CERD Efforts and Activities

**Research**

We have the goal of building community disaster management system that places the highest priority on saving lives. In preparation for complex, high-consequence disasters, it combines features of advanced disaster science, information technology, and citizen science. To protect residents from natural disasters, residents themselves must gain accurate knowledge of the risks that exist in their particular living environment and develop preparedness measures to apply in their day-to-day lives.

**Education**

We offer the Community and Disaster Management General Education Program to both OCU students and members of the community. All these offerings are organized mainly by members of CERD, a cross-sectoral organization, in order to provide both theoretical and practical training. One feature of our various programs is the active learning style of education which enables all to learn practical disaster management in a real community and not simply the knowledge required for community disaster management.

**Social Cooperation**

We conduct community contribution activities in various ways so that knowledge on disasters and disaster prevention can be used for the disaster prevention activities in communities. The achievements record and information shared through this program will be reported in the Community Disaster Management Forum, a presentation of the results. These activities will encourage an exchange of opinion regarding future challenges. Researchers as lecturers are delivering classes to elementary and junior high schools, etc., and lectures at various places are also carried out.
Yoshinori KANJO
Graduate School of Engineering
Water and Wastewater Engineering

Hiroaki KITO
Graduate School of Engineering
Hybrid Structure

Yoshinari KIMURA
Graduate School of Literature and Human Sciences
Geographic Information Science

Takasaki SHIGEMATSU
Graduate School of Engineering
River and Coastal Engineering

Hideya TAKAHASHI
Graduate School of Engineering
Information System Engineering

Tomohito TAKUBO
Graduate School of Engineering
Robotics

Atsushi TAKIZAWA
Graduate School of Engineering
Human Life Science

Yoshiya TANIGUCHI
Graduate School of Engineering
Structural Engineering for Architecture

Hisao TSUNOKAKE
Graduate School of Engineering
Concrete Structure

Sota NAKAJO
Graduate School of Engineering
Coastal Engineering, Hydraulics

Minako NABESHIMA
Graduate School of Engineering
Architectural Informatics

Tatsuya NEMOTO
Graduate School of Engineering
Geomatics

Tsuyoshi HAGUCHI
Graduate School of Engineering
Geology

Shinji MASUMOTO
Graduate School of Engineering
Geomatics

Satoshi Mizutani
Graduate School of Engineering
Waste Management

Muneki MITAMURA
Graduate School of Engineering
Urban Geology

Daisuke YOSHIDA
Graduate School of Engineering
Geomatics

Susumu YOSHINAKA
Graduate School of Engineering
Structural Engineering for Architecture

Takashi YAMAGUCHI
Graduate School of Engineering
Bridge Engineering, Steel Structure

Go YONEZAWA
Graduate School of Engineering
Area Informatics

Venkatesh RAGHAVAN
Graduate School of Engineering
Geomatics and Remote Sensing

Tsunugumi YAMANAKA
Graduate School of Engineering
Human Life Science

Research Fellow

Takuya SATO

Research on GIS and Remote Sensing technologies for spatial data acquisition, visualization, analysis and sharing and their applications for disaster management

Nagahiro YOSHIDA
Graduate School of Engineering
Infrastructure Planning and Transportation Engineering

Toru ENDO
Graduate School of Engineering
Aquatic Environmental Engineering

Akihiko OSHIMA
Graduate School of Engineering
Geotechnical Engineering

Hisao TSUNOKAKE
Graduate School of Engineering
Concrete Structure

Research on disasters such as earthquakes, tsunami, slope collapse. Study on rise and fall of ancient civilizations and environmental change. Earthquake, tsunami, slope, ancient civilizations, environmental change.

Shinji MASUMOTO
Graduate School of Engineering
Geomatics

Development of three-dimensional geological modeling system based on the logical model of geological structure and its application using geographic information system. 3D geological model, geographic information system.

Takasaki SHIGEMATSU
Graduate School of Engineering
River and Coastal Engineering

Development of tsunami evacuation shelter and research on tsunami by river water, inundation inside levees, and inundation propagation characteristics in the underground space using finite element simulation. Combined water disasters, Evacuation planning, evacuation simulation, multipurpose, mathematical programming, fastest flow model.

