ARCHI-TECTURE IN THE AGE OF DIGITAL MEDIA

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philosophy
& architecture
symposium

25-27 MAY 2023
UNIVERSITY OF PATRAS,
DEPARTMENT
OF ARCHITECTURE,
PATRAS, GREECE

BOOK OF ABSTRACTS

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Book of Abstracts

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PROGRAM

25th May (on-line parallel program)

International Seminar in Philosophy,
Architecture, Education, and Legislation

The Truth of/in Building

15:30 | Prof. Dr. Luis Umbelino, University of Coimbra, Portugal, luis.1belino@gmail.com

| Prof. Dr. Christian Frost, London Metropolitan University, England, c.frost@londonmet.ac.uk — Building Meaning: The Festival Experience and Architecture

| Prof. Dr. Alexis Tzompanakis, Technical University of Crete, Greece, atzobanakis@tuc.gr — Identity Mapping and Memory Palimpsests

| Dr. Justin Snell, University of Cape Town, South Africa, snell.justin@gmail.com — Dwelling and Clearing: Truth, Topology, and Topography in Respect of Architec-ture and the City

| Prof. Dr. Dr. Andrzej Wierciński, University of Warsaw, Poland, andrew.wiercinski@gmail.com — Building as A Source of Energy (ἐνέργεια and δύναμις) for Cultural and Social Engagement

20:00

Faculty of Artes Liberales
University of Warsaw

25th May (thursday)

	author	paper	chair
09:30		Reception of the speakers	
10:00	Constantinos V. Proimos	Welcome	
10:30	Theodore Spyropoulos	Keynote	Vasiliki Petridou
11:00			
11:30		**Coffe break**	
12:00	Phoebus Panigyrakis	Beginnings of "Architecture and the Computer". The First Conference on Digital Architectural Design at the Boston Architectural Center, 1964	Sophia Vyzoviti
12:30	Konstantinos Grivas	The Quadripartite Fix as Counteraction to the Transient Architecture of the Early Digital Era	
13:00	Valina Geropanta	Digital Technologies in City Planning in the Global South: an Overview of Selected Case Studies	
13:30	Giannis Perperidis	Smart Cities as Digital Games: A Critical Approach to the Gamification of the Smart City Production	
14:00		**Lunch**	
16:30		**Lunch**	
17:00	Dimitrios Moutafidis; Spiros Papadimitriou	Transcendent Mediations and the Matter of Truths: Modeling Sacred Sites of the Nymphs	Constantinos Moraitis
17:30	Dimitris Gourdoukis	After Digital: The Analog and the Aesthetic	
18:00	Sergio P. Amorim	How To Do Architecture: Analogue Versus Digital	
18:30	Pedro B. de Araújo; Sérgio P. Amorim	Two Hands to Philosophize	
19:00		**Coffe break**	
19:30	Melanie Martins Barroso	Body-Device *(on-line presentation)*	Katherine Liapi
20:00	Sofia Souvatzoglou	Pseudomedic Abodes Culture VS Pseudocodes' Metastructure	

26th May (friday)

	author	paper	chair
09:30	Katherine Liapi	Algorithmically Generated Minimal Surface Structures of Floating Compression: In Search of a New Spatiality and Embedded Meaning	Konstantinos Grivas
10:00	Konstantinos Moraitis	Aesthetics of Science or Scientific Approach Transmitted into Arts? Topology, Philosophy, Biology and Computational Design as Cultural Transference or Metaphor	
10:30	Agapi Proimou	Well into the Architecture of Digital Media. A Critical Review in a Contemporary Context on the Article "Towards a New Architecture" by Jeffrey Kipnis	
11:00	Marianna Charitonidou	The Digital Turn and the Transformation of Architecture's Ontology: Experimenting with Geometry, Virtual Reality and the Big Data	
11:30		**Coffe break**	
12:00	Spiros Papadimitriou	Narratives of Technical Images; The Smart Phone Architect	Vítor Alves
12:30	Antonio J. Cidoncha	A Brief History of Architectural 3d Rendering *(on-line presentation)*	
13:00	Fabiano Micocci	New Forms of Contextualism. Post-Digital Collage and the Representation of Cities *(on-line presentation)*	
13:30	Ioanna Symeonidou	Recent Developments in Architectural Representation: From Digital to Immersive	
14:00		**Lunch**	
16:30		**Lunch**	
17:00	Saul Fisher	Authorship, the Digital, and the Abstract Architectural Object	Giannis Tsiaras
17:30	Alexandra Stratou	The Craftsman is Dead. Long live the Practice of Crafted Instructions	
18:00	Sotiria Alexiadou	Authenticity in Architecture of the Digital Media Age and Challenges in its Future Conservation	
18:30		**Coffe break**	
19:00	Paraskevi Panteliadou	QUASI OBJECTS. Introducing the Concept of Vagueness and the Mechanism of Amphiboly in Architecture and in Non –Architectural Regimes of Transformation and Deformation	Giannis Tsiaras
19:30	Ramsey Eric Ramsey; Diane Gruber	Measure for Measure or Building, Dwelling, and Poetry's Opening of Measurability	
20:00	Anna Karagianni	Shaping Human – Centric Strategies Through Neuroscience: using New Technologies to Measure User Perception of the Built Environment	

