EinDfA TC NEWS #10/2019

Dear members and friends of the International Ergonomics Association (IEA),
Ergonomics in Design for All Technical Committee,
Welcome to our third year and tenth newsletter!

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

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

CONGRESSES AND CONFERENCES

THE SLIPS, TRIPS AND FALLS CONFERENCE, FEBRUARY 13th -14th 2020, IN MADRID (SPAIN).
https://www.stfmadrid2020.com/. The call for papers is open.

Topics: Falls prevention, The role of Architectural Design, Analysing accidents and determining the causes of falls, Human & Behavioural Factors, Ageing, Ergonomics, rehabilitation and assistance products, Measurement Principles and Technology, Cleaning, Footwear, National and International Safety Standards, Research & development of innovative products.

Important dates
Abstract submission deadline	July 31st 2019
Early bird registration deadline	September 30th 2019
Regular Payment deadline for all presenters	December 15th 2019
Full paper submission	December 15th 2019

THE III INTERNATIONAL CONGRESS ON TECHNOLOGY AND TOURISM FOR ALL, 23rd -25th OCTOBER 2019, IN MALAGA, SPAIN
https://www.efc.be/event-post/iii-international-congress-on-technology-and-tourism-for-all/

Topics: Technologies and Services to Access Information and Communication, Human-Computer Interaction, Assistive Technologies, Tele-care and Tele-assistance, Prolonging Active Life, Digital Home and Independent Living, Robotics for Personal Autonomy, Transport for All, Technologies for Smart Cities, Accessible Technologies for Collaboration and Learning, Augmented/Virtual/Mixed Reality, Technology Applications and Solutions for Accessible Tourism and Cultural Activities, Tourism Regulations and Standards, Accessibility in Hotels and Museums, Accessibility in Cultural and Natural Heritage, Accessibility in Transport, Accessibility in tourism information, Tourism activities for all (outdoor and indoor).

EVENTS

THE SYMPOSIUM "ENABLING HUMAN FUNCTIONING IN A HEALTH AND SOCIO-CULTURAL PERSPECTIVE" ON THE 28 MAY 2019 AT HASSELT UNIVERSITY

By **Hubert Froyen**, em. prof. of Hasselt University, Faculty of Architecture

The Faculty of Architecture and arts & the Faculty of Rehabilitation sciences presented an Interdisciplinary Symposium with Honorary Doctors.
https://www.uhasselt.be/UH/fac-architectuur-en-kunst/Actueel/Agenda/Interdisciplinary-symposium-with-honorary-doctors-enABLING-HUMAN-FUNCTIONING-IN-A-HEALTH-AND-SOCIO-CULTURAL-PERSPECTIVE

At 'dies natalis' of Hasselt University, faculties nominated Patricia Moore, US (Faculty of Architecture and arts) for an honorary doctorate for her work on Designing for All: Enabling opportunities for the 21st century
https://www.uhasselt.be/UH/dieslectures/enABLING-HUMAN-FUNCTIONING-IN-A-HEALTH-AND-SOCIO-CULTURAL-PERSPECTIVE

OPEN WORKSHOP ON EUROPEAN STANDARDISATION WORK IN ACCESSIBILITY AND DESIGN FOR ALL
By **Isabella Tiziana Steffan**, Project team of M / 420

PrEN 17210 "Accessibility and usability of the built environment - Functional requirements" (according to European Disability Strategy 2010 – 2020 and following EU Mandate 420), is now out for Enquiry Vote until 11th July. During this phase an Open Workshop took place on June 5th 2019 in Brussels. It gave the opportunity of being informed of the standardisation developments under the second Phase of Mandate M/420 of the European Commission, and specifically prEN 17210. This is specially aimed to the procurement community and legislators, as final users of the deliverables, to representatives of people with disabilities and of older people, and to all the relevant stakeholders involved in the building process and in the assurance of the accessibility chain, i.e. architects, engineers, facility managers, ergonomists, etc.

Relevant experts presented the content of the document, and selected stakeholders provided their views on the future standard and on its relationship with the European policies.

