

## Ergonomics in Design for All/ Newsletter

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Dear Members and Friends of the International Ergonomics Association (IEA),  
Ergonomics in Design for All Technical Committee,  
**Welcome to our third year and eleventh newsletter!**

I wish you good luck with your work,  
**Isabella T. Steffan**  
IEA Ergonomics in Design for All TC  
Chairperson

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## CONGRESSES AND CONFERENCES

### INTERNATIONAL COMMISSION FOR ILLUMINATION (CIE) QUADRENNIAL CONFERENCE

By Jennifer Long, Visual Ergonomics, Katoomba, *Australia*

The International Commission for Illumination (CIE) held the 29th Quadrennial conference in Washington DC, on the 14-22 June 2019. This included a three-day conference program (17-19 June) as well as Division and Technical meetings for discussing CIE business and the development of lighting-related standards and technical reports.



Portrait Gallery, Washington DC

The conference program included presentations, posters and workshops on a range of topics, including interior lighting, urban lighting, road lighting, and measurement of light and colour. Design-for-all related content included:

- A session “Measuring temporal light modulation and assessing its effects on viewers: Moving towards setting limits”. Presenters described and discussed flicker (particularly from LED) and its effect on people who are sensitive to it.
- Discussion about the non-visual effects of light and circadian function.
- A session “Toward an integrated discomfort glare measure based on the human visual system”. Presenters discussed the difficulties associated with quantifying discomfort glare and speculated about ways to integrate current research into glare models, and how to incorporate glare calculations into the design process for interior lighting installations.

There were also more than 200 poster presentations.

Written conference papers are open access and are available [here](#).

## EVENTS

### THE FIRST INTERNATIONAL CONGRESS TUR4ALL OF ACCESSIBLE CRUISE DESTINATIONS

December 2 and 3, 2019, in Valencia (Spain)

**Aims:** The congress aims to promote the normalization of accessibility in cruise tourism, putting the focus on experiences in destinations for people with disabilities, reduced mobility, families, elderly people and with needs of accessibility in general. It will be a space for reflection on the current situation and awareness for all professionals and actors in the sector. Good practices will also be announced and synergies and networking among professionals in the sector will be promoted. Its main goal is to involve the entities that manage destinations, ports and cruise companies in the creation and marketing of accessible experiences in Spanish and European destinations.

**Speakers:** Francisco Sardón Peláez - President of PREDIF, Marco Pizzio - Head of the Area of Social and Accessible Tourism in the AISM, John Sage - Founder and President of Accessible Travel Solutions, Silvia Longmire - Founder of the blog and travel agency «Spin the Globe», Mirjam Versteegh - Owner of the travel agency «Disabled Accessible Travel», Virginia Lopez Brave - General Director and owner of Cruises News Media Group.



<https://www.congreso.tur4all.com/en/>

## NEWS

### HFES NEW POLICY STATEMENT ON AIRLINE SEATING

In response to Congress request for the Federal Aviation Administration to update standards for passenger seat dimensions, the Human Factors and Ergonomics Society (HFES) has released a new policy statement on airline seating. The current FAA data in use regarding passengers' size and weight is outdated - given the steady increase of airline passengers' dimensions as determined by the United States Army in 2014.

Outdated standards reflect in poor design (contributing to an increased risk of injury), poor fit,

poor emergency evacuation standards, and health threats related to limited space and movement - which are the four key areas HFES focused on, including recommendations on ways to update standards and guidelines according to congressional direction. Kermit Davis, HFES President, supported warmly that the airline industry should factor human characteristics and ergonomics into aircrafts design, aiming for an open and transparent process by FAA to solicit input embracing competent insight from the Society's experts.

To view the complete policy visit this [page](#).