27th May (saturday)

	author	paper	chair
09:30	Vasilis Stroumpakos	Words, Hybrids and Copilots: Exploring the Application of Diffusion Models and Natural Language AI Systems in Architectural Design Research and Concept Generation	Eric Ramsey
10:00	Constantinos V. Proimos	Digital Forms, Architectural Bonds	
10:30	Sophia Vyzoviti	The Ground as Concept Model	
11:00	Giannis Tsiaras; Fotis Sagonas	Workflow in Architrecture: Post-CAD Era	
11:30		**Coffe break**	
12:00	Alexandros Christodoulou; Ioanna Symeonidou	Architectural Workflows in the Age of Disruptive AI Technology	Eric Ramsey
12:30	Smaro Katsangelou	From Piranesi to Midjourney: The Future of Avant-Garde Architectural Conception	
13:00	Andrew Wiercinski	Keynote	Constantinos V. Proimos
13:30			
14:00		**Lunch**	
16:30		**Lunch**	

ABSTRACTS

AGAPI PROIMOU

Well into the Architecture of Digital Media. A Critical Review in a Contemporary Context on the Article "Towards a New Architecture" by Jeffrey Kipnis

In the year 1993, in the AD issue "Folding in Architecture" appeared the very influential and seminal essay "Towards a New Architecture" by the American critic Jeffrey Kipnis. In his essay, Kipnis is elaborating in detail the notion of a New Architecture that is arising under the influence of recent developments in geometry, science and the transformations of political space in the beginning of the digital era. New Architecture, according to Kipnis, fundamentally differentiates from the homogeneous universal space of Modernism as well as from the incongruous heterogeneity that is produced from the Post- Modern collage, as it distances from the logic of erasure, it aims for heterogeneity under a proposal of principles for design and it experiments with/projects new forms. New Architecture is subdivided in two broad camps: InFormation and DeFormation, that are formulated through the comparison and the analysis of the critical spatial strategies, the instrumental design techniques and the production of architectural effects of exemplary projects of that period. The two disparate directions embody the characteristics of the five points towards a New Architecture – vastness, blankness, pointing, incongruity and intensive coherence - as defined by Kipnis himself. At the conclusion of the essay, it is underlined that InFormation and DeFormation have broached the problem of the New but still remains to be seen if either or both are going to evolve to a New Architecture that will "promote form vitality and political relevance".

Today, 30 years later and following the consequences of the financial crisis of 2008, what exactly the architectural landscape looks like? Is it possible to apply the five criteria of the New Architecture, as defined by Kipnis, in the emerging new forms of practice that have grown in popularity since? Furthermore, the two disparate camps of InFormation and DeFormation, that were clearly distinguished in the architectural discourse of early 90s, remain intact today or they have merged into a single seamless organization, a hybrid? Finally, the wishful thinking of a politically engaged and stimulating aesthetic or institutional form that would define the characteristics of a heterogeneous space as a democratic vital space, nonrepresentational but crucially spatial was grasped in the contemporary architectural discourse?

ALEXANDRA STRATOU

The Craftsman is Dead. Long Live the Practice of Crafted Instructions

In "The Craftsman", Richard Sennet restores the value of craft as a paradigm of practice that elevates the human condition once it ceases to be regarded through a polarized relationship with moral judgement. Acceleration of the craftsman's tool to become machine furthered the rift between maker and user, eradicating the former and labelling the latter as consumer. Craftsmanship is understood as the nostalgic remnant of times past, an *objet d' Art*, or at best an incubator for the Artist who produces the signed, unattainable art object. Focusing on the redeeming qualities of materiality as a challenge rather than a commodity, suggests the substitution of the term *consumer* with a term that aspires to a participatory role for humans who are experiencing remorse over the involvement of man-made technology in the ecological crisis and a heightened sense of alienation from the means of production of one's vital elements.

