

Barbara E. A. Piga

Indirizzo Ufficio

Politecnico di Milano | DASTU
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Indirizzo Residenza

Milano, ITALY

Ordine degli Architetti, Pianificatori,
Paesaggisti e Conservatori della
Provincia di Milano
(dal 2009 – ID 17007)

Architetto di formazione, Barbara E. A. Piga è *Ricercatore (RTDb)* al *Politecnico di Milano (POLIMI)* (2021 – 2024), dove è anche *Coordinatore* del *Laboratorio di Simulazione Urbana Fausto Curti - labsimurb (POLIMI – Dipartimento di Architettura e Studi Urbani DASTU)* dalla sua fondazione nel 2007. A *labsimurb* coordina e dirige progetti di ricerca legati alla simulazione esperienziale e alla progettazione urbana sensoriale. È socia fondatrice dell'Associazione *REACH - Representation Advances and Challenges* dalla sua fondazione nel 2022. È anche membro del Board del laboratorio di ricerca interdipartimentale POLIMI *i.Drive - Interaction Between Driver, Road Infrastructure, Vehicle, And Environment* dal 2019, dove è responsabile della simulazione esperienziale in ambito di mobilità e delle linee guida per l'ambiente urbano/paesaggistico (valutazione e progettazione). È membro del comitato scientifico del laboratorio di Ateneo *laboraA* (dal 2022) che sviluppa simulazioni sia in ambito di Realtà Virtuale che di modellazione fisica e olografica.

È il Coordinatore POLIMI del progetto *"NextGenerationEU - PNRR Innovation Ecosystem: Multilayered Urban Sustainability Action (MUSA) – Spoke 1: Urban Regeneration (Cities of the Future)"* dove è anche Responsabile Scientifico della Action *"Phygital4P - 'Public-Private-People partnership' (4P)"*. È Responsabile Scientifico per DASTU del progetto *"NextGenerationEU – PRIN: MED4PED: Mobility Experience Decision support system for pre-assessing PEDedestrian walkability through on-site and off-site simulation"*. È stata Responsabile Scientifico per POLIMI di due Progetti Europei H2020 EIT Digital (Digital Cities) *AR4CUP: Augmented Reality for Collaborative Urban Planning (2019 e 2020)*, nei quali ha progettato un nuovo metodo di co-design con Realtà Aumentata e Virtuale. In questi progetti ha sviluppato una metodologia innovativa per (pre-)valutare l'esperienza delle persone nello spazio con l'impiego della simulazione; questo la ha portata alla titolarità di due Copyright (*Experiential Environmental Impact Assessment - exp-EIA®; Copyright BOIP N. 123453 - 06.05.2020 e Copyright BOIP N. 130516 - 25.02.2021*) e ad un *Brevetto Internazionale per Invenzione "Metodo per calcolare una o più isoviste di un ambiente fisico o di Realtà Estesa"* (International Publication Number WO 2023/275679 A1 - 5.1.2023 con POLIMI e Università degli Studi di Milano). È stata membro dell'Advisory Board del Progetto Europeo H2020 *Artwin* (2021-2022). È stata membro del Progetto Europeo H2020 Lighthouse *Sharing Cities* (2016-17) per la metodologia di co-design per lo sviluppo di servizi urbani innovativi.

È membro del Comitato Scientifico e Consiglio Accademico dell'università vietnamita *Economics Ho Chi Minh City (UEH) - College of Technology And Design (CTD)* dal 2019. È stata invitata come Foreign Researcher al *CRENAU - UMR 1563 AAU*, Nantes - France (2022 e 2014). È membro del Network Internazionale *GUDesign - Genealogy of Urban Design* (dal 2021) e Membro Associato di *Atmospheric Spaces* (dal 2017). È membro del Comitato Editoriale di *International Journal of Sensory Environment, Architecture and Urban Space* (dal 2013). È membro dello Steering Committee di *European Architectural Envisioning Association - EAEA* (dal 2009), un'associazione internazionale focalizzata sulla simulazione alla scala architettonica e urbana. È membro di *International Ambiances Network* (dal 2011) e relativo Steering Committee (dal 2015), un'associazione di ricerca che si occupa di *ambiance* urbana con una prospettiva interdisciplinare. È membro del Comitato Scientifico della *Design Communication Association - DCA* (dal 2014) Americana ed Europea, organizzazione internazionale di accademici e professionisti nel campo della rappresentazione architettonica. È stata membro dello Steering Committee del progetto quinquennale inter-universitario POLIMI-UNIMI *Città Studi Campus Sostenibile* dal suo lancio (2011 – 2016). È docente nei corsi e laboratori di POLIMI sui temi della simulazione e rappresentazione per il progetto urbano dal 2011.

I suoi interessi di ricerca si concentrano sulla rappresentazione come strumento per studiare ed anticipare il rapporto uomo\ambiente, con particolare riferimento al ruolo della simulazione esperienziale per la progettazione urbana sensoriale dalla fase di ideazione a quelle di valutazione e presentazione. Indaga e propone forme innovative di simulazione, anche attraverso ambienti immersivi multisensoriali legati alla Realtà Estesa, ad esempio con Realtà Aumentata (anche Augmented Maquette) e Realtà Virtuale (anche Virtualità Aumentata). Promuove un approccio 'One Health', multi-scalare e interdisciplinare. Ha conseguito un dottorato di ricerca in Urbanistica presso POLIMI (2010).



Barbara E. A. Piga

Business Address

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Home Address

Milano, ITALY

Order of Architects, Planners,
Landscape Architects and
Conservators (Milan)
(from 2009 – ID 17007)

An Architect by education, Barbara E. A. Piga is *Assistant Professor (RTDb)* at the *Politecnico di Milano (POLIMI)* (2021 – 2024), where she is also *Coordinator* of the *Laboratorio di Simulazione Urbana Fausto Curti - labsimurb (POLIMI - Department of Architecture and Urban Studies DASTU)* since its foundation in 2007. At *labsimurb* she coordinates and leads research projects related to experiential simulation and sensory urban design. She is founding partner of the *REACH - Representation Advances and Challenges Association* since its foundation in 2022. She is also member of the Board of the interdepartmental research laboratory *i.Drive - Interaction Between Driver, Road Infrastructure, Vehicle, And Environment* since 2019, where she is responsible for mobility experiential simulation and the urban/landscape environment guidelines (assessment and design perspective). She is member of the Scientific Committee of the POLIMI *laborA* laboratory (since 2022), which develops simulations in both Virtual Reality, physical, and holographic modeling. She is the POLIMI Coordinator of the project "*NextGenerationEU - PNRR Innovation Ecosystem – Multilayered Urban Sustainability Action (MUSA) – Spoke 1 – Urban Regeneration (City of tomorrow) – Musa (musascarlit)*" where she is also Scientific Coordinator of the Action "*Phygital4P - 'Public-Private-People partnership' (4P)*". She is Scientific Responsible for DASTU of the project "*NextGenerationEU – PRIN: MED4PED: Mobility Experience Decision support system for pre-assessing PEDedestrian walkability through on-site and off-site simulation*". She is the POLIMI Scientific Coordinator of two European Projects H2020 EIT Digital (Digital Cities) *AR4CUP: Augmented Reality for Collaborative Urban Planning (2019 and 2020)*, where she designed a novel co-design methodology via Augmented and Virtual Reality. In these projects, she developed an innovative methodology for (pre-)assessing the experience of people in space through simulation; this led her to the ownership of two Copyrights (*Experiential Environmental Impact Assessment - exp-EIA®*; Copyright BOIP N. 123453 - 06.05.2020 and Copyright BOIP N. 130516 – 25.02.2021) and of the *International Patent for Invention Method for calculating one or more isovists of a physical or Extended Reality environment* (International Publication Number WO 2023/275679 A1 - 5.1.2023 with POLIMI and Università degli Studi di Milano). She is on the Advisory Board of *ARTwin* H2020 European Project (2021-2022). She was part of the H2020 Lighthouse European Project *Sharing Cities* (2016-17) for the co-design methodology for developing innovative urban services.

