



**Disaster Prevention Panels Using Art Are To Be Installed on the Wall of the Kyoto University
Ujigawa Open Laboratory along the Keihan Line,**

Kyoto University, Keihan Railway, and Toppan Printing will launch a continuous trial to raise people's awareness of disaster prevention.

14 February 2023

Kyoto University, Disaster Prevention Research Institute, Research Center for Disaster Reduction Systems (Director: Professor Mitsunori Hatayama), Disaster Prevention Research Institute, Ujigawa Open Laboratory (Director: Professor Kenji Kawaike), and Disaster Prevention Research Institute, Art Innovation Industry-University Joint Research Division (Director: Professor Naoko Tosa), Keihan Electric Railway Co., Ltd. (Chuo-ku, Osaka, President: Yoshihiro Hirakawa), and Toppan Printing Co. (Bunkyo-ku, Tokyo, President: Hideharu Maro) will jointly install a disaster prevention panel and an AR tsunami video, that expresses the tsunami with art, on the wall of the Ujigawa Open Laboratory facing the Keihan Main Line. This is to raise people's awareness of disaster prevention in their daily lives. As a memorial for March 11 (the day of the Great East Japan Earthquake), we will be operating a Keihan Railway AD train of 7 cars for a week from March 6 (Monday) to March 12 (Sunday). We also plan to start disaster prevention initiatives hereafter jointly.

We will hold a press conference as follows, so please join us.

Pre-registration is **required** for this press conference.

- Application deadline: Friday 24 February, 18:00
- Participation application form (please apply using the barcode on the right):



Date and time: Monday 27 February 2023, 15:30–16:30

(EMBARGOED until 27 February 15:30)

Venue: Ban Memorial Building, Kyoto University Main Campus

Disaster Prevention Research Institute, Research Center for Disaster Reduction Systems, Art Innovation Industry-Academia Joint Research Division (Toppan Printing)

Access Map: No. 41 of the below map

http://www.kyoto-u.ac.jp/ja/access/campus/yoshida/map6r_y/

Online participation via ZOOM is also possible.

Presenters:

Prof. Eiichi Nakakita, Director of Disaster Prevention Research Institute, Kyoto University

Prof. Mitsunori Hatayama, Director, Research Center for Disaster Reduction Systems, Disaster Prevention Research Institute, Kyoto University

Prof. Naoko Tosa, Disaster Prevention Research Institute, Kyoto University

Contact information

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Project Overview

The Disaster Prevention Research Institute of Kyoto University is researching disaster prevention, targeting disasters such as earthquakes, tsunamis, and floods that frequently hit Japan. At the same time, we are conducting activities to raise people's awareness of disaster prevention. Photos and Videos of disasters are usually used to emphasize the importance of disaster prevention, but some problems tend to cause trauma to people who experienced disasters. As a new attempt to address this, we have started art-based activities. Since art has a solid power to appeal to people's minds, artistically expressing disasters is expected to raise awareness of disaster prevention without causing trauma. Naoko Tosa, an artist and professor at the Disaster Prevention Research Institute, created disaster prevention panels using art created from the sound of a tsunami. In addition, with the cooperation of Toppan Printing, we have developed a technology that displays an art image of the tsunami on a smartphone by reading the AR code on the signboard using AR (see Note). We plan to use these to raise people's awareness of disaster prevention.

Keihan Electric Railway Co., Ltd. has experienced significant damage from natural disasters. As a railway company that puts the safety of passengers first, it is essential to raise awareness of disaster prevention among passengers and people living along the railway line.

As Toppan Printing agrees with Prof. Tosa's desire to use art to bring about innovation in people's lives and society, we have been conducting joint research, such as utilizing it for human resource development.

Production and installation of disaster prevention panels using art

The images and videos of the tsunami used for the disaster prevention panels were created using Professor Tosa's "Sound of Ikebana" video art production method. The "Sound of Ikebana" is a video art filmed with a high-speed camera at 2000 frames per second. It is an art based on natural phenomena, generating organic and beautiful shapes that computer graphics cannot express.

This time, she used the sound of a simulated tsunami generated using a tsunami simulator at the Kyoto University, Disaster Prevention Research Institute Ujigawa, Open Laboratory to create an art video expressing a tsunami using the "Sound of Ikebana" technique. Two representative images were used to develop two disaster prevention panels with the size of 5m (length) and 5m (width) with the cooperation of Toppan Printing. At the same time, she created an AR panel using AR code, the AR technology of Toppan Printing, so that people can see the art video. If people install an app called "ARreader" on their smartphones in advance and hold it up to the code on the panel, a video showing the tsunami as the art will be displayed on their smartphones.

We have temporarily installed these three types of panels on the wall of the Ujigawa Open Laboratory and are currently conducting tests to check whether the disaster prevention signs are visible to Keihan train passengers and whether the AR codes can be precisely read from inside the train. We plan to start full-scale operation on March 11, the Great East Japan Earthquake date. In conjunction with this, we also plan to conduct the following.

- Disaster prevention signs and posters announcing disaster prevention efforts will be posted at the Sanjo, Gion Shijo, and Chushojima stations of Keihan Railway.
- Disaster prevention signboards and suspended posters appealing to disaster prevention efforts will be put up on the seven cars of the Keihan AD train.



For future disaster prevention

As long as the Kyoto University Disaster Prevention Research Institute exists, we should focus on making people aware of our efforts in disaster prevention research and raising people's awareness of disaster prevention. Taking this initiative as an opportunity, the Disaster Prevention Research Institute of Kyoto University will continue working with Keihan Electric Railway Co., Ltd. to raise people's awareness of disaster prevention. Specifically, the Disaster Prevention Research Institute has set up several days for the general public to visit the Ujigawa Open Laboratory. We are planning to increase opportunities for people to know our activities. In addition, Keihan Electric Railway Co., Ltd. is planning to cooperate in publicizing the event by installing posters at significant stations to promote the event.

The code on the right will start a video of a scene showing the panels at the wall of the Kyoto University, Disaster Prevention Research Institute, Ujigawa Open Laboratory, which can be seen between Chushojima and Yodo Stations on the Keihan Railway, →



The code on the right will start a video of the artistic tsunami that can be seen by launching the app and holding it over the AR marker →



There's a landscape we don't want you to encounter in your life...

京都大学 防災研究所 宇治川オープンラボラトリー

大地震 津波だ 高台へ!

Beautiful but Scary...

What landscape is this? Let's take a look at the "AR Tsunami"!

① Download App ② Launch the Areader app ③ Hold the camera over the AR code from the train window

Osaka bound: **left** window Kyoto bound: **Right** window

Organized by Disaster Prevention Research Institute, Kyoto University In cooperation with Keihan Electric Railway Company and Toppan Printing Co.