A step toward the reinstatement of craft as practice, were strategies forged in the 60's and 70's to relinquish authorship of the art or design object. In Sol LeWitt's large-scale wall drawings the creative focus is removed from the object and placed on the process. The author codifies practice through detailed design of the rules and instructions that define it. A similar quest, one that acknowledges estrangement between maker and user, motivates the compilation of "Autoprogettazione" by Enzo Mari, who offers exercises of implementation in furniture-making as a series of hands-on courses. *Design* is separated from mass-production, and herein lies the superiority of the *chart of crafted instructions* in comparison to the industrial mold. Both mediums seek to control the outcome, the former resulting to rigid sameness reinforcing the identity of *consumer*, the latter generating variables of the same object or image involving the user into the process of making. In LeWitt's case, the removal of the *Artists' hand* while retaining the status of the artistic object is key.

This questioning of the *hand* as an agent of authorship created the context for the introduction of digital manufacturing platforms and applications of Artificial Intelligence in cultural production. The work of Channa Horwitz, Casey Reas, and Mika Tajima builds on the legacy of Art based on instructions. The 3-d printer, in its many capacities and forms allows for non-regulated small-scale production on a need-to-use basis, which in its most extreme applications may reintroduce craft's "pandoric" effect that Sennet seeks to restore. Furthermore, AI image generators such as Crayion or DALL-E enable the user to participate in the design process and image creation through crafted instruction. These applications may produce results that are viscerally readable, yet they still rely on the inherited mind to hand correlation which is vital to the human condition. Contemporary forms of process-based design practices address issues of maintenance and repurposing as part of an active design agenda that seeks to involve the recipient of their product. If craft is to survive through the *practice of crafted instructions*, hands-on experience of both author and recipient should be considered *sine qua non*.

ALEXANDROS CHRISTODOULOU, IOANNA SYMEONIDOU

Architectural Workflows in the Age of Disruptive AI Technology

Artificial Intelligence is rapidly changing the landscape and workflows of multiple professions. Recently, developments in AI algorithms using text prompting as an interface have largely reduced the barrier-to-entry for these systems, allowing larger parts of the public to interact with them. For professions such as digital artist and programmers, systems such as Midjourney[6] and ChatGPT[3] are already seen as a possible facilitator of related workflows but also as a possible competitor to the human workforce in these fields.
This paper will investigate the potential uses of such systems in contemporary architectural practice as well as the factors limiting their current usability. Text prompted AI applications for architectural purposes have been investigated already by researchers[3] in recent years. While there are benefits in having natural language as input to computational design, related to the democratization of computational design and the reduction of the steep learning curve related with the field, the challenges in making systems precise enough to address the very detailed and complex logical processes of architectural design are reasons for the reduced uptake in the field so far.
Architectural AI researchers underline that while the challenge of an AI system providing an end-to-end solution to an architectural design problem is unlikely within the next years, due to the interdependence between complex multidisciplinary design systems- breaking up phases of the design process to bounded sequential processes which would then have set requirements and results allows for possible applications already in contemporary practice[4]. For example, generative image creation algorithms can be utilized in very early design stages as additional inspiration[2] while surrogate machine learning models can be utilized on later design stages to evaluate large numbers of design alternatives[5]. Given the uncertainties related to the statistical nature of ML results, its usability in the later design stages is reduced due to the increased importance of simulation accuracy in these stages.
The ability of the human brain to take into account analyses parameters related to multiple design phases and stages is an important reason why the driver of these separated design processes is the reason why there haven't been applications of fully automated architectural design powered by AI. Therefore, for the forthcoming years the modes and means for human-machine interaction related to architectural design processes are of primary importance. While text prompting seems to be a promising means towards a more natural definition of design boundary conditions for designers, there are also significant challenges related to achieving the level of specificity present in current parametric design workflows. The paper will demonstrate the use of currently available AI tools that can be easily incorporated within architectural workflows – therefore excluding tools that require deep ML background for users - within a design case study in order to demonstrate their potential and limitations and discuss the possible futures of human-machine architectural design collaboration.