She is Scientific Committee and Academic Council Member of the Vietnamese University of *Economics Ho Chi Minh City (UEH) - College of Technology And Design (CTD)* since 2019. She was invited as Foreign Researcher at *CRENAU - UMR 1563 AAU*, Nantes - France (2022 and 2014). She is member of the *GUDesign - Genealogy of Urban Design* International Network (since 2021) and Associated Member of *Atmospheric Spaces* (since 2017). She is member of the Editorial Committee of the *International Journal of Sensory Environment, Architecture and Urban Space* (since 2013). She is member of the Steering Committee of the *European Architectural Envisioning Association - EAEA* (since 2009), an international association focused on simulation at the architectural and urban scale. She is Member of the *International Ambiances Network* (since 2011) and its Steering Committee (since 2015), an international research association dealing with urban ambiances with an interdisciplinary perspective. She is Member of the Scientific Committee of the American and European *Design Communication Association - DCA* (since 2014), an international society of academics and professionals of the architectural representation field. She was member of the Steering Committee of the five years' inter-university POLIMI-UNIMI project *Città Studi Campus Sostenibile - CSCS* since its launch (2011 – 2016). She is instructor in POLIMI courses and design studios on the topic of simulation and representation for urban design since 2011.

Her research interest is focused on representation as an aid for investigating and anticipating the human\environment relationship, with a specific focus on the role of experiential simulation for sensory urban design from conception to evaluation and presentation. She investigates and proposes innovative forms of simulation, even via multi-sensory immersive environments related to Mixed Reality, e.g. via Augmented Reality (also Augmented Maquette), and Virtual Reality (also Augmented Virtuality). She fosters a One Health, multi-scalar, and interdisciplinary approach. She holds a Ph.D. in Urban Planning from POLIMI (2010).

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ACADEMIC APPOINTEMENTS

2021-2024 | POLIMI ASSISTANT PROFESSOR (RTDb)

ICAR-17 Assistant Professor position at POLIMI

2017-2021 | POLIMI ASSISTANT PROFESSOR (RTDa)

ICAR-17 Assistant Professor position at POLIMI

2011-2017 | POLIMI ADJUNCT PROFESSOR

M.Sc. *Architectural and Urban Simulation* teaching position at POLIMI

2010 – 2017 | RESEARCH FELLOWSHIP

(2011 – 2017) 6 one-year *Research Fellowship* positions at DASTU (ex – DiAP) – POLIMI

(2010 – 2011) 1 eleven-months *Research Fellowship* position at DPA – POLIMI

VISITING POSITIONS

2022 | INVITED RESEARCHER & LECTURER at Ecole Centrale Nantes - CREANU - Centre de Recherche Nantais Architectures Urbanités Ambiances, Architectures, Urbanités UMR 1563 CNRS-MCC-ECN (Nantes - FR)

www.crenau.archi.fr

Invited Researcher and lecturer (ID foreign researcher in France: 65962 - Nov – Dec. 2014). Research topic: The experience of urban design: observation, interpretation, representation with traditional and innovative methodologies and tools for defining urban design briefs.

2014 | INVITED RESEARCHER & LECTURER at Ecole Centrale Nantes - CERMA Research Laboratory UMR 1563 (Nantes - FR)

(now: CREANU - Centre de Recherche Nantais Architectures Urbanités Ambiances, Architectures, Urbanités - Unité mixte de recherche 1563 CNRS-MCC-ECN)

www.crenau.archi.fr

Invited Researcher and lecturer (ID foreign researcher in France: 65962 - Nov – Dec. 2014). Research topic: Perceptual simulations to address urban transformations: an experiential approach to defining design guidelines. Investigation of methods and tools for enhancing a user-centered approach in urban design and planning practice.

EDUCATION

2010 (Feb) | Ph.D. WITH HONORS | POLIMI – DiAP (now DASTU) | Milano, IT

Ph.D. with honors in Pianificazione Urbana, Territoriale e Ambientale (PUTeA) - XXI cycle.

Thesis title: “*Visual Simulation for Urban Planning. The Perceptual Point of View in The Comprehension of Urban Transformation Projects*”. Supervisor: V. Erba and F. Curti. Ph.D. Thesis, Politecnico di Milano – Dipartimento di Architettura e Studi Urbani. http://opac.biblio.polimi.it/TESI_D02465.pdf

2004 (Dec) | M.Sc. in ARCHITECTURE | POLIMI | Milano, IT

Master of Science in Architecture (98/100) at POLIMI Faculty of Architecture.

Thesis title: ‘Il piano dei Servizi del Comune di Ornago’. Supervisor: V. Erba . Co-supervisor: A. Arcidiacono, L. Pogliani

POLIMI INSTITUTIONAL ROLES

RESEARCH LABORATORY COORDINATION & LABORATORIES SCIENTIFIC COMMITTEES

2007 – ongoing | COORDINATOR of the RESEARCH LABORATORY ‘LABSIMURB’

www.labsimurb.polimi.it

POLIMI - DASTU COORDINATOR and PROJECTS LEADER of the research laboratory “*Laboratorio di Simulazione Urbana Fausto Curti - labsimurb*” founded by Fausto Curti (POLIMI) and Peter Bosselmann (UC Berkeley) in 2007.

Labsimurb research focuses on experiential and environmental simulation for urban sensory design and project evaluation. Specific attention is devoted to interactive and dynamic simulation tools for supporting the urban (co-)design process and the decision-making one.

2019 – ongoing | BOARD member of the INTERDEPARTMENTAL RESEARCH LABORATORY ‘i.DRIVE’

www.idrive.polimi.it

POLIMI-DASTU COORDINATOR of the POLIMI interdepartmental research laboratory *i.DRIVE - Interaction Between Driver, Road Infrastructure, Vehicle, and Environment* (MECC – DEIB – ABC – DASTU). The laboratory uses experiential simulation for assessing driving experiences. B. Piga is responsible of simulation concerning the environmental experience and urban\landscape design.

2022 – ongoing | MEMEBR of the SCIENTIFIC COMMITTEE of the POLIMI LABORATORY ‘laborA’

[Politecnico di Milano: LaborA \(polimi.it\)](http://Politecnico di Milano: LaborA (polimi.it))

POLIMI – DASTU INTERDIPARTIMENTAL SCIENTIFIC COMMITTEE (member of) of the POLIMI laboratory “*laborA*” founded in 2021.

The laboratory experiments with digital, physical, and phygital tools. It is equipped with: Virtual Theatre (360° round screen with 7m diameter with projection on the curved surface and the floor), Holographic Table, laser scanners, and 3D printers.

INTERNATIONAL AGREEMENT COORDINATION

2019 – ongoing | SCIENTIFIC COORDINATOR of INTERNATIONAL AGREEMENT - VIETNAM

POLIMI-DASTU Scientific Responsible for the international inter-university Agreement between POLIMI – B.Piga (Milan, Italy) and UEH/UII (University of Economic Hochiminh City Institute of Innovation) – A.Trinh (Ho Chi Minh, Vietnam). Within this framework, B. Piga is also Scientific Committee and Academic Council Member of the UEH - College of Technology And Design (CTD).

2018 – ongoing | ERASMUS+ Teaching Staff Mobility COORDINATOR - POLAND

ERASMUS COORDINATOR for the Erasmus exchange program POLIMI - University of Lodz (Poland)

2018 – 2019 | SCIENTIFIC COORDINATOR of INTERNATIONAL AGREEMENT - CHINA

POLIMI-DASTU Scientific Responsible for the international for the Exchange Program Agreement POLIMI (DASTU: B.Piga) and the Northeast Agricultural University – NEAU (Harbin, China) (NEAU: Guanqing Feng). Title: “*Cross-culture comparison of city livability perception using virtual reality*”

SCIENTIFIC COORDINATOR of RESEARCH FELLOWS and JURIES

2019 – ongoing | COORDINATOR of RESEARCH FELLOWS and EXTERNAL COLLABORATORS

Research Fellows

2024-2025	Ziqi Cui
2019 - 2022	Gabriele Stancato
2020 - 21	Silvia Cacciamatta
2020 - 21	Giulio Faccenda
2019	Marika Fior

External Collaborators

2023-2024	Shangyu Lou (POLIMI)
2019-2020	Marco Boffi (UNIMI)
2019-2020	Nicola Rainisio (UNIMI)

2018 – ongoing | JURY for POLIMI Urban Planning incoming international students

(“Progetto Internazionalizzazione per la valutazione delle richieste di ammissione dei candidati stranieri alla Laurea Magistrale”).

2018 – ongoing | JURY of several evaluations of POLIMI Research Assistants and collaborators

TEACHING EXPERIENCE

POLIMI | Scuola di Architettura, Urbanistica, Ingegneria delle Costruzioni (AUIC)

Ongoing

2024 – ongoing | POLIMI Ambassador Program

POLIMI M.Sc. course titles “[Advanced Methodologies for Human-Centered Urban Design](#)”, prof. B. Piga (DAStU), L. Mainardi(DEIB). The course aims to provide participants with a systemic understanding of the complex relationship between humans and the environment through an interdisciplinary approach that combines architecture, biomedical sciences, and environmental psychology.

