

ImPACT Program Manager

**Kanako
HARADA**



- 2001 Received M.E. from Graduate School, The University of Tokyo
- 2001 - 2004 Hitachi Ltd.
- 2005 - 2007 Japan Association for the Advancement of Medical Equipment
- 2007 Received Ph. D. in Engineering from Graduate School, Waseda University
- 2007 - 2010 Postdoctoral Research Fellow, Scuola Superiore Sant'Anna, Italy
- 2010 - 2012 Project Assistant Professor, Graduate School of Engineering, The University of Tokyo
- 2012- Project Lecturer, Graduate School, The University of Tokyo
- 2015- ImPACT Program Manager
- 2016- Associate Professor, Graduate School, The University of Tokyo

Profile

Spanning research experience at universities, industry, hospitals, and abroad, her unique career has also involved work related medical equipment reviews and standardization. With management experience in international projects concerning machine tools and robots, Prof. Harada aims to return the benefits of research to society at large.

R&D Program Overview

Through the development of a Bionic Humanoid that is an elaborate model of the human body, this program will realize quantitative and ethical research and development, evaluation, education, and training methods together with recreation of skilled techniques, bringing about wide-ranging revolution in industry.

Key Points of Disruptive Innovation

Bionic Humanoids

- Characteristics of the human body will be recreated on the basis of measurements, and the effects and operations conducted on the model will be recorded and evaluated by means of built-in sensors.

Revolution in society will be demonstrated through deployment of the seeds of innovative technology

- Using industrial robot arms as a base, a safe, intelligent, skilled robot that can be used close to people will be developed, providing a successful example of a revolution in medical treatment



- Bring together top world-level researchers in measurements, processing, materials, and robots to break through technical barriers

Potential impact on industry and society

- The quantitative, ethical approach of replacing humans and animals with Bionic Humanoids as test subjects in product evaluation will achieve a wide-ranging revolution in industry
- It will achieve the passing on of evaluation, education, training, and technology in the manufacturing industry, the health care industry, and other sectors where skilled techniques are required.

Manufacturing industry

Medical care

Welfare

Robot learning

Safety evaluation using elaborate models

Passing on skilled techniques and technology (education, training, evaluation)

Skilled precise manipulation

Custom product design

Measurement of characteristics of living organisms, shaping of three-dimensional forms using soft artificial materials, ultra-precise intelligent robot control