



BIOCCA LUIGI

Researcher at CNR ISPC.

Architect, expert in accessibility and usability of the built environment and heritage for larger user groups, personalized tourist routes, and user experience evaluation in co-design. He participated in several European funded projects and proposals, both as a partner and as a coordinator.

Author of about 100 publications among articles, presentations at national / international conferences, reports and contributions to books.

MAIN RESEARCH TOPICS:

- Accessibility and usability of the built environment and heritage;
- Accessible tourism, accessible routes and cultural heritage;
- Enhancement and access to new cultural knowledge;
- Evaluation of user experience and requirements for co-design in the built environment and products/services/technologies for independence in human activities.

Areas of interest: urban regeneration, re-use/retrofit of historical hospitals, IoT and study of accessible and personalized preferences/routes in museums, co-design and co-planning.

RECENT PROJECTS

- **2024-2025**

Kasval Project, Mehdyia (Morocco)

Call MAECI - Ministry of Foreign Affairs and International Cooperation

Activity:

He carried out photographic surveys of the site and supported the survey and scanning activity with laser scanner of parts of pre-existing historical buildings. The general plan for the enhancement of the site also includes an assessment study for planning the site accessibility with personalized thematic itineraries.

- **2022-2025**

Kastrum Project, Umm Ar Rasas (Jordan)

Call MAECI - Ministry of Foreign Affairs and International Cooperation

Activity:

He contributed to identifying use and accessibility guidelines of the archaeological site.

He carried out photographic surveys of the site to evaluate the level of accessibility and to detect critical points and possible solutions to improve the general use of the site and the creation of personalized thematic routes.

He edited the Technical Report of the appendix in the Final Report of the project.

He presented “Accessibility and Inclusion”, about the requirements and guidelines for multisensory, physical and technological use, in the International Workshop “*Kastrum project. The Italian interdisciplinary mission for the study and enhancement of the site of Umm Ar Rasas Kastron/Mefa’a – MAECI Project*”, Amman, Jordan, October 2023.

- **2022-2024**

New scenarios for ancient villages and territories. A community imagines its future.

PNRR, Missione 1 – Digitalizzazione, innovazione, competitività e cultura, Componente 3 – Cultura 4.0 (M1C3). Misura 2 “Rigenerazione di piccoli siti culturali, patrimonio culturale, religioso e rurale”, Investimento 2.1: “Attrattività dei borghi storici”, finanziato dall’Unione europea - Next Generation EU – Comune di Grotte di Castro (VT).

Activity:

Report on:

- the vision of potential growth in the attractiveness of historical, environmental and landscape places;
- the naturalistic potential to sport and cycle tourism;
- the potential village implementation of the historical cellars for food and wine events;
- the growing interest as a tourist destination in the lake district
- the good general state of maintenance of the village and its buildings as an attractive factor for visitors/new residents with improved usability.

- **2019-2020**

INTARSI

National Call for Tender Museum Network in Rome MUCIV

Activity:

Contribution to accessibility guidelines of museum exhibit areas related to furniture, services, rest areas.

- **2016-2019**

STAGE Streaming of Theatre and Arts for Old Age Entertainment

AAL-2015, Area: Living Actively and Independently at Home

Activity:

International coordinator.

ICT platform for accessing cultural events in streaming with e-learning modules and social networks for access to new cultural knowledge.

Main objectives:

- Increase participation in cultural offer for an active life and quality of leisure time.
- Ease of management and programming of entertainment opportunities.
- Use of the platform in an easy, effective, convenient way, with low costs and reduction of time/costs of mobility and physical access to events.
- Strengthening of accessible cultural offer in streaming mode.

OTHER ACTIVITIES

- From 2013 to 2015 he was Special Visiting Researcher of the Ciencia Sem Fronteiras program of the CAPES / CNPq Brazil, c / o Faculty of Architecture and Urban Planning of the Federal University of Rio de Janeiro (FAU-UFRJ), Proarq department (www.proarq.fau.ufrj.br). Project no. 176/2012 "AVALIAÇÃO DE ACESSIBILIDADE AND USABILIDADE NO ENVIRONMENT CONSTRUÍDO", Coordinators: UFRJ PROARQ / Núcleo Pró-acesso Brazil (Cristiane Rose de Siqueira DUARTE), CNR (Luigi BIOCCA). Elaboration of a check-list / tool for the assessment / certification of accessible environments. Case studies: Fori Traiane, Rome and Imperial Museum, Petropolis, Brazil.

MEMBERSHIPS

- CIB (International Council for Research and Innovation in Building and Construction), TG125 – Creating an Inclusive Built Environment for Diverse Users' Needs (since 2025).
- Accessibility Working Group (established by CNR in 2021 with provision No. 13/2021) - Universal Design for the design and development of an accessible website with research content.
- SITdA (Italian Society of Architectural Technology) in 2020.
- TESIS Interuniversity Research Center - "Systems and Technologies for Health, Social and Education Structures" Florence Faculty of Architecture (since September 2016).