2017 – 2024 | ASSISTANT PROFESSOR (ICAR/17)

POLIMI B.Sc. & M.Sc. courses and studios in *Architecture* and *Urban Planning* on the topic of architectural and urban representation and simulation. Ex cathedra lectures and supervision of students with design reviews. https://bit.ly/Piga_POLIMI_dida

2010 – ongoing | THESIS SUPERVISOR and CO-SUPERVISOR

Supervisor of B.Sc. and M.Sc. thesis at POLIMI (Architecture and Urban Planning), also in collaboration with *Università degli Studi di Milano - UNIMI* (Scienze umanistiche per l’ambiente). Co-Supervisor of M.Sc. thesis at POLIMI (Engineering) and UNIMI (Scienze umanistiche per l’ambiente - Course “Valorizzazione culturale del territorio e del paesaggio”) https://bit.ly/Piga_POLIMI_Thesis_Supervisor

2007 – ongoing | INTERNSHIP TUTORSHIP

Supervision and mentoring of national and international internship students’ at *labsimurb* (POLIMI) (pre- and post- graduation).

Past

2011 – 2017 | ADJUNCT PROFESSOR

POLIMI M.Sc. courses of *Architecture* and *Urban Planning* on the topic of architectural and urban design and simulation. Ex cathedra lectures and supervision of students with design reviews.

2006 – 2011 | TUTORSHIP

M.Sc. program in Urban Planning and Policy Design in various courses and studios.

INTERNATIONAL TEACHING & Ph.D.

Ongoing

2016 – ongoing | INTERNATIONAL WORKSHOP TUTORSHIP

International WS Tutorship for the funded project “MOBIANCE” (ECN UMR 1563 AAU CREANU – FR & POLIMI DAStU labsimurb – IT): a series of international workshops with students from different universities in Europe (i.e., architecture, urban planning, industrial design, engineering, management)
In 2016 organization of the 3rd MOBIANCE WS at POLIMI and organization and coordination of the related International Seminar for Erasmus Teaching Mobility. <https://ambiances.net/workshops/milan-2017-sharing-cities-ambient-commons-urban-futures.html>

2014 – ongoing | COORDINATOR OF INTERNATIONAL VISITING SCHOLARS and INTERNATIONAL Ph.D. STUDENTS

Supervision and mentoring of International Visiting Researchers and Ph.D. students at labsimurb.

Past

2019 | INTERNATIONAL JURY MEMBER of Ph.D. THESIS DISSERTATIONS

Daich, S. (2019). *Modélisation du système anidolique pour un environnement lumineux intérieur intégré*. [Doctoral, Université Mohamed Khider-Biskra - ALGERIA] <https://core.ac.uk/display/196257511>

Saadi, M. Y. (2019). *Paramètres physiques Des ambiances lumineuses: Un modèle numérique pour l'évaluation des ambiances lumineuses*. [Doctoral, Université Mohamed Khider-Biskra - ALGERIA] <http://thesis.univ-biskra.dz/3884/>

PATENTS & COPYRIGHTS

PATENTS FOR INVENTION

2021 | INTERNATIONAL PATENT FOR INVENTION

"Method for calculating one or more isovists of a physical or extended reality environment"

[ITA: *"Metodo per calcolare una o più isoviste di un ambiente fisico o di realtà estesa"*]

International Patent for Invention N. 102021000017168 deposit on 30/06/2021

in the name of Politecnico di Milano - POLIMI (50%): B. Piga (42%), G. Stancato (8%); Università degli Studi di Milano - UNIMI (50%): M.Boffi (21%), N.Rainisio (21%), P.Ceravolo (5%), G.Tavares (3%)

COPYRIGHTS & LICENSES

2023 | LICENSE SIAE

"Software for the operation of the Luminous Table and for simulation and analysis in urban and architectural contexts"

License SIAE \ Copyright No. D000020125 dated 16.06.2023

Copyright (B. PIGA)

2021 | COPYRIGHT

"Experiential Environmental Impact Assessment - exp-EIA®" 2021

Copyright BOIP N. 130516 - 25.02.2021

Copyright (B. PIGA, M. Boffi, N. Rainisio) 'exp-EIA® 2020' of new features for (pre-)assessing people experience of existing places

2020 | COPYRIGHT

"Experiential Environmental Impact Assessment - exp-EIA®" 2020

Copyright BOIP N. 123453 - 06.05.2020

Copyright (B. PIGA, M. Boffi, N. Rainisio) of an innovative methodology for pre-assessing people's experience of design projects through simulation coupled with architectural\psychological constructs.

GRANTS & AWARDS

GRANTS

for more details see section: 'Research Experience'

2023-2025 | NextGenerationEU NATIONAL PROJECT (PRIN) | B.Piga POLIMI DEPT. DASTU SCIENTIFIC COORDINATOR

NextGenerationEU "PRIN: Progetti di Ricerca di Rilevante Interesse Nazionale – Bando 2022"

Project title: ["MED4PED: Mobility Experience Decision support system for pre-assessing PED pedestrian walkability through on-site and off-site"](#)

2023-2025 | NextGenerationEU NATIONAL PROJECT (Patent Competition) | B.Piga POLIMI SCIENTIFIC COORDINATOR

NextGenerationEU "SEED4IP 2.0: SEED for Innovation Patent". Project Leader UNIMI.

Project title: ["exp-EIA D: The exp-EIA \(experiential-Environmental Impact Assessment\) Dashboard"](#)

2022-2025 | NextGenerationEU NATIONAL PROJECT (PNRR) | B.Piga POLIMI SPOKE + ACTION 1.4 SCIENTIFIC COORDINATOR

NextGenerationEU "[PNRR Innovation Ecosystem: Multilayered Urban Sustainability Action \(MUSA\) – Spoke 1: Urban Regeneration \(Cities of the Future\)](#)"

Action 1.4 title: ["Phygital4P: 'Public-Private-People partnership' \(4P\)"](#)

2024 | Erasmus+ INTERNATIONAL PROJECT | B.Piga CO-COORDINATOR

Erasmus+ Blended Intensive Program

Project title: ["Experiencing Nantes - A psycho-architectural approach to urban design"](#)

2020 | H2020 EUROPEAN PROJECT | B.Piga POLIMI SCIENTIFIC COORDINATOR

H2020 European Project EIT Digital (Digital Cities)

Project title: ["AR4CUP-2020: Augmented Reality for Collaborative Urban Planning"](#)

2019 | NATIONAL PROJECT PARTNER | B.Piga POLIMI-DAStU SCIENTIFIC COORDINATOR

International Reinventing Cities Project – via Serio area, Milan

Project title: "VITAE" project (leading team Covivio, Carlo Ratti Associati, Habitech & partners, including POLIMI – DAStU – labsimurb – B.Piga coordinator)

2019 | H2020 EUROPEAN PROJECT | B.Piga POLIMI SCIENTIFIC COORDINATOR

H2020 European Project EIT Digital (Digital Cities)

Project title: "[AR4CUP-2019: Augmented Reality for Collaborative Urban Planning](#)"

TRL: 8

AWARDS

2021 | BEST PROJECT AWARD | B. Piga POLIMI PROJECT COORDINATOR

The European Project 'AR4CUP' coordinated by B.Piga for POLIMI wins the [Laval Virtual Award Europe](#) in the "Service" category 2021 (as *XR4CUP*)

2020 | AWARDED PAPER – SPECIAL MENTION | B. Piga AUTHOR

Shi, Y., Ferraioli, A., Piga, B., Mussone, L., & Caruso, G. (2020). A method of processing eye-tracking data to study driver's visual perception in simulated driving scenarios. *European Transport Conference*, 1–18. *Special Mention Etc 2020 Website*: <https://aetransport.org/awards>

2005 | AWARD for the Best M.Sc. thesis | B. Piga AUTHOR

Selected within the *best MSc thesis* of the academic year 2003-04 by the Ordine degli Architetti, Pianificatori, Paesaggisti e Conservatori della Provincia di Milano

RESEARCH EXPERIENCE: NATIONAL AND INTERNATIONAL PROJECTS

EUROPEAN FUNDED PROJECTS

2020 (Jan – Dec) | EUROPEAN PROJECT HORIZON 2020 COORDINATOR

H2020 Eit Digital (Digital Cities) 2020 European Project "AR4CUP: Augmented Reality for Collaborative Urban Planning" (Jan 2020 – Dec 2020)

www.labsimurb.polimi.it/research/ar4cup-2020-h2020 - <https://ar4cup.artefacto.eu/>

POLIMI H2020 Coordinator. Management of the project teams and funds. Proposal entirely written by B.Piga. Scientific coordination of the research concept and development. The project is based on the use of experiential simulation through Augmented Reality (AR) and Virtual Reality (VR) for assessing the current urban citizens' experience at the neighborhood scale. The project designs and further develops the AR4CUP app (commercially CitySense) for an innovative co-design solution for assessing the current perception of the neighborhood by citizens.

