

## ERGONOMICS/HUMAN FACTORS, SOCIAL CHANGES AND DIGITAL TRANSFORMATIONS IN WORKING AND LIVING CONTEXTS

It is now known that several socio-demographic, technical-economic and political global phenomena have led to dynamics previously unknown influenced, in the last few years, the quality of work, altering its relationships and forms, by transforming production systems and organizational models, and modifying the characteristics of practices and people involved. New processes and new working conditions are emerging, from which new demands arise and new needs to satisfy, for achieving prevention, health and safety aims.

A particularly complex picture come forward, since we need to improve well-being of individuals, seen as evolving subjects - whose specificities are hardly to standardize in "average" physical, perceptual, cultural and behavioral characteristics - who are called to act in uncertain working contexts (productive and domestic), just as it is necessary to increase productivity and safety by operating in systems that are changeable, innovative, highly automated and interconnected. One of the main change factors is the growing diversity in the social composition of today Western world, including cultural diversity, primarily, which is generating social systems in which individuals with different ethnic backgrounds and characteristics are called to live and work together.

Work environment, domestic environment and urban environment, once designed thinking to homogeneous groups of users, now are populated by subjects different in many aspects: both because they come from geographic areas also far, and because they have very different ages. The aging population and retirement policies, for example, are increasing an aged workforce, which will be increasingly cooperate with colleagues much younger, coming from digital native generation. Therefore, an extremely varied working population is expected in terms of age, with notable differences not only in physical terms, but also in cognitive, cultural and behavioral one. At the same time, a new industrial revolution has begun: human contexts, workplaces, domestic and urban setting, as well as traditional organizational systems are called to integrate with highly innovative technologies, based both on connectivity and digitalization, able to support people and objects to communicate and collaborate through the network, and on complex automated systems, collaborative -robot, exoskeletons, and augmented reality.

**Ergonomics and Human Factor can play a key role in these changing realities, for many reasons.** Firstly, by providing methodological tools able to manage the variability of characteristics and the strong differentiation of the needs of the current group of workers, as well as to fulfill the current lack of explicit references to these specific categories of workers by improving methods of risk assessment.

In relation to the digital industry, where people and technologies need to be integrated in a close and intense way, and where the growing diversity of psycho-physical characteristics of the working population results a critical element in the design and management of these systems, Ergonomics and Human Factors can contribute to the improvement of the design of complex systems and organizations towards their greater usability and towards an improvement of the global users experience, by increasing both health and safety levels, and physical, psychological and emotional well-being of people/users/patients.

Likewise, relating to environment and physical space, where diversified activities need to be hosted, often no longer placed in fixed locations, and strongly marked by creativity and relationship, Ergonomics and Human Factor can contribute, through criteria Human-Centered and User Experience, for understanding contexts and occupants'

specificities, and for managing conflicting performance that inevitably emerge, that affect not only health and safety conditions, but also productivity of organizations.

Starting from these premises, the areas of interest on which the Italian Journal of Ergonomics, in 2019, intends to propose specific contributions are:

- environments, systems and products for and of productive and work activities: from manufacturing production systems to 4.0 industry, to creative work, to ubiquitous work;
- activities and realities of everyday life: from personal care activities, to sports activities, to social communication, to the activities of daily life inside the houses and the urban and collective space.

Number 18 and number 19 intend to focus on these issues, collecting contributions on studies and research, as well as professional and project experiences, for defining the role of ergonomics as a useful tool to manage these transformations.

## **NUMBER 18**

### **TRANSFORMATION FOR/OF WORKING ACTIVITIES IN PRODUCTION CONTEXTS AND SERVICES**

- 1. Socio-demographic phenomena and changes in the composition of workers**
  - a. Aging of the population and increasing of older workers
  - b. Entry into the work of digital native generation
  - c. Immigration and different ethnic groups
- 2. Digital technologies and change of systems and practices**
  - a. Industry 4.0 and intelligent factory
  - b. Agile work and smart working
  - c. Team working and creative thinking: the importance of individual creativity and interpersonal relationships
  - d. BYOD systems to work everywhere
  - e. Smart devices for smart people
- 3. New places for new work practices**
  - a. Highly connected places
  - b. Dematerialized or remote places
  - c. Unfixed or changing places
  - d. Informal and unconventional places
- 4. New systems for new risks and new health and well-being conditions**
  - a. Heterogeneity of workers, health and safety conditions beyond the standard
  - b. Collaborative robotics, exoskeletons, augmented reality: technical-regulatory and usability problems
  - c. Indoor quality of the built environment, productivity and comfort