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[2] Bolojan, D., 2022. Creative AI: Augmenting Design Potency. Architectural Design 92, 22–27. https://doi.org/10.1002/ad.2809
[3] ChatGPT [WWW Document], n.d. URL https://chat.openai.com (accessed 12.15.22).
[4] Bolojan, D., 2022. Is Language All We Need? A Query Into Architectural Semantics Using A Multimodal Generative Workflow – caadria 2022, n.d. URL https://caadria2022.org/is_language_all_we_need_a_query_into_architectural_semantics_using_a_multimodal_generative_workflow/ (accessed 12.15.22).
[5] Kabošová, L., Chronis, A., Galanos, T., Kmeť, S., Katunský, D., 2022. Shape optimization during design for improving outdoor wind comfort and solar radiation in cities. Building and Environment 226, 109688. https://doi.org/10.1016/j.buildenv.2022.109688
[6] Midjourney [WWW Document], n.d. . Midjourney. URL https://midjourney.com/home/?callbackUrl=%2Fapp%2F#about (accessed 12.15.22).

ANNA KARAGIANNI

Shaping Human – Centric Strategies Through Neuroscience: Using New Technologies to Measure User Perception of the Built Environment

To what extent does the combination of spatial interaction, psychology and architecture affect the human mind? How can architects, designers and psychologists collaborate towards radically changing the way people perceive the built environment? How can interactive technologies contribute to unveiling the connection between space and the brain? This paper seeks to bring into light different methodologies at the intersection of theories related to space, architecture, and human - centric interactive technologies. Borrowing theories of psychology and spatial perception (Vischer, 2004), the research presented here intends to investigate the interaction between space and human behavior.
As such, two case studies are presented. For the first case study, Smart Agora, the objective was to decipher user experience within the emblematic building of the Municipal Market of Chania, by establishing a temporary digital environment within the bustling physical space. The second case study presents a user-centered, design-driven application, based on AR technology, called Chroma. The study aims to designate the inextricability of color and space, by creating a vast number of different colors and combinations and an interactive tool that enables users to experiment with it in space. Within the application, users created their own color combinations and explored how different combinations could change our perception of space. Through the user interface, users were able to choose and experiment with a wide range of palettes. Each palette was created as a result of previous theoretical research on theories of color and contrast.

In both case studies, the research team empirically observed the process and collected questionnaires from users during the experiments, to extract measurable results and better understand the relationship between user, space, and the virtual environment.
The findings of the studies offer important insights into the way that user experience has been transformed by new technologies. This study acts as a knowledge container of spatial analysis, thus creating user knowledge, emerging from interaction design research and lay between general theories and specific instances. It is, in fact, obvious that, through the superimposition of the physical, digital, human and interaction layer, new strong concepts will be identified, articulated and discussed in the field of Neuroscience and Human-Centered Design.

Vischer, J. (2008) *Towards a user-centered theory of the built environment*, Building Research & Information, 36:3, 231 – 240, DOI: 10.1080/09613210801935472.
Alavi, H. S. (2017). *The Evolution of Human-Building Interaction: An HCI Perspective* Interaction Design and Architecture(s) Journal - IxD&A, N.32, pp. 3-6

ANTONIO J. CIDONCHA
A Brief History of Architectural 3d Rendering

The origin of rendering as a means of architectural representation has a diffuse time frame. However, the perspective offered by the 30 years since the launch of 3DStudio allows us to venture into a brief contextualised history of this digital medium, essential today and which has undoubtedly changed the work dynamics around the discipline. Zaha Hadid, described the significant and suddenly changed approach to architectural visualizations as ''Moving away from certain dogmas about what architecture is.''

This text proposes a narrative based on a chronological compilation of computer-generated images that draw parallels with the most relevant built architecture, the photographers who portrayed them, and the publications that provided a theoretical framework for each historical period.

Luis Fernández Galiano refers to the last decade of the twentieth century and the first decade of the twenty- first century as "the Age of Spectacle". Frank Ghery's Guggenheim Museum in Bilbao exemplified a digital architecture from its conceptual foundations that was distributed at great speed thanks to the appearance of the internet as a means of cultural consumption. The photography of Roland Halbe and Iwan Baan began to compete in architectural magazines, physical and digital, with the brilliant renderings of Luxigon, which incorporated in their images the new systems for calculating reflectivity and transparency of materials.

The beginning of rendering as a discipline was associated with and limited by complex and expensive hardware and software, which restricted its use to practices of great economic capacity. The "StartArchitects" not only made visible the ability to create new forms, but also an ostentatious way of representing them, which for the first time in history became available only to a few.

The bankruptcy of Lehman Brothers in 2008 brought about a change of direction in the world economy. That same year's Pritzker Prize for Peter Zumthor's handcrafted production also heralded a renewal of references. Paradoxically, the advance in the production of computers with greater processing capacity democratised the production of images. Their production ceased to be a technical or economic problem. Once the technical means had been conquered, the production of images approached this artisan, almost dreamlike vision of our profession. Forgetting the wide-angle or the over-reflectivity of surfaces, studios such as Mir or The Boundary focused on conveying and interpreting atmospheric qualities of architecture, in the same way that Helene Binet portrayed Zumthor's architecture.