Muneki MITAMURA
Graduate School of Engineering
Urban Geology


Daisuke YOSHIDA
Graduate School of Engineering
Geomatics


Go YONEZAWA
Graduate School of Engineering
Area Informatics

Research on spatiotemporal analysis using urban geographic data of Vietnam for disaster management.
Disaster Nursing

Kazunobu OKAZAKI
Research Center for Urban Health and Sports
Health and sports science


Yuko HIRATANI
Graduate School of Engineering
Disaster Nursing
disaster, survivor, education, self-care

Study on small size robots that can enter various irregular areas and can be controlled by users. In the project, I am considering portable robots that will help the victim evacuate to a place of refuge with their own efforts. Moving robot, Portable size, Irregular area

Megumi KAWAHARA
Graduate School of Nursing
Cancer / Acute Nursing Science
Disaster Nursing
disaster, survivor, education, self-care

Research on child health care nursing and family health care nursing

Yoko TAKADA
Graduate School of Engineering
Robotics

Study on small size robots that can enter various irregular areas and can be controlled by users. In the project, I am considering portable robots that will help the victim evacuate to a place of refuge with their own efforts. Moving robot, Portable size, Irregular area

Tetsuo TSUJIJO
Graduate School of Nursing
Communication Engineering

His research interests include prioritizing and leading techniques of visual information processing in disaster environment. To be more useful in disasters, to be indispensable in ordinary situations is important.

Shigeyoshi NAKAJIMA
Graduate School of Engineering
Information Processing

Training a human using surveillance cameras in disaster environment for human identification, human tracking, image processing and cracks in buildings

Michio MIYANO
Graduate School of Nursing
Safety Engineering of Housing, Regional Disaster Prevention

He conduct research on related disaster such as earthquakes and flood and danger and daily accidents causing injury and outside the house, among to involve a safe and controllable living environment. Specifically, he is conducting research on evacuation behavior in case of disaster and mechanisms of human casualty in living reconstruction, and refugee

Hiromasa YAMAMOTO
Graduate School of Medicine
Emergency and Disaster Medicine

Assessment of the manageability of the medical system under disaster and production of guidelines and disaster prevention. Development of educational contents for disaster medicine to improve medical students.

Hisayo YOKOYAMA
Research Center for Urban Health and Sports
Endocrinology and metabolism, Exercise therapy


Kazuyuki KONAGAYA
Graduate School of Urban Management
Town Management, Regional Regeneration, Urban Economics

Economic and Management Analysis on Urban Planning, Town Management Problems

Yoshiyuki FUKUSHIMA
Graduate School of Literature and Human Sciences
Communication and Interaction, Interaction analysis

From the point of view of interaction, the study is conducted in the field of interaction, learning and their learning, and the communication of facts about interaction in the field of disaster management. Disaster management threats. Interaction, Social interaction, Interaction ability, "HICM" (High Impact Communication Model)

Kazuhiko MORI
Graduate School of Literature and Human Sciences
Architectural Planning, Well-being Environment Design

Research on Community Planning with Disaster Education – Community Place and Social Capital Recovery. Disaster Prevention Culture, Education for Disaster prevention, Community Activity, Social Capital

Shigeki SAKAGAMI
Graduate School of Economics
History of industrial technology

History of power technology, Internal combustion engine, Steam engine, Steam turbine, Gas turbine. Technical history of accidents. Internal combustion engine, Diesel engine, Automobile, Steam engine, Steam turbine

Haruo SOEDA
Graduate School of Literature and Human Sciences
Disaster reduction learning in extracurricular activities introduced in formal school curriculum. disaster reduction learning, extracurricular activities, schools

Kazuhiko MORI
Graduate School of Literature and Human Sciences
Architectural Planning, Well-being Environment Design

Research on Community Planning with Disaster Education – Community Place and Social Capital Recovery. Disaster Prevention Culture, Education for Disaster prevention, Community Activity, Social Capital

Yukari MURAKAWA
Graduate School of Nursing
Cancer / Acute Nursing Science
Disaster Nursing
disaster, survivor, education, self-care

A study on strengthening local ability of disaster prevention by the relationships. relationship, local ability of disaster prevention, locals

Nagashima HARA
Ph.D. in Medicine

Research Fellow
Takayuki UEDA
A study on excessive technology and educational implementation for people with disabilities and elderly people

Kazuyo KOJIMA
Disaster Management for Community

Yosuke YAMAMOTO
Community development, Earthquake-related social disaster

Yutaka SUGIMOTO
Neighborhood environment attributes of social and outdoor living

Kazuyuki KONAGAYA
Graduate School of Urban Management
Town Management, Regional Regeneration, Urban Economics

Evaluation of effects of disaster education, Development of educational program of disaster reduction for community residents. Learning, dopant conditioning, choice, disaster education, disaster training
**CERD Organization**