TRL 9 (AR4CUP-2020 app; commercially CitySense)

Budget managed: 214.991 €; Total Budget: 563.406 €.

2019 (Jan – Dec) | EUROPEAN PROJECT HORIZON 2020 COORDINATOR

H2020 Eit Digital (Digital Cities) 2020 European Project "AR4CUP: Augmented Reality for Collaborative Urban Planning" (Jan 2019 – Dec 2019)

www.labsimurb.polimi.it/research/ar4cup - <https://ar4cup.artefacto.eu>

POLIMI H2020 Coordinator. Management of the project teams and funds. Main author of the project proposal. Scientific coordination of the research concept and development. The project is based on the use of experiential simulation through Augmented Reality (AR) and Virtual Reality (VR). The project designs and develops the AR4CUP app (commercially CitySense) for an innovative co-design solution for anticipating and pre-assessing the perception of urban design projects through experiential simulation.

TRL 8 (AR4CUP-2019 app; commercially CitySense)

Budget managed: 153.750 €; Total Budget: 529.271 €

Copyright methodology by B.Piga, M. Boffi, N. Rainisio: "Experiential Environmental Impact Assessment (exp-EIA)" - BOIP N. 123453 del 06-05-2020]

2016 - 2017 | H2020 PARTNER

H2020 LightHouse EUROPEAN Project "Sharing Cities" (Grant Agreement n.691885) www.sharingcities.eu

POLIMI H2020 Collaborator for the co-design activities of the Sharing Cities EU project (WP2 – DASTU). In particular: user research activities, co-design methodology development, co-design toolkit, workshop with citizens and stakeholders, representation, and communication of the co-design outcomes.

2014 – 2017 | INTERNATIONAL RESEARCH GROUP MEMBER | CNRS International Research Group (GDRI) 'Translating Ambiances'

www.ambiances.net/seminars/gdri-translating-ambiances.html

Member of the International Research Group funded project. This project fits into the larger framework of the International Ambiances Network (www.ambiances.net). Launched in 2008 this network coordinates and encourages, at an international level, work and events focusing on architectural and urban ambiances with an interdisciplinary approach. The GDRI was funded by the French Ministry of Culture (2014). The final research seminar in June 2017 was organized and scientifically coordinated by labsimurb (B. Piga & E. Morello).

EUROPEAN PROJECT: first stage of evaluation approved

2020 | EUROPEAN PROJECT HORIZON 2020 COORDINATOR

H2020 European Project EIT Urban Mobility for COVID-19 "AR4MOB: Augmented Reality for Urban Mobility"

POLIMI Coordinator. Management of the project teams and funds. Proposal entirely written by B.Piga. Scientific coordination of the research concept and development. The project is based on experiential simulation through Augmented Reality (AR) and Virtual Reality (VR) for assessing the current urban citizens' experience concerning urban mobility. The app also enables to guide citizens to the safer mobility solution for the Covid-19 sanitary emergency.

The project was classified as fundable but it was not in the first 40 projects that received funds.

2015 | INTERREG-MED PROJECT PROPOSAL

First phase approved, stopped in the second phase. Interreg-MED - Priority Axis 2 - Fostering low carbon strategies and energy efficiency in specific MED territories: cities, islands, and remote areas (Specific objective 2.3: To increase capacity to use existing low carbon transport systems and multimodal connections among them). Proposal: "UrbanNODES: Encouraging intermodal connections through a new urban grammar legibility" (Proposal ID: 931) Collaboration to the development of the research concept and the writing of the project proposal with Cynthia Echave (Urban Ecology Agency of Barcelona - Coordinator). Research proposal on intermodal urban nodes for improving legibility and promoting novel urban grammar based on superblocks and people-based approaches (mainly visual perception).

NATIONAL FUNDED RESEARCH

2023-2025 | DASTU SCIENTIFIC COORDINATOR

POLIMI-DASTU Scientific Coordinator as Project Partner of the funded project *NextGenerationEU "PRIN: Progetti di Ricerca di Rilevante Interesse Nazionale – Bando 2022"*. Project title: "[MED4PED: Mobility Experience Decision support system for pre-assessing PEDedestrian walkability through on-site and off-site](#)". POLIMI-ABC Dept. is Project Leader; the project is connected to the inter-departmental research laboratory [i.Drive](#). The MED4PED project focuses on walkability in urban settings, addressing the evolving physical environment and lifestyles. It aims to provide effective management methods for informed urban planning and design decision-making, considering urban and social dimensions. The project involves the development of an integrated system supporting decision-making through data analysis and virtual-reality simulation.

2023-2025 | POLIMI SCIENTIFIC COORDINATOR

POLIMI Scietific Coordinator of the funded project: NextGenerationEU "SEED4IP 2.0: SEED for Innovation Patent". Project Leader UNIMI. Project title: "[exp-EIA D: The exp-EIA \(experiential-Environmental Impact Assessment\) Dashboard](#)". The project further develop the exp-EIA[©] project, aiming at delivering and update of the TRL of patented project that couple architecture and environmental psychology.

2022-2025 | POLIMI SCIENTIFIC COORDINATOR

POLIMI Spoke 1 Coordinator of the project NextGenerationEU "PNRR Innovation Ecosystem: Multilayered Urban Sustainability Action (MUSA) – Spoke 1: Urban Regeneration (Cities of the Future)", and Scientific Coordinator of the Action "[Phygital4P: 'Public-Private-People partnership' \(4P\)](#)". The Action "4P Phygital Platform" will lead to the release of the Phygital (Physical + Digital) platform, a SAAS (Software as a Service) solution that favors the "Public-Private-People partnership" (4P), facilitating the collaborative shaping of

sustainable urban regenerations policies and actions with an environment- and human-centered approach. The platform is conceived with an eco-systemic approach enabling the collection of objective environmental data (e.g. from sensors and databases) and subjective personal data in aggregated form (e.g., mobile devices, wearables, questionnaires). The combination of the physical environmental data and the personal/community experience over time enables a comprehensive understanding favoring decision-making at different scales of intervention.

2020 | RESEARCH MEMBER

International “Reinventing Cities Project”

POLIMI-DAStU Coordinator as Project Partner of the international *Reinventing Cities Project* – via Serio area, Milan: VITAE project (main team Covivio, Carlo Ratti Associati, Habitech & partners). The DAStU focus is based on co-design using innovative solutions (including Augmented and Virtual Reality).

TRL 8 (AR4CUP-2020 app; commercially CitySense)

Budget managed: 214.991€; Total Budget: 563.406 €

Copyright methodology by B.Piga, M. Boffi, N. Rainisio: "Experiential Environmental Impact Assessment (exp-EIA)" - BOIP N. 130516 del 25.02.2021]

2011 – 2013 | RESEARCH MEMBER

smartplanPOLIMI.wordpress.com

Research Team Member (research ID: 5x1000 Junior) at POLIMI - DAStU. Research title: *Open innovation in urban discovery and planning for the Città Studi Campus Sostenibile project: from master plan as alignment environment to urban digital footprints*. Research focuses on open innovation in urban planning, particularly on the topic of interactive simulation for urban design and public participation.

2007-2010 | SCIENTIFIC COORDINATOR

Scientific Coordinator of the research project funded by POLIMI-DIAP (now: DAStU): “*Simulation for decision-making: the Garibaldi-Repubblica case study*”. The research investigates the use of different typologies of simulation for the evaluation of the cumulative impact of urban transformation projects.

2008 | PH.D. SCHOLARSHIP

1 one-year Research Ph.D. Scholarship by Regione Lombardia “Attivazione di un ambito Stage/Project Work in discipline tecnico-scientifiche per neolaureati, dottori di ricerca e dottorandi di ricerca” for the research project: “La simulazione dinamica come strumento di valutazione dei progetti di trasformazione urbana” [Dynamic simulation as an evaluation tool of urban transformation design project].