The sustainable endeavour with which our profession is trying to engage in the fight against climate change is represented in the last decade by silent, sometimes anonymous architecture, such as that of Lacatton and Vassal. Building on the existing city, they combine industrialised resources to produce new housing paradigms. This vindication of the beauty of the ordinary, of what has always been there, appears in the gaze of ArtefactoryLab for new projects by Baukunst or Muoto, in which the environment acquires a natural protagonism, combining post-production strategies with notable technical refinement.

CONSTANTINOS V. PROIMOS

Digital Forms, Architectural Bonds

The emergence of digital media has changed the profession and practice of architecture. On the one hand, it has allowed complex calculations and intricate problem solving using algorithmic applications. On the other hand, the architect is obliged to release control of the design process to software. Digital design favors dynamic adaptation of building forms to the constantly changing demands of contemporary multicultural societies. Architecture thus incorporates factors of time, motion and force on form via transformation and deformation at the very moment of formal inception. The shapes formed in computer-aided design are the result of decisions made using parameters. One of the challenges that have emerged with digital design media is how to develop techniques that translate quality and lifeworld matters into quantifiable parameters. In a highly corporate and commodified world, the stake is to deliver architecture back to its users enabling them to actively participate in the creation, appropriation and distribution of design with the ultimate goal to create an architectural bond among people.

DIMITRIOS MOUTAFIDIS, SPIROS PAPADIMITRIOU

Transcendent Mediations and the Matter of Truths: Modeling Sacred Sites of the Nymphs

The present research investigates the ways that transcendence is mediated spatially. Cave shrines of the Nymphs are analyzed and conceptualized as emergent spatial effects of transcendent mediations between secular and sacred realities. We use the term transcendent mediations to describe mediations that obtain agentive capacities to materialize entanglements between suppliants' secular human world and the sacred non-human worlds of the votive offerings and the supernatural deities.

We will investigate this hypothesis through the design of a spatial model that attempts to represent these transcendent sites. This model is formalized as a sequence of digital and analogue mediations. Analogicity and digitality are not approached as opposite encoding processes, but as overlapping realities. We want to emphasize the creative transition from one mediation to another and study them as complementarities. From the one side, the analogicity of the indivisible between matter and meaning, suppliants and votive offerings and from the other side, the digitality of rituals as discrete repetitive motions and the digitality of the diachronic, topological and collective accumulation of information inside the sacred caves are transcribed within the spatial model. Especially, we want to pay attention to the moments when the encoded information of model's mediations are deterritorialized, virtualized and turn into data; into a magma that its form and meaning, appearance and being converge; and after that, the ways that these data are territorialized back as in-formation. The added information that the proposed model introduces is a series of material investigations that encode digitally and analogically the transcendent mediations. Votive offerings' materialities(pigments, collagen, oxides) are transformed into spatial models through analog mediations. Then these material performances, as analogue effects, are re- encoded digitally through photogrammetry and rematerialized as eternal digital fragments; as suppliants new embodiments and fleshes. They are preserved digitally as encoded skins, memory fragments and dynamic archives of the past transcendent mediations. Foremost, suppliants devotion is re-encoded and preserved eternally as truth.

We call eternal truth the permanent presence of a body regardless of the world(physical or virtual), material appearance and the identities that are projected onto it. We are mainly interested in the transitions and ways that this truth is rematerialized; the ways votive offerings embody suppliants and become eternal mediums of their devotion inside the cave shrines. Inspired by the thought of Vilem Flusser concerning the anthropology of media and Alain Badiou concerning truths, eternity and worlds, we will trace the capacities of matter to define eternities, deep-time embodiments and dynamic memory structures through these digital and analogue mediations. Finally, is transcendence the ultimate convergence of meaning and form, presence and trace, physical and virtual worlds? Is it a metaphor that makes mediation visible as mediation; as the underlying multiple, in every singular expression, truth?