RESEARCHES

PUDCAD, PRACTICING UNIVERSAL DESIGN PRINCIPLES IN DESIGN EDUCATION THROUGH A CAD-BASED GAME

By **Antonella Serra**

PUDCAD is a project dedicated to the teaching of the principles of Universal Design through a Game-Based Learning aimed at Design students.
The project, funded with European Erasmus + funds, is developed by the Universities: Technische Hochschule Ostwestfalen, Detmold (Germany), Bahçeşehir Üniversitesi, Istanbul (Turkey), Politecnico di Milano, Milan (Italy), University of Florence, Florence (Italy), Lahti University of Applied Sciences, Lathi (Finland) and coordinated by Istanbul Teknik Universitesi, Istanbul (Turkey).
It lasts three years and developed through research activities, workshops and dissemination (conferences and scientific publications). The project will end in August 2020 with the presentation of the Game prototype, which will be in the design and testing phase during this last year.

For more information: PudCad web site, Facebook page, E3 PudCad Conference, Florence (IT), E2 PudCad Conference, Detmold (DE), Ergonomics & Design Lab.

FOCUS
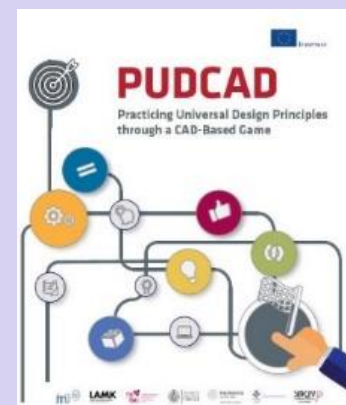
DIGITAL TECHNOLOGY FOR AN INCLUSIVE AND ENABLING DESIGN: THREE SUGGESTIVE EXAMPLES

By **Erminia Attaianese,** Associate Professor to University of Naples Federico II, chair of LEAS (Laboratory of Experimental and Applied Ergonomics).

The diffusion of new low-cost technologies and the pervasive use of digital artefacts is fostering a process of radical transformation including not only the physical and organizational context in which we live and operate, but also the way we use and interact with systems and the environment.

Digital access and connectivity, microelectronics, digital data and automation, are the key factors of this transformation, that together with systems for collecting, organizing and analyzing large amounts of complex data for modeling new types of information, sustain design scenarios before unthinkable, that can really improve societal inclusion.

Numerous experimental examples may demonstrate how much digital technology can be relevant in conceiving products and environments for all. Here three suggestive cases are briefly presented.

Sign Language Ring is a device that detects sign language motion and "translates" that to voice by emitting audio through a speaker. Inspired by Buddhist prayer beads, according to its designers from Asia University, this wearable device includes a bracelet and set of detachable rings worn on select fingers. It can also translate voice to text, transcribing spoken language picked up by a microphone into text that's displayed on the bracelet's screen.

Currently in the prototype stage, Layer company has developed a smart textile for use in Airbus' economy class seating, called Move, which would allow passengers to monitor and control their seat conditions using their phone. Digitally knitted from a polyester wool blend with an integrated conductive yarn, the smart seat cover is connected to a series of sensors that detect both the passenger's body and the conditions of their chair, including temperature, seat tension, pressure and movement. The Move app analyses the data collected by the sensors and sends targeted messages to the passenger telling them how they can improve their comfort. Moreover, during the flight, the seat automatically adjusts itself based on the passenger's weight, size and movement by passing a current through the conductive yarn to change the seat tension.

The Massachusetts Institute of Technology (MIT) has recently developed an inexpensive sensor glove designed to enable artificial intelligence to figure out how humans identify objects by touch. Called Scalable TActile Glove (STAG), it uses 550 tiny pressure sensors to generate patterns that are used to create improved robotic manipulators and prosthetic hands. The MIT project is very suggestive, since researchers are intentioned to replicate human's ability to figuring out what an object is just by touch. Using the STAG glove pressure sensors, the MIT is gathering as much touch information as possible for creating a large enough databases, to sustain a machine learning process that could bring to create a system able to perform analysis and deduce not only how a human hand can identify something, but also how it can estimate its weight, something robots and prosthetic limbs have trouble doing today.