INTERNATIONAL STEERING, SCIENTIFIC, ORGANIZING COMMITTEE

ADVISORY BOARD

2021-2022 | H2020 EUROPEAN PROJECT ‘ARTwin’ | B.Piga MEMBER OF THE ADVISORY BOARD

<https://artwin-project.eu/index.php/advisory-board>

Member of the ADVISORY BOARD of the Horizon 2020 European Project ARTwin (*Grant Agreement No 856994*) based on a real-time ecosystem between Augmented Realty Cloud platform and Digital Twin (BIM) and connected Augmented Realty services in the 4.0 construction field.

STEERING COMMITTEE

2022 – ongoing | INTERNATIONAL CTD Scientific Committee & Academic Council Member

UEH University - COLLEGE OF TECHNOLOGY AND DESIGN (CTD), Ho Chi Minh City (VIETNAM)

2017 – ongoing | INTERNATIONAL NETWORK ‘Atmospheric Spaces – Aura, Stimmung, Ambiance’

<https://atmosphericspaces.wordpress.com/about-2>

ASSOCIATE MEMBER of the international network dealing with the ambiance topic from a philosophical and transdisciplinary perspective.

2015 - ongoing | INTERNATIONAL NETWORK ‘Ambiances International Network’

<https://ambiances.net>

Member of STEERING COMMITTEE of the International Ambiance Network, a research association focused on sensory environment in an inter-disciplinary perspective (human and social sciences, architecture and urban planning, engineering, and applied physics).

2009 - ongoing | INTERNATIONAL ASSOCIATION 'EAEA: European Architectural Envisioning Association'

<http://eaeenet.wix.com/eaea> - www.facebook.com/EAEA.group

Member of STEERING COMMITTEE of EAEA, an international association founded in 1993 at the European level. The association is a platform for communication and exchange of experiences, experimentation, research, and collaboration in the field of sensory and environmental simulation.

2022 – 2025 | MEMEBR of the IEEE Technical Committee on Immersive Learning (TC-ILE)

[IEEE Education Society](http://www.ieee-edusociety.org)

[Technical Committee on Immersive Learning Environments | IEEE Education Society \(ieee-edusociety.org\)](http://www.ieee-edusociety.org)

Within the IEEE technology community worldwide, Immersive learning refers to the learning process occurring in immersive environments. The TC-ILE focus on the relationship of learning with the technical, narrative, and engagement aspects of immersive environments. It includes virtual settings, but also physical settings. The Committee involves several worldwide researchers from different disciplines.

2011 – 2016 | INTER-UNIVERSITY RESEARCH PROJECT 'CSCS: Città Studi Campus Sostenibile'

www.campus-sostenibile.POLIMI.it

Member of the STEERING COMMITTEE of the inter-university (POLIMI – UNIMI) project 'Città Studi Campus Sostenibile' dealing with applied and theoretical research towards more sustainable approaches (social, energy & environment, mobility, food & health).

INTERNATIONAL NETWORK - INVITED MEMBER

2021 - ongoing | GUDesign INTERNATIONAL NETWORK

<https://gudesign.org/members/barbara-piga>

Invited Network Member of the 'GUDesign - Genealogy of Urban Design'. The network is interdisciplinary and promotes comparative analysis between theoretical approaches and realized projects to identify best practices useful to operate proactively in future transformations.

INTERNATIONAL COMPETITIONS & JURIES

2020 & 2021 | INTERNATIONAL DESIGN COMPETITION | SCIENTIFIC and ORGANIZING COMMITTEE, and JURY

Brief review of the International Design Competition "*Future City: Smart Design for Post-Pandemic World*" (1° and 2° edition), collaboration to the organization, and competition jury member. Participants are asked to look at the existing urban built environment and imagine how it should cope with future pandemic.

<http://iscmfuturecity.co>

2017 | H2020 INTERNATIONAL COMPETITION – CALL FOR IDEAS | COORDINATOR, SCIENTIFIC COMMITTEE AND ORGANIZATION

Leader of the Concept and Design International Competition - Call for Ideas "*Envisioning the City of the Future: Making the Invisible Visible*" within the *H2020 Lighthouse "Sharing Cities"* (Grant Agreement n.691885). Participants were asked to imagine and design possible scenarios of the city of the future
www.eko.polimi.it/index.php/contest-env-2017/env_2017

2013, November | INTERNATIONAL JURY OF THE DESIGN COMPETITION

within the Annual Festival of Innovative Technologies in Architecture in Construction - GREEN PROJECT 2013 (Moscow) greenproekt.com/program/piga

2012 – 2013 | COORDINATOR, SCIENTIFIC COMMITTEE AND ORGANIZATION OF DESIGN CONTEST

POLIMI students' competition 'Redevelopment of the open spaces of the Campus Bonardi', for the inter-university project Città Studi Campus Sostenibile

call: www.campus-sostenibile.polimi.it/web/guest/bando

multimedia design guidelines: www.labsimurb.polimi.it/tour/guidelines/trifoglio/LineeGuida.html

virtual exhibition: www.campus-sostenibile.polimi.it/web/guest/mostra

INTERNATIONAL CONGRESS, CONFERENCES, SEMINARS & WORKSHOPS

2014 - ongoing | DESIGN COMMUNICATION ASSOCIATION – DCA | BOARD AND SCIENTIFIC COMMITTEE

All American and European Biannual Conferences from 2014

<https://designcommunicationassociation.wordpress.com>

2011 - ongoing | EUROPEAN ARCHITECTURAL ENVISIONING ASSOCIATION – EAEA | BOARD AND SCIENTIFIC COMMITTEE

All EAEA Biannual Conferences from 2011 <http://eaeenet.wix.com/eaea> - www.facebook.com/EAEA.group

2018 | UNIONE ITALIANA PER IL DISEGNO – UID | ORGANIZING COMMITTEE

XV Congress of Unione Italiana per il Disegno - UID. 13-15.09.2018 Politecnico di Milano (Milan - Italy)

www.unioneitalianadisegno.it/convegni/2018/en/comitati-eng

2018 | INTERNATIONAL CONFERENCE ON GEOMETRY AND GRAPHICS CONFERENCE - ICGG | ORGANIZING BOARD

40th ICGG Conference 2018 3-7.8.2018 Politecnico di Milano (Milan - Italy)

www.icgg2018.polimi.it/?page_id=133

2015 | AMBIANCES INTERNATIONAL CONGRESS | SCIENTIFIC COMMITTEE

3rd Ambiances International Congress 21-24.09.2016 Polytechnic School of the University of Thessaly (Volos - Greece)

<http://ambiances2016.arch.uth.gr/en/3rd-congress/scientific-committee>

COORDINATION of LABSIMURB NATIONAL and INTERNATIONAL EVENTS

2017 | INTERNATIONAL SEMINAR & WORKSHOP | SCIENTIFIC and ORGANIZING COMMITTEE

Research Seminar “Sharing Cities, Ambient Commons and Urban Futures”

International Workshop “Mobiance 3 - Exploring and Envisioning Future Urban Scenarios Related to the Sharing Approach”

27.02.2017 – 31.03.2017 (Milan – IT). Main universities involved: POLIMI, ECN, ENSA, Audencia

www.ambiances.net/workshops/Mob3

2016 | | ERASMUS+ INTERNATIONAL SEMINAR | SCIENTIFIC and ORGANIZING COMMITTEE

International Seminar for Erasmus Teaching Mobility AA 2015/2016 POLIMI – DASTu -labsimurb and ECN - UMR 1563 AAU / CREANU. 04-06.07.2016 CREANU (Nantes – FR)

www.labsimurb.polimi.it/conference/ERASMUS_Nantes_PROGRAM.pdf

2015 | INTERNATIONAL SEMINAR & WORKSHOP | SCIENTIFIC and ORGANIZING COMMITTEE

International Research Seminar: “Quality and Quantity of Visual Perception. Recent ICT Improvements for Tridimensional Visibility Analysis”

Internal Research Seminar “Brainstorming on visibility studies”

International Workshop “The CREANU visibility tool in practice”

23-24.11.2015 POLIMI (Milan – IT). Universities involved: POLIMI, CREANU (ECN\ENSA), EPFL, SUPSI

www.dastu.polimi.it/visualperception

2015 | INTERNATIONAL SEMINAR & WORKSHOP | SCIENTIFIC and ORGANIZING COMMITTEE

International Research Seminars “The role of ICT tools for urban design and Walk-scape: Ongoing research on Augmented Reality solutions for the built environment”

International Workshop: “Walk-shop: Discovering and representing the sensory dimension of urban space”