DIMITRIS GOURDOUKIS

After Digital: The Analog and the Aesthetic

Digital media went over the course of 30 years from being an alternative - and in many cases experimental - approach to architecture and design to forming the almost exclusive framework within which architecture is operating. Digital tools, techniques, and technologies are today the main means of architectural production, and they dominate every aspect of it. During the course of those 30 years one can also observe a significant shift in our understanding of the nature of digital media as well as a shift in our aspirations concerning their contribution in the design process. Initial approaches tended to understand digital tools as a "liberating force". As the means that can set the design process free from the standards that have been dominating architectural practice for almost a century under the influence of modern architecture – and modernity at large. What followed was a period of constant 'digital design maturation'. Architects begun mastering digital tools, developed a new-found sense of virtuosity and digital craftmanship and through scripting harnessed the concept of control, inherent in all digital tools. But while this inevitably led to the domination of digital media that we experience today, another concept became important: that of the protocol. Doubling also as a technology, the protocol refers to the framework, the set of rules and standards that makes every digital technology possible. It describes the way in which it operates and makes clear that control and who has access to it is central to all digital media. It also dispels any illusions that digital tools could be the means that liberate us from all the standards set by modernity. In fact, protocols make clear that digital technologies, in reality the pinnacle of modern thinking, make the domination of any kind of standards absolute.

The effects can be observed in architecture in many ways; one of the most obvious being the homogeneity of the results produced by digital means. The more variation digital tools seam to offer, the less variability is observed in design outcomes. Recent examples of AI- produced architectural images emphasize that observation.

Today therefore, while the 'second digital turn' moves towards its closure, it becomes clearer that architecture needs to break free from the dominance of digital protocols and the homogeneity that inevitably they impose. The proposed paper presents in detail the timeline described above and proposes two direction that architecture could follow towards that end. The first is that, through the realization that the digital in the ultimate creation of modernity, the concept of the analog could present an alternative direction – where the analog refers to a way of thinking and not to the return of pre-digital practices. The second is through the concept of the 'aesthetic' replacing that of the 'scientific' in the ways that we understand and try to approach innovation. Both are ultimately attempts to underline and enhance the importance of the production of subjectivity, in architecture and design as in any other cultural production.

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Deleuze, Gilles, *Francis Bacon: The Logic of Sensation*. 1st ed. Minneapolis: Univ Of Minnesota Press, 2005.
Galloway, Alexander R., *Protocol: How Control Exists After Decentralization*. Cambridge, Mass: MIT Press, 2004.
Guattari, Felix, *Chaosmosis: An Ethico-aesthetic Paradigm*. Power Institute of Fine Arts, 2012.

RAMSEY ERIC RAMSEY, DIANE GRUBER

Measure for Measure or Building, Dwelling, and Poetry's Opening of Measurability

For [the natural scientist] can only measure, and thereby he always already presupposes measurability.
—Martin Heidegger, *Zollikon Seminars*

In this essay we begin with a brief readingof Ruben's classic painting *The Consequences of War* to set the stage for a hermeneutic discussion of poetry/measuring following Heidegger's reading of the line ". . .poetically man dwells. . ." from Hölderlin. We suggest whatever use we must necessarily make of ruled and metric measuring in our quotidian and practical affairs, it is always proceeded by an opening of world that poetry makes possible bythe disclosure of measurability. These insights following from Heidegger's interpretation along these lines will then be turned toward thoughts concerning how dwelling today faces many threats to its being capable of building (threats which are perhaps exacerbated by the onset of the digital age).

FABIANO MICOCCI

New Forms of Contextualism Post-Digital Collage and the Representation of Cities

In recent years, there has been a return of the relevance of analogue drawings in architecture in the many expressions of handmade drawing, collage, physical model, other mix-techniques and the so-called Post-Digital drawing. The term Post-Digital was introduced in 2000 by the musician Kim Cascone among music producers and then it has been extensively diffused among various other fields like arts, humanities, and science. In 2017, Sam Jacob extended this term to the field of architecture with a focus on representation. Although the large success of this kind of drawings among architects, its spread also raised many criticisms about its real efficiency on shaping the reality (Ferrando, Carpo, Ghosh, Zembeletti) because of its apparent disjunction between drawing and the real. Therefore, Post-Digital drawing is a limitation or an expansion of architect's knowledge towards reality?
Post-Digital architecture has been investigated also at many other levels and had an impact on theoretical thinking with a renewed interest in Euclidean geometry (Berry), picturesque (Colletti), data management (Carpo), context (Negroponte), sameness (Vassallo), production (Hopkins) and dissemination (Ferrando). These positions are all associated with a significant change in the use of data, that moved from the search for new forms towards the manipulation of the existing data to be personalized. This mutation has signed the retirement from the restless research for formal innovation and the arising of an urgent need to innovate contents. According to Neil Spiller, this epistemological turn is characterized by the abandonment of the objectivity of the technological determinism common in digital culture in favor of a relativism procured by the comeback of subjectivity that may raise questions in front of the many unknowns of the world.

