

## PROGRAM

### The 2nd International Symposium on Design of Artificial Environments

ACROS FUKUOKA, Japan ( International Conference Hall and Room 606)

Date		A.M.	P.M.	
<b>November 29 (Thursday)</b>		10:00-10:15 <b>Opening Ceremony</b> 10:15-12:30 <b>Thermal Environment</b>	14:00-15:30 <b>Physiological Evaluation</b>	16:00-18:15 <b>Environment for the Elderly</b>
<b>November 30 (Friday)</b>	<b>Room A</b>	9:30-12:30 <b>Acoustic Environment</b>	14:00-18:00 <b>Auditory Communication</b>	
	<b>Room B (Room 606)</b>	9:30-12:30 <b>Environmental Design</b>	14:00-18:00 <b>Light Environment</b>	
<b>December 1 (Saturday)</b>		9:30-11:45 <b>Information Design</b>	13:15-15:45 <b>Psychological Evaluation</b>	16:15-17:15 <b>Bathing Environment</b>

**Keynote speech** (40min presentation+5min discussion), “**Environment for the Elderly**” (25min+5min), **Others** (10min+5min)

November 29 (Thursday) A.M.

**10:00-10:15 Opening Ceremony**

**10:15-12:30 Thermal Environment**

Chairpersons: Ingvar Holmér and Shinichi Sawada

Risk assessment for cold work  
*Ingvar Holmér (Keynote speech)*

Heat adaptation of tropic-dwelling people  
Mohamed Saat Ismail and Yutaka Tochihara

Evaluation of thermal sensation during elementary school swimming class -Effects of the environment, children’s physical characteristics and swimwear condition-  
Hitoshi Wakabayashi, Seiji Arai, Yasuo Sengoku, Koichi Kaneda, Takeo Nomura and Yutaka Tochihara

Effects of vascular endothelial function on cold tolerance in human  
Takafumi Maeda, Tetsuhito Fukushima, Keita Ishibashi, Shigekazu Higuchi, Masashi Kuramae and Shintaro Yokoyama

The need for international collaboration on occupational thermal stress assessment among Asian countries  
Shin-ichi Sawada

Regional differences in human thermal comfort limit  
Takako Fukazawa, Yutaka Tochihara and George Havenith

Thermal physiological and psychological prediction system based on thermoregulation model expressing local characteristics of each segment  
Shintaro Yokoyama, Takahumi Maeda and Masashi Kuramae

**12:30-14:00 Lunch**

November 29 (Thursday) P.M.

**14:00-15:30 Physiological Evaluation**

Chairpersons: Jin-Hun Sohn and Shozo Tobimatsu

Low frequency noise and its psychological effects

*Jin-Hun Sohn, Jin Sup Eom, Ae-ran Kwon, Sook-Hee Kim and Sung Soo Jung (Keynote speech)*

Post-stress recovery effect of the nature-videos on EEG activity of Type A behavior pattern  
Shigeki Watanuki and Jeong-Mi Lee

How to record and measure responses of brain to pleasant and unpleasant visual stimuli  
Shozo Tobimatsu, Emi Yamada, Takao Yamasaki and Katsuya Ogata

Modulation of sensory inputs from inflamed region to the primary sensory cortex  
Megumu Yoshimura, Kohei Koga and Hidemasa Furue

**15:30-16:00 Break**

November 29 (Thursday) P.M.

**16:00-18:15 Environment for the Elderly**

Chairpersons: Ken Parsons and Ken Sagawa

Standards for physical environments occupied by elderly people  
*Ken Parsons (Keynote speech)*

Acoustic environment design for older people  
Kenji Kurakata and Hiroshi Sato

Vision and lighting environment for older people and people with low vision  
Ken Sagawa and Nana Itoh

Thermal evaluation based on the thermal sensations of young and old persons in moderate thermal environments  
Kazuyo Tsuzuki, Toshihiko Ohfuku, Kazue Mizuno, Toshie Iwata and Tomonori Sakoi

November 30 (Friday) A A.M.