09-11.03.2015 POLIMI (Milan – IT). Main universities involved: POLIMI, ECN, University of Sheffield

www.dastu.polimi.it/Walkscape

2014 | INTERNATIONAL SEMINAR & WORKSHOP | SCIENTIFIC and ORGANIZING COMMITTEE

“Computational Design and Research: current research at Aedas R&D”. With C. Derix & A. Izaki. 22-23.05.2014 POLIMI (Milan – IT) www.dastu.polimi.it/Aedas

2013 | INTERNATIONAL CONFERENCE and PUBLICATION | SCIENTIFIC and ORGANIZING COMMITTEE

“EAEA11 2013 - Envisioning Architecture: Design, Evaluation, Communication”. 25-28.09.2013 POLIMI (Milan – IT) www.eaea11-2013.POLIMI.it

I lead all the scientific and organizational issues (definition of the conference themes and topics, double blind review, conference presentation and session chairing, communication, and all the organizational tasks). The conference had three main tracks: 1. Visualizing Sustainability: making the invisible visible; 2. Experiential Simulation: the sensorial perception of the built environment; 3. Conceptual Representation: exploring the layout of the built environment. The general objective was to investigate the role of visualization as a tool for conception, verification, evaluation, and communication of architecture and urban space. The conference had a worldwide attendance, with more than 40 countries represented. The acceptance rate was 1/3 (177 incoming abstracts, 56 papers and 18 posters presented and published). The members of the scientific committee were

21, and there was an official presentation of the international links to EAEA and DCA USA. We had three relevant keynote speakers: Peter Bosselmann (Berkeley University of California), Eckart Lange (University of Sheffield), and Jack Breen (TU Delft). During the conference, we were invited to be the editors of a special issue on experiential simulation of the International Journal of sensory environment, architecture and Urban Space.

2013 | INTERNATIONAL SEMINAR | SCIENTIFIC and ORGANIZING COMMITTEE

"Research on Understanding Human Behavior in Public Space". 02.12.2013 POLIMI (Milan – IT).
Universities involved: POLIMI, Osaka Institute of Technology, UniMiB

2010 | INTERNATIONAL SEMINAR | SCIENTIFIC and ORGANIZING COMMITTEE

"Exploring Urban Change through Visual and Environmental Simulation". 17-18.06.2010 POLIMI (Milan – IT).
Institutions involved: POLIMI, University of Sheffield, Brandenburg University of Technology, TUDelft, University of Glasgow, Agencia d'Ecologia Urbana de Barcelona, Glasgow City Council
www.dastu.polimi.it/EnvSimulation.pdf

2007 | INTERNATIONAL SEMINAR | SCIENTIFIC and ORGANIZING COMMITTEE

"Laboratorio di Simulazione Urbana Work in Progress". 7.06.2007 POLIMI (Milan – IT)
Universities involved: POLIMI, University of California Berkeley. 2

SCIENTIFIC REVIEW COMMITTEE

Ongoing

2022 – *ongoing* | Conf. REAACH-ID
2018 – *ongoing* | Journal 'Environmental Modelling and Software'
2018 – *ongoing* | Journal 'Architecture, City and Environment - ACE'
2014 - *ongoing* | Conf. 'Design Communication Association – DCA'
2014 - *ongoing* | Journal 'Journal of Creative Sustainable Architecture & Built Environment – CSABE'
2013 - *ongoing* | Journal '[International Journal of Sensory Environment, Architecture and Urban Space](#)'
2011 - *ongoing* | Conf. / European Architectural Envisioning Association - EAEA
2016 - *ongoing* | Congress / Ambiances International Congress

Past

2020 | Symposium 'Greening Cities-Shaping Cities' - within: H2020 Clever Cities
www.greeningcities-shapingcities.polimi.it
2018 | Conf. 'Education & Research in Computer Aided Architectural Design in Europe - eCAADe'
2018 | Symposium 'Sharing Cities Shaping Cities' - within: H2020 Sharing Cities
www.sharingcities-shapingcities.polimi.it
2014 and 2018 | Conf. 'International Conference on Geometry and Graphics – ICGG'

INVITED LECTURES, INTERNATIONAL PRESENTATIONS & CHAIRING

INTERNATIONAL INVITED LECTURES & KEY-NOTES

07.09.2023 | KCAP - INTERNATIONAL INVITED LECTURE

Lecture Title : “exp-EIA® [experiential Environmental Impact Assessment]”

Invited by [KCAP](#), global urbanism, architecture and landscape design firm for presenting the exp-EIA method enabling the assessment of urban design projects from an architectural\psychological perspective.

31.03.2023 | INTERNATIONAL INVITED LECTURE

Lecture title: “Visualizing Multisensory Environmental Dimensions in Planning and Design”

Invited by Hamburg Institute for Advanced Study (HIAS) with HafenCity University Hamburg (Germany) within the international conference “Sense and Visibility: Multisensory Experience and Representation of the Environment beyond the Visual”

08.12.2022 | INTERNATIONAL KEYNOTE LECTURE

Lecture title: “Smart Co-Design: X-Realty as a collaboration enabler and an analytical tool for human-centered design”

Invited by College of Technology and Design (CTD) of the University of Economics Ho Chi Minh City (UEH) within the international conference “Resilience by Technology and Design” (RTD-2022)

<http://rtdconference.info>

30.11.2022 | INTERNATIONAL KEYNOTE LECTURE

Lecture title: “Assessing the urban experience through data: the importance of an interdisciplinary approach”

Invited by the 9th International Conference on Social Networks Analysis, Management and Security (SNAMS-2022)

<http://emergingtechnet.org/SNAMS2022/index.php>

<http://emergingtechnet.org/SNAMS2022/keynote-speakers.php>

24.11.2020 | INTERNATIONAL KEYNOTE LECTURE

Lecture title: "Experiential Simulation: Anticipating the Subjective Experience"

Invited by [UEH - Institute of Smart City and Management \(ISCM\)](#) - SmartCity+ Initiative: Tech and Urban Transformation (Ho Chi Minh – VIETNAM & Remote)

<https://www.facebook.com/ISCM.UEH/posts/427828998889004/>

27.05.2020 | INTERNATIONAL H2020 WORKSHOP PRESENTER & DISCUSSANT

Lecture title: “AR4CUP” WS “The future of XR: Current ecosystem and upcoming opportunities”

www.areteproject.eu/newsevents/body,556656,en.html organized by the H2020 EU Projects [ARETE](#) and [iv4XR](#) projects www.areteproject.eu/newsevents/body,552113,en.html

02.02.2023 | INTERNATIONAL INVITED LECTURE

Lecture title: “X-Realty for supporting Human-Centered Design”

Invited by the [ECN - CNRS](#) Master course [Webinar 3D et geospatial](#) of the [Research Group MAGIS](#) (Méthodes et Applications pour la Géomatique et l’Information Spatiale) and [Research Group IG-RV](#) (Informatique Géométrique et Graphique, la Réalité Virtuelle et la Visualization)

14.11.2022 | INTERNATIONAL INVITED LECTURE

Lecture title: “Experiencing Futures with XReality”

Invited lecture for the event launch of the Special Issue of the “Futures” Journal

<https://www.dastu.polimi.it/futures-of-human-nature-relationships-in-urban-planning-design-and-practice>

Flyer \ <https://www.dastu.polimi.it/wp-content/uploads/2022/11/Poster-Futures-Event-14112022-reduced.pdf>

8-9.3.2018 | INTERNATIONAL INVITED LECTURE

Lecture title: "Co-designing and Envisioning the City of the Future"

Invited by [Universitat Politècnica de Catalunya](#) (Barcelona – ES)

19-20.09.2016 | INTERNATIONAL INVITED LECTURE

Lecture title: "Translating ambiances in design: representation and communication, environmental and experiential simulation"

Invited by the University of Thessaly within the GDRF Funded Program Translating Ambiances - 3° Seminar (Volos – GR) www.ambiances.net/gdri-volos2016.html

04-06.07.2016 | INTERNATIONAL INVITED LECTURE

Lecture title: "Level of Details of Augmented Physical Models for Urban Design and Planning"

Invited by CREANU Research Laboratory - International Seminar AAU-POLIMI on *Ambiances & Higher Education* (Nantes – FR)

04.12.2015 | INTERNATIONAL INVITED LECTURE

Lecture title: "Environmental and Experiential Simulation to Design and Evaluate Urban Transformation"

Invited by the Università di Camerino within the Founded Project FAR 2012 Qland-Qlife: Quality of Landscape and Quality of Life in the sustainable Adriatic City. International Seminar (Ascoli Piceno – IT) <http://d7.unicam.it/sad/node/5012>

07-09.10.2015 | INTERNATIONAL INVITED LECTURE

Lecture title: "The phigital future of cities: a possible perspective"