In this paper, the Post-Digital will be investigated in the interlacing relationship between the two issues presented above: the return of the *maniera* of analogic drawing that renews the historical legacy of the *architecture on paper*, and the significant turn backwards of the digital that cares more about the management and the transmission of data. An example of this combination is the success of post-digital collage that is widely used both into theoretical speculations as well as into design process. If, at the one hand, post-digital collage follows the long tradition of collage art since the beginning of the Twenty Century, at the other hand it makes a large use of digital technologies, online resources, and social media, thus updating the way it is produced. The interlacing of the art of collage and the use of digital tools has shaped a renovated interest towards contexts and cities, where individual's subjectivity meets an enormous amount of data available – mainly images – easily accessible. The work of some architects that use post-digital collage to investigate the role of architecture in specific cities will be presented as case-studies to demonstrate the contextualization of the digital in architecture.

GIANNIS PERPERIDIS

Smart Cities as Digital Games: A Critical Approach to the Gamification of the Smart City Production

In many of his writings, Juhani Pallasmaa (2012) criticizes architecture tendencies that are exclusively dependent on computers and calculations that produce buildings and urban technical artifacts that only satisfy the eye. Today we could add that such tendencies utilize more advanced digital technologies that intensify the problems Pallasmaa detected. But the crucial feature of today's digital technologies is that they are gamified. Such gamification occurred through the incorporation of the artistic critique of the counterculture movements and the events of May 1968 as Luc Boltanski and Eve Chiapello argue in the book *The New Spirit of Capitalism*. According to them, today's production reflects the structures of games and so do the products created. Cities are such products too. In my paper I will try to show the gamified aspects of the smart cities that are being designed and constructed today like "The Line" or "Eco Atlantic", highlighting that such designs incorporate the features that gamification introduced in production: increased productivity and economic efficiency. Thus smart cities that are designed digitally reminding cities in games like *Anno 2070* (Ubisoft) may incorporate futuristic aesthetics and feature innovative future designs but essentially they aim at profit as every other technical artifact designed as a game in capitalism. As gamification in companies and production aims at increasing productivity levels, so gamification in designing cities aims at welcoming more guests and raising profits for whoever constructs the city. Huge skyscrapers, spaces of green with pools and fountains, dazzling public buildings and more, all having constructed in such a way as for citizens to think they live in the world of *Cyberpunk 2077* (CD Projekt RED) still perpetuate (and maybe intensify) problems that Pallasmaa and other scholars identified in current cities. The paper will conclude that in opposition to the initial claims by game designers that gamification may be the solution to huge problems like that of environmental crisis (McGonigal), current gamifying strategies that influence digital urban design cannot escape from the capitalistic "technical code" and so they cycle through the "operational autonomy" of capitalistic enterprises (notions drawn from Andrew Feenberg's philosophy of technology), with greater social, economic and environmental consequences than before.

GIANNIS TSIARAS, FOTIS SAGONAS

Workflow in Architecture: Post-CAD Era

workflow: the way that a particular type of work is organized, or the order of the stages in a particular work process
—Cambridge dictionary
We are trapped, as designers, in the same running-to- stay-still dance of Alice's 'Red Queen' as we attempt to cope with the onslaught of chance that the virtual world brings to us.
—Neil Spiller[1]

The workflow that one follows to tackle a design request as a part of architectural production, can be broken down in three different stages: the design approach in relation to the requested project (work), the visualization of the final proposal, and the production of a model of it (virtual or real at scale), which incorporates all the construction aspects dictated by the material expression (realization) of the proposal.
The concept of workflow in architecture started to emerge and became more systematic in the digital era, particularly with the appearance of the first 3D design programmes, which have resulted in the emergence of the CAD era. Historically, CAD practice has failed to keep up with the needs of the construction sector. These have started getting more demanding, due to the sector's better ability to manage complex geometries, and as a result of digital fabrication. Therefore, the architectural question has also started shifting, from the representation of architectural information to its management and dissemination.
In the beginning of the post-CAD era, the BIM design practice appeared as the optimal approach regarding the management of design information. Thus, it started producing new hierarchies and protocols, and familiarizing its users with continuously changing workflows.
BIM technology has emerged as the ultimate software expertise for building design and construction.
The architect dives into the simulation-modelling environment of BIM technology, producing new ways of organizing the design process – therefore, new workflows. The question of how design software, both on the tool and interface level, affects the way architecture is produced, remains.
Through the constant interaction between architects and their virtual design environments, new workflows are created and organized. These workflows produce new behaviours that destabilize the role of architecture in the contemporary social and economic context. Science, social structures, and the media are in a constant vortex. In this new reality, on the edge of era that has set new standards, we are called to redefine our relationship with potential. Still, the architect's responsibility for the built environment they produce remains, quite dramatically, in the foreground.

