# Research

### Grants-in-Aid for Scientific Research

Identification of missing data mechanisms peculiar to software development data

Development of a Bunraku Robot which can be Operated by One Person

Development of high durable reinforcing method of old embankment for heavy rainfall and earthquake

Estimation of the quantitative effect of sea cultivation aimed at dissapearnce of nutritional insuffiency at shallow water area

A Study of children mobility from the perspective of Children Independent Mobility (CIM) and traffic safety

Experimental study for the general use of silicate-based surface penetrants

Comprehensive research on the application of microsatellite to bachelor's degree education and the development of its evaluation method

A Study on the Creation of Novel Expressions under Wartime Censorship : Focusing on Osamu Dazai

Research on High-reliable Cooperative Operation for Multiple-Mobile-Robot System using Blockchain and Distributed learning

Moduli of representations and related topics (4)

Research on BMI operation screen that can control autonomous wheelchair more freely

Mathematical Deepening of Audio Source Separation Based on Independence and Amplitude/Phase Modeling and Development of Multimodal Hearing-Aid system

Fundamental study of continuous blood pressure measurement using a wearable sensor attached to nail surface

Research to realize a practical satellite development curriculum using a general-purpose satellite model starting from high school students

Investigation of optimum arrangement of small-vertical-axis-wind-turbine clusters with interaction between the pairs and trios of turbines

Formation of double roughness structures on surface of polymer blend film using atmospheric pressure low temperature plasma Application to Smart Machining Systems using Compression of Skill Data for Inheritance of Excellent Technician's Skills

Development of a portable fishway system suitable for the upstream migration of salmon and trout

Semiconductor Device Foundry Achieved at a Nano-tech Platform Established on an Average Science Lab.

Interview dialogue system for augmenting awareness opportunity

Evaluation of astrophysical fusion reaction rates using a microscopic nuclear model

Basic study on recycling method of ITO transparent conductive substrate using pulsed arc discharge

Development of resource recycling artificial geomaterial and application to geohazards prevention measures

Development of assessment methods of both children's independent mobility and safety

Thermocell using redox-active ionic liquid based electrolyte

Development of criteria and decision-making measures for the continuation of local railways

holding a photo exhibition to promote behavioral change toward tiding up through a sense of the extraordinary.

Development of color and sound educational materials for kindergarteners to early elementary school students

Study on optimal energizing conditions of 500 kHz current for apical periodontitis treatment

16 another research study, Number of Research Studies 45, Total Funds 41,176,000Yen

#### Commissioned Research

A Collaboration Project between Mitoyo City and The National Institute of Technology, Kagawa College

In stall at ion test of a portable fishway for the upstream migration of Oncorhynchus keta and Oncorhynchus gorbuscha

2 another research study, Number of Research Studies 4, Total Funds 4,784,742Yen

# Cooperative Research with Private Sector

Feasibility of industrial methane production in the subsurface environment via microbial activities

Development of High-Performance Lead-Acid Batteries

Extraction Technology of Metal from Abandoned Coated Wires

On Share Cyber Security Information

Study of Fluorine Treatment Technology

The development of the convenient device system for water use and disaster mitigation including lowering the water level in the small and middle scale irrigation ponds

Development of RFID antenna at 920MHz band

Study on development of wireless river monitoring system

Study on durability life prediction method of cable conductor/shield wire for moving parts.

A Study on Anomaly Detection by Image Classification Algorithm in Thermal Power Plants

Speech enhancement based on spotforming using multiple microphone arrays

Line joining of SUS304 thin plate using Friction Stir Welding (FSW)

Improved statistical models for assessing children's independent mobility

Efficiency Improvement of Semi-Solid Slurry Generation Equipment

The analytical investigation against downstream area of flood at caused by pond's dike failur

Development of active phased array antenna using printing technology on stratospheric balloon surface

Analysis and decomposition of audio mixtures utilizing spatial information

12 another research studies, Number of Research Studies 30, Total Funds 9,156,000Yen

# $\diamondsuit$ Other Competitive Funds and Grants

Development of technology to realize a highly profitable cultivation system in horticulture facilities

Wide-band AC Servo System Based on Discrete-state Feedback Considering Control Delay of PWM Inverter

Wide-band AC Servo System Based on Based on Discrete-state Feedback Considering Local Linearization and Successive Discretization

2 another research studies, Number of Research Studies 5, Total Funds 3,862,000Yer