

## **Message from the President**

I would like to thank the entire faculty members for their contributions to the annual review 2014 of our university based on their works in research, education and other activities. The annual review 2014 is an important material to release the present status of our university to the outside.

On the other hand, three projects of our university are beginning, that is, 1) Establishing our university as one of super global universities of Japan, 2) Activity of revitalization center, 3) Robot project of Aizu. Based on the achievements explained in this annual review, we would like to conduct the three projects of our university from the fiscal year 2015.

Each of three projects is simply described in the following.

### **Establishing our university as a Super Global University (SGU)**

This project aims to enhance Japan's research and educational competitiveness in higher education by supporting university reforms that promote internationalization and cooperation with top overseas universities. Our proposal of SGU is to create ICT innovators who can and will succeed on the world stage through the three-part concept of Spirit, Technology, Adaptability, that is, spirit for entrepreneurship through innovation, technology with ability to design, develop, and use ICT, and adaptability for international relationship and cooperation.

### **To promote revitalization of Fukushima by establishing an ICT base in Aizu.**

#### **Establishment of the Revitalization Center**

The University of Aizu has been implementing various projects to help in the recovery from the Great East Japan Earthquake. It recently set up a new organization "The University of Aizu Revitalization Center" which will conduct revitalization support activities by utilizing our features as a university specializing in IT for the prefectural government's "Plan for Revitalization in Fukushima Prefecture". This "Master Plan" is the guideline for our revitalization support activities. We will continue our sincere efforts towards revitalization of the prefecture.

**The University of Aizu is determined to contribute to the revitalization of Fukushima Prefecture from damage caused by the Great East Japan Earthquake, through establishment of the University of Aizu Revitalization Center for industrial promotion and creation of job opportunities using ICT\*.**

For that reason, cutting-edge ICT research is conducted at the Center, aiming at creation of new ICT industry. We provide a research environment which is suitable for starting new business, to attract ICT companies to the Aizu region. At the same time, we focus on ICT human resource development to nurture would-be leaders who can play an important role in creation and clustering of industries.

As an organization in Fukushima Prefecture, we make our utmost efforts to overcome Prefecture's serious issues including recovery from the nuclear hazard and conquering of harmful rumors, so that Prefectural citizens can live in safety and comfort.

ICT= Information Communication Technology.

### **Advanced ICT Research Project**

Our goal in this Project is to integrate private sectors' needs with the University's research seeds to initiate creation of new innovative industries. Using external funds from national/local governments for exclusive use in industry-university-government or industry-university research projects, or those from private entities, we conduct cutting-edge ICT research and prototype research, aiming at putting results into future practical use. R&D fields: Development of energy management technologies for a smart city which is expected to enjoy huge expansion, security technologies for in-vehicle devices, automatic diagnostic devices for aging social infrastructure such as roads and bridges using sensors, etc.

### **Innovation Field Project**

In order to cluster and support ICT companies having a public nature and novelty, we provide necessary space for business development and verification studies through this Project. Cloud computing services, data center services and a study environment suitable for innovation creation are available to users. As a place for discussion on innovative ideas, space is provided for use by a wide range of people such as researchers, students, employees from advanced companies and venture enterprises, etc. to meet and exchange information freely. The Center building has a Security War Room for testing of various devices such as car navigation systems,

PCs, mobile phones, smart home electronics, etc.

### **Innovation Management School Project**

The goal of this Project is to nurture ICT human resources who can play a leading role in promoting Fukushima Prefecture's industries.

In order to achieve this goal, we organize practical programs to supplement lectures at the University and/or offer specialized programs for specific purposes. In addition to the programs organized by the Revitalization Center, its facilities are made available to human resource development programs organized by private entities, etc. to widen the range of programs offered at the Center and improve their quality. Examples: Programs to introduce cutting-edge research conducted at partner companies, ICT skills training programs for locals, camp-style training programs on cutting-edge technologies for domestic company employees, etc.

**Jointly with ICT related companies both inside and outside of Japan and companies in Fukushima Prefecture, we conduct research and tests of advanced ICT technology utilizing our expertise.**

We also develop next-generation ICT specialists in the fields of analytics and high-security. From the outcome of this research and human resource development, we are aiming to support the revitalization of Fukushima by creating new internationally-competitive ICT related business models or new industries. We produce technology and human resources for Japan and overseas. The University of Aizu Revitalization Center is aiming to become the center in advanced ICT at a global level.

### **UoA Efforts in Robot Development**

Our purpose is to support of reconstruction and rejuvenation of Hamadori costal region making use of UoA 's strength (ICT) by 1) Contribution to realization of Fukushima international research industry city (Innovation coast) project through collaboration of Hamadori robot valley and Aizu IT valley, and 2) Achievements for development of software for robots, artificial intelligence and a robot prototype model, and 3) Contribution to development of robots practicable for industrial application and on disaster sites.

Current state of robots has its limits, that is, humanoid robots are only performing simple tasks and walking, and moving robots including automatic driving cars have

controlled road environment to move or remote controls by the help of human vision.

On the other hand, core technologies of the UoA for future development issues are 1) real-time vision for constructing moving 3D scene, and 2) algorithms for real-time recognition of complex human gesture instructions captured by a video camera, and etc.

We focus on development from current state of robots such as 1) realizing full automatic handling and moving of robots by capturing a complex scene and its 3D reconstruction, 2) making a bird viewer by a new type of drone, and 3) ground viewer by a new type of robot applicable to disaster sites and agriculture fields etc.

We would like to successfully conduct these three projects and produce academic and industrial outcomes.



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Message from the president Ryuichi Oka  
President