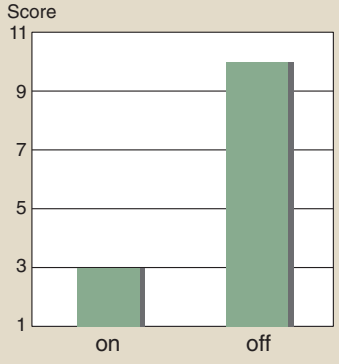


Fig.1 Comparison of average face scale scores when the power of the robot is "ON" and "Off"

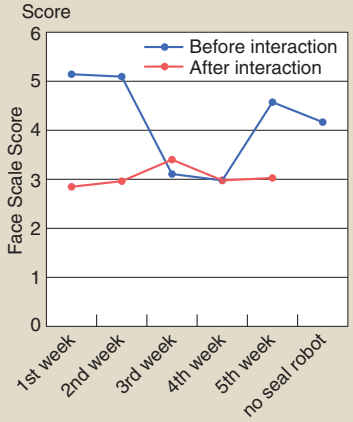


Fig.2 Average face scale scores of the elderly

Fig. 1 shows the comparison of the pediatric patients' mood at a children's ward who hold the robot with the mains switch both on and off. Fig.2 represents the results of a series of interaction tests between the elderly people and Paro. The tests were conducted one time per day, 3 days a week, for the period of 5 weeks at an adult day-care centre. Face Scale is a measurement tool to assess the mood using a scale of one to twenty from a smiley face to sad face.

7th generation Paro, weighing 2.7kg

Therapeutic Robot

Prime Minister Mr. Koizumi holding Paro (Photo: Cabinet Public Information Office)

World's Most Therapeutic Robot

"Mental Commit Robot" Nickname: "Paro"

Since ancient times, animals have always played a role in man's life. Although the merits of animal therapy are positively recognized in the areas of medical care and welfare, there are difficulties to introduce this form of therapy at hospitals and nursing homes for fear of the associated problems such as allergy, zoonotic infections, biting, scratching etc. Additionally, it is also difficult for those who live alone to take care of pets. It is often forbidden to raise animals in housing complexes. Under such circumstances, Paro was developed in order to meet the demands for a robot pet which can coexist with humans.

This white-haired "Paro" is modeled after a baby harp seal. Seals are not so common in daily life and thus the robot would not draw upon too much of a comparison with real life seals. Paro is the world's first "Mental Commit Robot" and gives pleasure and comfort to humans through interaction.

Since 2000, Paro has been a great success in a series of demonstration experiments concerning robot therapy which have been implemented at the pediatric ward of Tsukuba University Hospital, adult day-care centers and nursing care facilities. Moreover, with the aim of improving robot-assisted therapy, further improvements have been made to Paro, leading to the completion of the 7th generation Paro.

Paro has received widespread acclaim not only in Japan but also in Britain, Norway, Italy, UAE, Korea, Australia and the U.S., among others. The exhibit of "Paro and Robot Therapy" has started at the National Museum of Science and Technology in Sweden in May 2003 and is attracting increasing attention. The exhibit will continue for the next three years.

Paro at the Science Museum in London, UK

Paro surrounded by children at a pediatric ward

Researcher's Message

We are striving for an early practical application of the Mental Commit Robot "Paro" in order to provide comfort and relaxation and also improve people's quality of life.