Invited by Ecole Nationale Supérieure d'Architecture de Nantes (ENSA) – *Mobiance 2 Workshop : Capteurs-senseurs en interaction dans la ville* (Nantes – FR). www.ambiances.net/Mobiance2

27-29.04.2015 | INTERNATIONAL INVITED LECTURE

Lecture title: "Interpreting and communicating the atmosphere of places: outcomes from a teaching experience in architecture"

Invited by the Université du Québec à Montréal (UQAM) within the GDRF Funded Program Translating Ambiances - 2° Seminar (Montreal – Québec – Canada) www.ambiances.net/gdri-montreal2015.html

28.11.2014

Lecture title: "Managing complexity through prototypes of future realities: perceptual simulation for designing and evaluating urban transformation"

Invited by the Ecole Centrale de Nantes (ECN) - École Nationale Supérieure d'Architecture de Nantes (ENSA) (Nantes – FR)

15.09.2014 | INTERNATIONAL INVITED LECTURE

Lecture title: "Perceptual Urban Simulations: the relevance of introducing dynamic features"

Invited by the Università degli Studi di Milano Bicocca (UNIMIB) - *International Summer School: The Complexity of Crowd Dynamics: analysis, modeling, simulation* (Como – IT) www.csai.disco.unimib.it/CSAI/Crowd2014

09-12.09.2014 | INTERNATIONAL INVITED LECTURE

Lecture title: "Labsimurb and the Ambiances Research Approach"

Invited by the CREANU Research Laboratory & the GDRF Funded Program Translating Ambiances within the GDRF Funded Program Translating Ambiances - 1° Seminar (Nantes – IT) www.ambiances.net/gdri-nantes2014.html

26.11.2013 | INTERNATIONAL INVITED LECTURE

Lecture title: "Città Studi Sustainable Campus"

Invited by the Green Project Festival (Moscow – Russia) <http://greenproekt.com/program/piga>

13-14.06.2013 | INTERNATIONAL INVITED LECTURE

Lecture title: "Simulation for evaluation: the transformation of the Garibaldi - Repubblica district in Milan"

Invited by CERMA Research Laboratory - Joint International Funded Seminar CERMA – labsimurb: Simulation of Ambient Environment, Virtual Reality and Urban Design (Nantes – FR) www.ambiances.net/nantes-2013-simulation

08-09.04.2013 | INTERNATIONAL INVITED LECTURE

Lecture title: "The Garibaldi-Repubblica Project in Milan: The Labsimurb Simulation Research"

Invited by POLIMI - International Funded Seminar: Public spaces and services in changing urban spaces (Milan – IT) www.dastu.polimi.it/PublicSpace

17.03.2010 | INTERNATIONAL INVITED LECTURE

Lecture title: "Urban Simulation"

Invited by the Moholy-Nagy University of Art and Design (MOME) within the *International Program Course Week* (Budapest – HU)

NATIONAL INVITED LECTURES

15.03.2023 | NATIONAL INVITED LECTURE

Lecture title: "Rigenerazione urbana: il nuovo progetto MUSA"

Invited by POLIMI for the "Workshop PNRR e finanziamenti Smart City" of the [Osservatorio Smart Cities](https://www.som.polimi.it/thesis/smart-city-quali-opportunita-dal-pnrr/) (Osservatori della School of Management del Politecnico di Milano) <https://www.som.polimi.it/thesis/smart-city-quali-opportunita-dal-pnrr/>

13-14.10.2020 | NATIONAL INVITED LECTURE

Lecture title: "Simulazione Esperienziale e Realtà Aumentata nel Progetto Europeo H2020 'Augmented Reality for Collaborative Urban Planning'"

Symposium "REA/ACH-ID - Representation for Enhancement and management through Augmented reality and Artificial Intelligence: Cultural Heritage and Innovative Design" <https://reaachid.wixsite.com/reaach-id>

Invited by the Organizing Committee A. Giordano - Università degli Studi di Padova; M. Russo - Sapienza Università di Roma; R. Spallone - Politecnico di Torino

23-24.11.2015 | NATIONAL INVITED LECTURE

Lecture title: "Qualitative Visibility Analysis with Panoramic Photos and Videos"

Invited by POLIMI within the [International Research Funded Seminar Quality and quantity of visual perception: recent ICT improvements for tridimensional visibility analysis](http://www.dastu.polimi.it/Visibility) (Milano – IT) www.dastu.polimi.it/Visibility

13.11.2014 | NATIONAL INVITED LECTURE

Lecture title: "Il progetto CSCS: Città Studi Campus Sostenibile"

Invited by [Università degli Studi di Milano \(UNIMI\)](http://www.unimi.it/Arte_divulgazione) within the *BookCity: Giornate della sostenibilità. L'arte della divulgazione: ricerca scientifica, cultura letteraria e comunicazione d'impresa. Non solo Scienza* (Milano – IT) www.unimi.it/Arte_divulgazione

18.09.2014 | NATIONAL INVITED LECTURE

Lecture title: "Ripensiamo via Celoria! Comparazione di scenari ed esiti ambientali per una riqualificazione condivisa"

Invited by POLIMI - [European Mobility Week 2014: Le università e la mobilità sostenibile](http://www.campus-sostenibile.unimi.it/mobility_week_2014) (Milan – IT) www.campus-sostenibile.unimi.it/mobility_week_2014

12.10.2012 | NATIONAL INVITED LECTURE

Lecture title: "Il progetto CSCS: aspetti progettuali ed operativi"

Invited by POLIMI - Seminar: *Giornate della Sostenibilità* (Milan – IT) www.campus-sostenibile.polimi.it/GgSost_2012

15.03.2012 | NATIONAL INVITED LECTURE

Lecture title: "The perceived landscape"

Invited by POLIMI - Seminar: *Linear landscape: tools to analyze and manage the linear landscape. Preservation and planning policies* (Milan – IT)

PARTICIPATION TO INTERNATIONAL CONFERENCES & CHAIRING

(2011 – ongoing) **International Conferences Chairing** in several national and international conferences, seminars, and congresses (e.g., EAEA, DCA, REACCH, ...)

(2023, October) [REACH \(REpresentation Advances And Challenges\)](#) | [full paper, oral presentation & Chairing](#)

(2023, September) [UID-44 "Transitions"](#) | [full paper](#)

(2023, August) [EAEA-16 "Envisioning Architectural Scales: in the Analogue and Virtual Representation of Architecture"](#) | [full paper](#)

(2022, [REACH](#) (REpresentation Advances And Challenges) | [full paper, oral presentation & Chairing](#)

(2021, November) ["IMG2021: Image Learning"](#) international and interdisciplinary conference on images and imagination | [full paper, oral presentation](#)

(2021, October) [REACH-ID 2021 symposium](#) | [full paper, oral presentation](#)

(2020, December) [IV Ambiances International Congress 2020: Ambiances, Alloaesthesia: Senses, Inventions, Worlds](#) | Online for Covid-19 | [full paper, oral presentation](#)

(2020, September) **International Talkshow Chairing**

[Smart City International Talkshow: "Future Outlook"](#). 29.09.2020 Ho Chi Minh City & remotly. within the framework of the international competition "Future City: Shaping the unknown future" related to post-pandemic urban challenges. Organizer: University of Economics Ho Chi Minh City (UEH) and Institute of

Smart City and Management (ISCM) Institute of Smart City and Management (ISCM). POLIMI in the partnership (DAStU – labsimurb – B.Piga)

(2019, October) *XIII CTV 2019 "International Conference on Virtual City and Territory"* | Barcelona, ES | [full paper, oral presentation](#)

(2019, September). *EAEA-14 2019: Envisioning ambiances: representing (past, present and future) atmospheres for architecture and the built environment* | Nantes, FR | [full paper, oral presentation, chair](#)

(2018, September) *eCAADe: Computing for a better tomorrow* | Lodz, PL | [full paper](#)

(2018, August) *International Conference on Geometry and Graphics* | Milan, IT | [full paper, oral presentation](#)

(2018, July) *UID 2018: Rappresentazione Materiale\Immateriale - Drawing as (Intangible) Representation* | [full paper](#)

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(2015, September) *EAEA 2015: Envisioning Architecture: Image, Perception and Communication of Heritage*, Lodz - PL | [full paper, oral presentation, chair](#)

(2014, October) *Design Communication Conference 2014: Design & Graphic Palimpsest: Dialogue, Discourse, Discussion* | Atlanta, Georgia –USA | [full paper](#)