## FOCUS

### A BOOK ON ACCESSIBLE DESIGN RECENTLY PUBLISHED IN JAPAN

by Ken Sagawa, Ergonomics in Design for All, Tsukuba City, Japan

While there are a number of related documents have been published from ISO as international standards or guidelines, such as ISO/IEC Guide 71, there has been no full book on accessibility or accessible design yet that provides theoretical framework, ergonomic data, and practical design methods. Such kind of book has been awaited by designers in industries, educators in schools, and those who like to study accessibility to take into account the needs of older people and people with disabilities in their work.

Though written in Japanese, such a book was recently published in Japan by Ken Sagawa, Kenji Kurakata and Nana Itoh, former or current AIST researchers, from a publisher named NTS (New Technology & Science). As is well known, Japan is as one of the leading countries for promoting accessibility in ISO since the first development of ISO/IEC Guide 71: 2001 organizing an excellent collaborative work of METI(government), ADF(industry), and AIST(research). The book reflects and summarizes those activities of Japan over about 20 years in Japan, and is meaningful to be issued first in Japan.

Starting with a preface addressing intention and structure of it, the book consists of 10 chapters in a total of 250 pages with so many figures/illustrations and tables (about 120 figs and 20 tabs) as follows:

#### **Ch.1 History of design for older people and people with disabilities**

describes the diversity of the world and introduces several design concepts (normalization, barrier-free design, universal design, design for all, inclusive design, trans-generational design, accessible design) which take care of older people and people with disabilities.

#### **Ch.2 Basic concept and methods for accessible design**

describes basic concept of accessible design being



Figure 1 Cover page of "Accessible design"

Accessible design - Human centered design taking account of sensory and cognitive abilities of older people and people with disabilities - NTS Inc. Tokyo 2019.

based on ISO/IEC Guide 71, and gives a theoretical framework of two major design strategies (multiple means of information presentation and operation, ergonomic design to meet human abilities) and some theoretical issues related accessibility such as usability.

#### **Ch.3 Daily inconveniences of older people and people with disabilities**

describes various inconveniences that older people and people with disabilities have in their daily life as a starting point to consider accessible design.

**Ch.4 Multiple means of information presentation and operation**

describes what is multiple means of information presentation and operation as one of the basic and important design strategies providing many practical examples. Various types of multiple means, i.e. among different sensory abilities or different modalities within one sensation.

**Ch.5 Visual abilities and design methods****Ch.6 Hearing abilities and design methods****Ch.7 Tactile abilities and design methods****Ch.8 Cognitive abilities and design methods**

Chapters from 5 to 8 provides ergonomic data and related design methods for each of human sensory abilities such as vision, hearing, tactile sense, and for cognitive abilities useful for accessible design. A large scale of human data for older people and people with sensory disabilities mostly taken at AIST, Japan are included with their meanings and applications to accessible design.

**Ch.9 Standardization and promotion**

describes a history of collaborative work of government (Japanese industrial standards

committee, JISC), industry (Accessible design foundation of Japan, ADF) and research organization (AIST) for standardization of accessible design, international or domestic. Activities lead by JISC in ISO are described with a focus on TC159 Ergonomics, TC173 Assistive devices, and TC122 Packaging .

**Ch.10 Design guidelines for accessible design**

summarizes the book into a set of design guidelines for readers to quickly get some guidance or hints for their own design fields how to take into account their special needs of older people and people with disabilities. Guidelines are given for each type of sensory disabilities (vision, hearing) and cognitive disabilities as well as for older people.

It should be noted that physical abilities such as body size, strength and movement and related design issues are not covered in this book. The book is written all in Japanese and be available from NTS Co. Ltd (<http://www.nts-book.co.jp>).

Promoting Ergonomics in Design for All is a core activity of our EinDfA TC.  
You can find information about objectives, domains of interest, members of the TC here:  
<http://www.iea.cc/about/technical.php?id=56d641e4ddc48>

11/2019 - If you no longer wish to receive these emails, contact us for unsubscribe: [info@studiosteffan.it](mailto:info@studiosteffan.it)