**Director:** Muneki MITAMURA

---

### [Unit I] Disaster Risk

**Unit Leader:** Nagahiro YOSHIDA

**Regional Information and Risk Management**

- Unit Leader: Daiisuke YOSHIDA
- Venkatash RAGHAVAN: Akihiro OSHIMA
- Daiisuke YOSHIDA: Suguru YAMADA
- Go YONEZAWA: Muneki MITAMURA
- Yoshinari KIMURA: Shinji MASUMOTO
- Yoshikazu SETO: Tatsuyoshi HARAUCHI
- Akimasa TAKEAKA: Tatsuya NEMOTO
- Takuya SATO: Koichi NAKAGAWA

**Risk of Urban Infrastructure Management**

- Unit Leader: Susumu YOSHINAKA
- Yoshiya TANIGUCHI: Yosuke KANO
- Hiroaki KITOH: Satoshi MIYUZAKI
- Takashi YAMAGUCHI: Hiroki NAKAGAWA
- Hisao TSUJIOKA: Toshiro ENDO
- Tomohiko TAKUBO: Tomohiro YAMASHITA
- Susumu YOSHINAKA: Tatsuya NEMOTO
- Tsugumichi WATANABE: Takayuki NISHIKAWA

**Evacuation behavior Management**

- Unit Leader: Sota NAKAJO
- Hideya TAKAHASHI: Nagahiro YOSHIDA
- Atsushi TAKAWA: Takaoaki SHIGEMATSU
- Nakajiro TAKA

---

### [Unit II] Disaster Preparation

**Unit Leader:** Hitoshi WATANABE

**Promotion of Medical treatment in Disaster**

- Unit Leader: Hiromasa YAMAMOTO
- UNIT SUB LEADER: Kazuyuki KONAGAYA
- Akira OGIWA: Yosuke YAMAGUCHI
- Kazuaki OKAZAKI: Hisanori KOJIMA
- Hisayoshi YOKOYAMA: Tomoko SHIGAKI
- Tadao IMI: Hideki YAMADA
- Yuko NAKAGAWA: Kazuya KOJIMA
- Eiichi IKUTA: Seiji KAKIYAMA

**Physical fitness and Evacuation support**

- Unit Leader: Daiki IMI
- Hidemasa WATANABE: Yoshiya YOKOYAMA
- Akira OGIWA: Yosuke YAMAGUCHI
- Kazuaki OKAZAKI: Hisanori KOJIMA
- Hisayoshi YOKOYAMA: Tomoko SHIGAKI
- Tadao IMI: Hideki YAMADA
- Yuko NAKAGAWA: Kazuya KOJIMA
- Eiichi IKUTA: Seiji KAKIYAMA

**Welfare assistance in Disaster**

- Unit Leader: Yasuyuki NAKAGAWA
- Yasuyuki NAKAGAWA: Hong Gyu JEDON

---

### [Unit III] Social Implementation Management

**Research Theme:** The Social Implementation of Disaster Management Education, To improve the comprehensive disaster management capabilities of the local community

**Key Words:** Coordination for improvement on the disaster management capabilities of the community through good relations with one’s neighbors in normal times”, “The activity of the Sumiyoshi Act Company, a community theater group in collaboration with local residents”

---

[Research Theme]

**Promotion of understanding of natural phenomena and Utilization for disaster management, Technical development on disaster management**

**Key Words:** Risk, Spatiotemporal analysis, Innovation

**Research Project:** "Study on coastal water hazard", “Research on ensuring safety of buildings”, “Study on earthquake motions and liquefaction of ground”, “Study on spatiotemporal analysis for efficient evacuation”, “Research on evacuation support technology”

---

[Research Theme]

**To improve disaster management capabilities through self-help and mutual aid**

**Key Words:** Safety and Relief, Health and Physical fitness, Usual and Daily life

**Research Project:** “The medical care in a disaster and health issues at shelters”, “The skills and the physical strengths required in an evacuation”, “The shelters giving welfare consideration”, “Use of information and telecommunications technologies in a disaster”

---

For inquiries about research or joint-research possibilities, please contact the GLOBAL EXCHANGE OFFICE

**Contact us**

- [Contact us](http://www.cerd.osaka-cu.ac.jp)
- [office@cerd.osaka-cu.ac.jp](mailto:office@cerd.osaka-cu.ac.jp)

---

**CERD**

Center of Disaster Research and Education

**Social Cooperation**

**Director:** Hiroaki KITOH

---

**Research Project**

"Reality, Persistence, Collaboration"