(2013, September) *EAEA 2013: Envisioning Architecture* | Milan - IT | [full paper, oral presentation, chair](#)

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- 71) Boffi, M., **Piga, B.**, Rainisio, N., Faccenda, G., & Stancato, G. (2021). ABSTRACT \ Il benessere come elemento di progettazione urbana. Una proposta 'smart'. *13° Giornate Nazionali di Psicologia Positiva*.
- 72) Boffi, M., **Piga, B.**, Rainisio, N., Faccenda, G., & Stancato, G. (2021). ABSTRACT \ A psychological assessment mobile app for collaborative urban planning processes. *11th European Conference on Community Psychology*.
- 73) **Piga, B.**, Caruso, G., Ferraioli, A., & Mussone, L. (2019). ABSTRACT \ Road scenarios level of details for virtual driving simulation. *ETC 2019*

REPORTS

- 74) Balducci, A., Fedeli, V., Longo, A., Medina, T., Morello, E., & **Piga, B.** (2017). *Città Studi Cambia. Un laboratorio delle idee e dell'immaginario scientifico e urbano* (pp. 1–119) [Open Access]. Politecnico di Milano - Comune di Milano. <https://www.comune.milano.it/-/citta-studi-cambia-rapporto-finale>
- 75) Balducci, A., Fedeli, V., Longo, A., Medina, T., Morello, E., & **Piga, B.** (2017). *Città Studi Cambia. Stato dell'Arte* (pp. 1–119) [Open Access]. Politecnico di Milano - Comune di Milano. http://bit.ly/CittàStudiCambia_StatoDellArte

PROFESSIONAL EXPERIENCE

URBAN PLANNING, DESIGN, SIMULATION, AND CONSULTANCY

(2021) Consultancy to Terre s.r.l. for the Environmental Impact Assessment for the city of Venice: analysis of the visual intrusiveness in the UNESCO site 'Venice and its Lagoon' of a new building in Mestre.

(2017 – 2020) Consultancy for Beni Stabili (now Covivio) for the Symbiosis (Milan) urban project: the use of experiential simulation for pre-assessing the experience generated by urban transformations.

(2019) Project leader of Ri-pensiamo via Celoria at Salone del Mobile (INTERNI): Human Spaces: Urban Islands at Università degli Studi di Milano. The project consisted of a virtual experience, with Head-Mounted Displays, of the via Celoria redesign proposal by labsimurb (experiential simulation).

(2018) Urban analysis and scenario for 'Città Studi Cambia' (Milano – IT): technical and scientific support for the definition of new urban scenarios for the urban district of "Città Studi" neighborhood | www.labsimurb.polimi.it/research/citta-studi-2-0

(2014 – 2016) Masterplan and design project for 'Re-thinking of via Celoria' (Milano – IT), within the 'Città Studi Campus Sostenibile' project | <http://goo.gl/RLPFIE>

(2015) Strategic plan and brief for the design competition for the 'Redevelopment of the open spaces of the Campus Bonardi' – preliminary urban design project

(2013) Masterplan 'Incarico per lo Studio unitario e la progettazione di un percorso di connessione tra le stazioni di Milano Bovisio Politecnico (FERROVIENORD) – Milano Villapizzone (RFI)' | FERROVIENORD

(2012 – 2014) Collaboration for the urban re-design of piazza Leonardo da Vinci (Milano – IT), within the 'Città Studi Campus Sostenibile' project | <http://goo.gl/Xd5SWk>

(2012) Strategic plan and brief for the design competition for the 'Redevelopment of the open spaces of the Campus Bonardi' ideas competition | www.campus-sostenibile.POLIMI.it/web/guest/bando

(2011) Strategic Vision and structure of the inter-university project (POLIMI – UNIMI) 'Città Studi Campus Sostenibile' | <https://youtu.be/nSXwqy1R5xM>

(2011) Collaboration with labsimurb and arch. Alessandro Trevisan (Piani e Progetti) | Urban simulation for supporting the urban transformation of Settala municipality

(2007) Collaboration for the *City Plan* of Sesto San Giovanni, Italy | 'Linee guida per il Piano delle Regole di Sesto San Giovanni' | arch. Laura Pogliani

COLLABORATION WITH ARCHITECTURE AND URBAN PLANNING OFFICE

(2005 – 2007) *Urban Planning Office 'Studio Plateia'* (arch. L.Pogliani, arch. A.Arcidiacono, arch. G.Calmanti):

- (2006) Collaboration for the *Strategic Plan* for the Consorzio Area Alto Milanese – CAAM | 'Ricognizione e valutazione delle potenzialità di sviluppo strategico dell'area intercomunale del CAAM' | Studio Plateia (arch. L.Pogliani, arch. A.Arcidiacono, arch. G.Calmanti)
- (2006) Collaboration for the *Strategic Plan* of Scandicci, Italy | 'Piano Strategico e della Mobilità di Scandicci' | Studio Plateia
- (2006) collaboration for the updating of the RSA (Relazione sullo Stato dell'Ambiente) for the Comune di Milano | Studio Plateia

(2005 – 2007) *Architecture and Urban Planning Office 'Piani e Progetti'* (arch. Paolo Maffioletti, arch. Alessandro Trevisan)

- (2005) 'richiesta di Verifica per l'esclusione dalla procedura di VIA' e per il 'rapporto di impatto: compatibilità urbanistico-territoriale' per "Integrazione al PRU quartiere ERP - ex Incis' a Pieve Emanuele (Mi) | Studio Plateia and Piani e Progetti

(2006) *Architecture Offices*

- (2006) Collaboration for residential design projects in Milan | arch. Luca Mangoni
- (2006) Collaboration for the architectural design competition of the residential building in via Moscova, Milan, Italy (invited architect by Pirelli RE) | arch. Luca Mangoni
- (2002 – 2003) Collaboration for interior design of the lobby of the Canon Italia main office, San Donato (Mi), Italy | ARX - arch. Fulgenzio Maffezzini
- (2002 – 2003) Collaboration for residential interior design projects in Milan | ARX - arch. Fulgenzio Maffezzini

MEDIA COVERAGE (selection)

12/05/2021

Wired Next Fest | Marco Boffi & Barbara E. A. Piga (interview)

Wired Next Fest - Equilibri

Pagina Web intervista

Costruire il luogo in cui vorremmo vivere

<https://nextfest2021.wired.it/evento/luoghi-vivere-boffi-piga/>

Video dell'intervista

CitySense, la realtà virtuale aiuta a capire la città che cambia

<https://next.wired.it/wired-next-fest-2021/citysense-la-realta-virtuale-aiuta-a-capire-la-citta-che-cambia/>

12/05/2021

RAI Radio 1 - Eta Beta | Barbara E. A. Piga (interview)

SPORTELLO ITALIA - Rai Radio 1 - RaiPlay Radio

www.raiplayradio.it/audio/2021/05/SPORTELLO-ITALIA-84e25955-9204-406c-ac96-f631599759f9.html

09/2019

RAI 3 | Barbara E. A. Piga (interview)

Memex Doc – CambiaMenti – pt.6: Città

www.raiscuola.rai.it/programma-unita/memex-doc-cambiamenti-pt-6-citt%c3%a0/321/42690/default.aspx

24/03/2017

Ingenieri.info | Barbara E. A. Piga (interview)

Simulazione Architettonica e Urbana: quali sono gli obiettivi e cosa si studia al Politecnico di Milano?

www.teknoring.com/news/riqualificazione-urbana/simulazione-architettonica-e-urbana-quali-sono-gli-obiettivi-e-cosa-si-studia-al-politecnico-di-milano

03/08/2009

Corriere della Sera | Fausto Curti, Andrea Arcidiacono, Barbara E.A. Piga (newspaper page)

Torri e parchi, la sfida della città verticale

OTHER SKILLS

(12-19-30 Nov 2015) Project Management Certificated training courses | Politecnico di Milano (MIP) |

(29-30 Oct 2014) | Eye Tracking Masterclass for Behavioral Research Certificated Training courses | Tobii AB (Stockholm, SE)

(2009, since) EU licensed Architect | Registration Member n. 17007 of 'Ordine degli Architetti, Pianificatori, Paesaggisti e Conservatori della Provincia di Milano'.

Languages (oral & written): *Italian* (native), *English* (excellent), *Spanish* (very good).

REFERENCES

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Milan, 08/03/2024

Barbara Piga

Autorizzo il trattamento dei dati personali ai sensi del D.Lgs. del 30 giugno 2003, n. 196 (Codice in materia di protezione dei dati personali) e del GDPR 679/2016 (Regolamento Europeo sulla Privacy).