**Room A**

**9:30-12:30 Acoustic Environment**

Chairpersons: Gil-Soo Jang and Shin-ichiro Iwamiya

The psychological effect of visual and auditory stimuli on the road traffic noise perception  
*Gil-Soo Jang, Hoon Shin, Min-Jeong Song and Chan Kook (Keynote speech)*

Acoustic model of porous material for FDTD method  
Hisaharu Suzuki, Akira Omoto and Kyoji Fujiwara

Measurement, evaluation and control of sound field in enclosures  
Akira Omoto

Noise reduction efficiency of an air duct composed of acoustically soft and absorbent boundaries  
Kyoji Fujiwara and Yasuaki Kawase

Subjective congruence between moving picture and sound  
Shin-ichiro Iwamiya

The effect of music on the fear emotion in a survival-horror video game  
Masashi Yamada

Acoustic environment problems at temporary houses for victims of the Mid-Niigata Earthquake  
Koji Nagahata, Norio Suzuki, Megumi Sakamoto, Fuminori Tanba, Shin-ya Kaneko and Tetsuhito Fukushima

The effect of BGM from shops on the adequate sound levels for acoustic signs for visually impaired  
Katsuya Yamauchi, Koji Nagahata, Mari Ueda and Shin-ichiro Iwamiya

Auditory event perception in environments: Sound-producing events and Japanese onomatopoeic representation  
Nozomu Fujisawa, Masayuki Takada and Shin-ichiro Iwamiya

Questionnaire survey on vehicle horn use  
Masayuki Takada, Yoko Fukuda and Shin-ichiro Iwamiya

**12:30-14:00 Lunch**

November 30 (Friday) A P.M.

**Room A**

**14:00-18:00 Auditory Communication** Chairpersons: Valter Ciocca and Yoshitaka Nakajima

Principal component analyses of critical-band-filtered speech  
Kazuo Ueda and Yoshitaka Nakajima

A computational approach to the perception of syllables  
Yoshitaka Nakajima and Kazuo Ueda

Robot Audition – towards real-world computational auditory scene analysis –  
Kazuhiro Nakadai

Auditory event-related brain potentials to short temporal gaps: A developmental study  
Sachiko Koyama, Hidehiko Matsumoto, Kota Arai, Atsuhito Toyomaki, Takashi Morotomi and Hiroshige Takeichi

Measurement of tinnitus using interactive evolutionary computation  
Kimio Shiraishi, Yoshihiro Kanazawa, Mutsumi Saitoh, Hideyuki Takagi and Toshifumi Sakata

Sound edges as independent perceptual units  
Gerard B. Remijn, Hiroyuki Ito, Elvira Pérez and Yoshitaka Nakajima

Ungrammatical patterns should be resolved  
Elvira Pérez and Yoshitaka Nakajima

**15:45-16:15 Break**

Classic illusions of auditory time perception  
*Gert ten Hoopen (Keynote speech)*

Music sound restoration and the judgment of noise position in simple piano sequences  
Takayuki Sasaki

The development of the ability to perceive melodies in a noisy environment  
*Valter Ciocca and Fong Chung Yan, Patricia (Keynote speech)*

November 30 (Friday) B A.M.

**Room B**

**9:30-12:30 Environmental Design**

Chairpersons: Stephen R. Lord and Satoshi Muraki

Physiological approach to a desirable gradient of slope for individuals using wheeled technical aids  
Satoshi Muraki and Seiji Saito

The effects of different floor coverings on stepping-over movements in the elderly  
Seiji Saito and Satoshi Muraki

Design proposal for the aged person's medical welfare facilities using alternative prefabrication system  
"Furnished FLOP", part 1  
Toshikazu Ishida and Hiroaki Suetsugu

Design proposal for the aged person's medical welfare facilities using alternative prefabrication system  
"Furnished FLOP", part 2  
Hiroaki Suetsugu and Toshikazu Ishida

Falls in older people at home: risk factors and intervention strategies  
*Stephen R. Lord, Catherine Sherrington and Hylton B. Menz (Keynote speech)*

Research on a design evaluation and assessment system from the perspective of the relationship between  
good design and universal design  
Yoshitsugu Morita

Developing universal design product from users' perspectives - case study: a vehicle design in Japan  
Nermin Elokla, Yoshitsugu Morita, Yasuyuki Hirai and Aya Oshima

A study of usability methodologies  
Yasuyuki Hirai, Yoshitsugu Morita and Nermin Elokla

User participatory approach to urban/office environment design  
Atsue Takeoka

**12:30-14:00 Lunch**

November 30 (Friday) B P.M.