MAIN PUBLICATIONS

- BIOCCA, L. (2025). A potential toolbox for improving the accessibility process in historic villages. Built Heritage, Springer Nature Link.
- BIOCCA, L. et al. (2024) in "Manuale di progettazione per l'accessibilità e la fruizione ampliata del patrimonio culturale. Dai funzionamenti della persona ai funzionamenti dei luoghi della cultura", CNR Dipartimento scienze umane e sociali, patrimonio culturale, a cura di Gabriella Cetorelli e Luca Papi. Cnr Edizioni.
- BIOCCA, L., CAROCCI, C. (2024) Visite guidate e partecipazione attiva: Grotte di Castro (VT), Proceedings, 'L'acqua e gli Etruschi', FONTI Etrusche Storia, Archeologia, Paesaggio 1 – 2023, 21 - 23 march, pp. 243-262, CNR Edizioni.
- BIOCCA, L., VILLANI, T., ROMAGNOLI, F. (2022) Usability of Visiting Routes in Heritage: The Case Study of Mercati di Traiano, in "Transforming our World through Universal Design for Human Development", Series Studies in health technology and informatics, pp. 483-490, IOS Press Amsterdam, Sixth International Conference on Universal Design, Brescia, 7-9 September.
- PIETRONI, E., PAGANO, A., BIOCCA, L., FRASSINETI, G. (2021) Accessibility, Natural User Interfaces and Interactions in Museums: the IntARSI project, MDPI Heritage Journal.
- BIOCCA, L., PARACIANI, N. (2021) The STAGE platform: user engagement of older people through co-design and extended access to streamed cultural events, Fifth International Conference on Universal Design, Aalto University, June 9 - 11 2021, Aalto University, Espoo, Finland.
- FERRANTE, T., VILLANI, T., BIOCCA, L. (2021) Prefiguring the reuse of historic hospitals: an approach methodology to design in the digital age, XIX International Forum LE VIE DEI

MERCANTI "World Heritage and Design for Health", Naples 15-17 July, Proceedings XIX Forum, Gangemi Ed.

- FERRANTE, T., VILLANI, T., BIOCCA, L. (2020) Active Assisted Living. Soluzioni personalizzate per le residenze degli anziani indipendenti, International Conference "Design in the Digital Age. Technology, Nature, Culture", SITDA, Naples 11-12 Dec., Proceedings.
- BIOCCA, L., CARUSO, G., CHIARIGLIONE, R., FLOREA, M., KAPOURANIS, I., KOWALSKA, A., PADULA, M., PARACIANI, N., PICENNI, F. (2017) The STAGE project: tailored cultural entertainment for older adults via streaming technology, HCI International 2017, 19th International Conference on Human-Computer Interaction, Vancouver, Canada, 9 - 14 July 2017
- DUARTE, C., BIOCCA, L. (2016) RELATÓRIO DE ATIVIDADES (Rapporto Finale) Projeto no. 176/2012 "AVALIAÇÃO DE ACESSIBILIDADE E USABILIDADE NO AMBIENTE CONSTRUÍDO", Coordinatori UFRJ PROARQ/Núcleo Pró-acesso Brasile (Cristiane Rose de Siqueira DUARTE), CNR ITC Italia (Luigi BIOCCA)
- DUARTE C., BIOCCA L. (2016) Avaliação de acessibilidade e usabilidade no ambiente construído - Assessment of accessibility and usability in the built environment, Final Project Report CAPES no. 176/2012, p. 1-257.
- DUARTE, C., COHEN, R., BIOCCA, L. (2014) Universal Design as an added value for heritage valorization: the cases of Brazil and Italy, UD Conference, Svezia, giugno 2014, Ebook: Universal Design 2014: Three Days of Creativity and Diversity, Series: Assistive Technology Research Series, Volume 35, Published 2014, pag. 317-326. Editors Héctor Caltenco, Per-Olof Hedvall, Andreas Larsson, Kirsten Rasmussen-Gröhn, Bitte Rydeman.
- BIOCCA, L., D'EREDITA', A., MALAVASI C.M.L., PARACIANI, N. (2014), ValeAS: an ICT tool to assess accessibility and safety of the built environment, Technè, Journal of Architecture for Technology and Environment, no. 07, aprile., Firenze University Press.
- BIOCCA, L., CASACCI, P., D'INNOCENZO, A., DI PASQUALE D., FABBRI, R., MANUZZI, M., PADULA, M., PARACIANI, N., PISTOIA, M., SCALA, P. L., (2014) Smart Technologies in Social Housing: Methodology and First Results of the HOST Project Experimentation Activities. In Ambient Assisted Living (pp. 303-312). Springer International Publishing. Italian Forum 2013. Editors: Sauro Longhi, Pietro Siciliano, Michele Germani, Andrea Monteriù.
- ARTESE, M., BIOCCA, L., BUONO, P., GAGLIARDI, I., LERARIO, A., MAIELLARO, N., PARACIANI, N. (2014) MU.S.A. - Must See Advisor Project: a Cultural Heritage Booster, 6th International Congress on Science and Technology for the Safeguard of Cultural Heritage in the Mediterranean Basin, Atene, 22-25 ottobre 2013, pag. 410-419, Editore VALMAR, Roma.
- BIOCCA, L., PARACIANI, N. (2013) Accessibility and heritage in the tourism perspective: some 'minor' case studies from Italy, Proceedings of the 19th CIB World Building Congress, Brisbane 2013: Construction and Society, W084 Building Comfortable and Liveable Environments for All, Workshop, Brisbane (AU), 5-9 maggio. Edited by Prof. S.Kajewski, Prof. K.Manley and Prof. K. Hampson.