## **NUMBER 19**

### **TRANSFORMATION FOR /OF WORKING ACTIVITIES IN EVERYDAY LIFE**

- 1. Socio-demographic phenomena and digital technology**
  - a. Aging of population and accessibility/easy fruition of digital technologies
  - b. Diversities between digital native generation and older generations
  - c. Digital technologies as social inclusion tools
- 2. Technologies and product-service systems for home**
  - a. Product-service systems for home care e person care
  - b. Safety and inclusion in domestic work
  - c. Connected products, high performance buildings and smart homes (IoT, AI)
- 3. Technologies and product-service systems for public space**
  - a. Interaction and in public space
  - b. Urban innovation for social inclusion
  - c. Product-service systems for fitness (indoor e outdoor)
- 4. New places for new social practices**
  - a. Highly connected places
  - b. Dematerialized or remote places
  - c. Unfixed or changing places
  - d. Informal and unconventional places



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## DEADLINES

### NUMBER 18 TRANSFORMATION FOR /OF WORKING ACTIVITIES IN PRODUCTION CONTEXTS

Articles must be received by  
**April 30, 2019**

Number 18 publication is expected by  
**June 30, 2019**

### 30 June 2019 NUMBER 19 TRANSFORMATION FOR /OF WORKING ACTIVITIES IN EVERYDAY LIFE

Articles must be received by  
**September 30, 2019**

Number 18 publication is expected by  
**December 30, 2019**

## EDITORIAL NORMS

### GENERAL INFORMATION

Articles must be sent in word-compatible format (.doc, .rtf) by e-mail to the address:  
**segreteria@societadiergonomia.it**

Each article, including the title, the names of the authors, abstract, and bibliography, must have a minimum number of 20,000 and a maximum of 30,000 characters, spaces included and must contain:

- the text, written in Italian and English;
- an abstract, in Italian and in English, each containing between 100 and 250 words;
- the names and affiliations of the authors;
- a brief biographical note of the authors of no more than 100 words each, in Italian and in English;
- an indication of the reference section, namely "Profession and project" or "Studies and research". The works presented for the "Studies and research" section will be submitted to the evaluation of two blind reviewers;
- bibliography according to the rules indicated below.

### IMAGES AND TABLES

Images should not be included in the text but must be sent separately in .jpg or .tiff format at a resolution of 300 dpi. Images and tables must be numbered, have a reference and be positioned in the text (eg see Figure 1).

### CITATIONS IN THE TEXT

The bibliographic citations in the text must be reported in the format name / date, as in the following examples:  
(Jones, 2001). (Robsen, Hudson, Hutchkins, Ru, & Selanis, 1989). (Smith et al., 2005).

### BIBLIOGRAPHIC REFERENCES AT THE END OF THE TEXT

The bibliographic references at the end of the text must be completed in alphabetical order and in the case of several publications of the same author in chronological order. In the case of two or more authors separate the names with the comma and "&", do not use the words "et al."

### ARTICLES

Smith, L. V. (2000). Referencing articles in APA format. *APA Format Weekly*, 34, 4-10.

**JOURNALS**

James, S. A. (2001, June 7). Magazine articles in APA format. Newsweek, 20, 48-52.

**NEWSPAPERS**

Tensky, J. A. (2004, January 5). How to cite newspaper articles. The New York Times, pp. 4-5.

**BOOKS**

Rogers, C. R. (1961). On becoming a person. Boston: Houghton Mifflin.

Adler, A. (1956). The individual psychology of Alfred Adler: A systematic presentation of selections from his writings. (H. L. Ansbacher, Ed.). New York: Basic Books.

**INTERNET RESOURCES**

Van Wagner, K. (2006). Guide to APA format. About Psychology. Retrieved November 16, 2006 accessible online at: <http://psychology.about.com/od/apastyle/guide>