**Room B**

**14:00-18:00 Light Environment**

Chairpersons: Steven W. Lockley, Akira Yasukouchi and Naoyuki Oi

Spectral sensitivity of circadian, neuroendocrine and neurobehavioral effects of light  
*Steven W. Lockley (Keynote speech)*

Effects of lighting and personality trait on gastric functions  
Tetsuo Katsuura, Xinqin Jin, Yoshihiro Shimomura and Koichi Iwanaga

Evaluation of night time light based on action spectrum for melatonin regulation  
Toshie Iwata, Daisuke Itoh and Etsuko Mochizuki

Lighting design to maintain healthy sleep habits

Hiroki Noguchi, Naohiro Toda, Toshihiko Sakaguchi, Tomoaki Kozaki, Shota Koga and Akira Yasukouchi

Preferred combinations between illuminance and color temperature in several settings for daily living activities

Naoyuki Oi

**15:45-16:15 Break**

Effects of pre-sleep exposure to 5000 lux light and 15 degree Celsius ambient temperature on melatonin secretion, rectal temperature, and heart rate variability at night

Keita Ishibashi, Tomoaki Kozaki, Satoshi Arikura, Shigekazu Higuchi and Akira Yasukouchi

The effects of illuminance of fluorescent lamp on body temperature regulation at nighttime

Akira Yasukouchi, Satoshi Arikura, Keita Ishibashi and Tomoaki Kozaki

Effect of brightness contrast between a computer display and background on salivary melatonin concentration

Shigekazu Higuchi

Impact that illuminance has on vision of the elderly people

Michiko Iwata

Quantitative analysis of visual impression of activity in lighting environment based on luminance distribution data

Taiichiro Ishida and Hidehiro Yamaji

Performances in visual search for simulated dichromats' displays

Shoji Sunaga and Yukio Yamashita

Color correction of digital color images to produce acceptable color appearance under color adaptations by various illuminants

Yukio Yamashita, Shigekazu Kanda and Shoji Sunaga

December 1 (Saturday) \_\_\_\_\_ A.M.

**9:30-11:45 Information Design**

Chairpersons: Keiichi Sato and Hideyuki Takagi

Socio-cultural factors for new product acceptance in home environment design

*Keiichi Sato, Kyung-Ran Choi and Jung-Min Choi (Keynote speech)*

Directing the emotions of video movie viewers using interactive evolutionary computation based on physiological data

Hideyuki Takagi

Examination for the practical use of screen presentation systems and VR teaching material

Norio Setozaki and Takashi Takeda

3D virtual environment design based on interactive evolutionary computation

Hiroaki Nishino

The pioneering role of media art in interaction design: the OLE coordinate system and the freqtric project

Kiyoshi Tomimatsu, Jun Fujiki and Tetsuaki Baba

CG animation for the safety in transfer movements to bathtub of wheelchair-bound persons

Jiyoung Choi, Yutaka Tochiwara and Etsuo Genda

A study on the digital archiving of a traditional Cambodian dances  
Etsuo Genda and Jiyoung Choi

**11:45-13:15 Lunch**

December 1 (Saturday) P.M.

**13:15-15:45 Psychological Evaluation**

Chairpersons: Peter Howell and Hiroyuki Ito

Effect of speaking environment on speech production and perception  
*Peter Howell (Keynote speech)*

Assessment of speech comprehension by a random probing technique  
Hirosige Takeichi and Sachiko Koyama

Neural correlates of asymmetrical auditory temporal assimilation  
Takako Saito, Yoshitaka Nakajima, Gerard B. Remijn, Yoshinobu Goto and Shozo Tobimatsu

Perceptual filling-in at the blind spot  
Yukyu Araragi

Perceptual shape change in afterimages  
Hiroyuki Ito

Non-linear integration of binocular disparity and motion parallax  
Sachio Nakamizo, Masayuki Sato, Hidehiro Miyayashiki and Michiaki Kondo

Effects of spatial frequency on recognition of facial expressions: An ERP study  
Taisuke Nakashima, Takao Yamasaki, Yoshinobu Goto, Kunihiro Kaneko and Shozo Tobimatsu

Evaluation of expertise perception in sport  
Shuji Mori and Yasuhiro Seya

**15:45-16:15 Break**

December 1 (Saturday) P.M.

**16:15-17:15 Bathing Environment**

Chairpersons: Gert ten Hoopen and Yutaka Tochiara

The Japanese bathing style: Its merits and demerits  
Yutaka Tochiara

The effects of bathing time and thermal conditions on physiological and psychological responses during bathing  
Hiroko Kubo, Kanako Masuno, Akiko Fukui, Miwa Tsumoto and Yasuko Yagi

Effects of water and air temperatures on physiological and psychological responses while bathing  
Hikaru Koshimizu, Youichirou Ichianagi and Yutaka Tochiara

Effects of humidity and air velocity on physiological and subjective responses after bathing  
Nobuko Hashiguchi and Yutaka Tochiara