[1] Papadimitriou, S.I. (2005) "Architectural Futures," in Digital topo_graphies. Techniko Epimelētērio Hellados, Tmēma Kentrikēs Makedonias, p. 33.

IOANNA SYMEONIDOU

Recent Developments in Architectural Representation: From Digital to Immersive

Architectural representation has always been a research topic among architects, both in academia as well as in praxis. Recent digital developments have had a strong impact on representation techniques and style, as well as on the creative process and the design itself. As Mario Carpo explains in the Alphabet and the Algorithm, "all tools feed back onto the actions of their users, and digital tools are no exception [...] manufactured objects can easily reveal their software bloodline to educated observers" (Carpo, 2011). At the same time, contemporary virtual aesthetics in architecture (Eloy et al., 2021) define a new paradigm and further push the technological boundaries with the incorporation of digital media from the world of gaming that are repurposed for architectural representations. VR/AR headsets and immerse space experiences are changing the nature of architectural representation in an unprecedented manner. Since the first important milestone in CAD with Sutherland's Sketchpad at MIT in 1963 (Sutherland, 1963), developments in the design and representation of architecture have been exponential. Early CAD systems leveraged the aesthetics of wireframe representation and low- resolution computer graphics, to later give rise to photorealistic representations. A series of styles and paradigms emerged from the interplay of tools, design processes and visual culture (Symeonidou & Papapanagiotou, 2021) that were propagated across the world wide web and further influenced the design community and enabled a creative dialogue across architects and visual artists.

The advancements of computer graphics, game engines and digital design media did not only affect the style of architectural representations but also the level of interaction and embodiment of the user within an immersive experience of virtual spaces, by introducing motion and time, resulting in the blending physical and virtual worlds (Symeonidou, 2021). Envisioning architectural spaces has changed radically, departing from the ambition to emulate manual design processes with the computer, producing floor plans and sections with CAD tools, what Terzidis would refer to as "computerized architecture" (Terzidis, 2006), architects have already moved one step further by introducing computational strategies to explore or analyze architectural form, generate algorithms that perform specific tasks within the creative process and utilize the immense power of computation for solving problems and generating more geometrically complex architectural works. The developments of design processes and representation processes, although they refer to discrete phases of architectural design, they do affect each other reciprocally. Deconstructivist architecture had a clear affinity to architectural collages, while fluid free-form architecture was most often expressed in ambient occlusion renders. In recent years the culture of gaming has impregnated architectural aesthetics with regards to representation, leading to utopic spaces that change in time, displaying a wide range of styles and aesthetic influences, from cyberpunk to post-digital. The paper aims to cast light to the ever-changing field of architectural representation, addressing digital technologies, design processes and creativity, immersive experiences, and aesthetics. At the same time, it wishes to connect the above to the globalized digital culture and perception of space, while speculating on future tendencies in architectural representation.

KATHERINE LIAPI

Algorithmically Generated Minimal Surface Structures of Floating Compression: In Search of a New Spatiality and Embedded Meaning

This paper presents a novel concept of mathematically investigated and algorithmically generated structures that are expected to challenge existing norms in structural design and spatial form, and to stimulate questions of theoretical order. Tensegrity structures, or structures of tensional integrity, or *floating compression*, are structures composed of isolated compression members kept in equilibrium within a pre-stressed network, which, also defines their spatial delineation and confinement. Minimal surface tensegrity networks constitute a recently studied double-layer tensegrity structures' typology. Both layers of the investigated structures are minimal surfaces and occur from the assembly of prismatic tensegrity units of square base. In order to determine the configuration of each layer of the minimal surface tensegrity network, when the structure is in a state of equilibrium, the geometric constraints imposed by the condition of stability in a tensegrity structure,-continuous tension - discontinous compression-, should also be taken into account. A thorough mathematical investigation of the equilibrium geometry of these structures has led to algorithmic processes that generate a tessellation of planar square surfaces on their two layers of minimal surface shape, and renders possible the parametric description of the entire network. Three sets of algorithms that can be used for the generation of minimal surface tensegrity networks of helicoidal, catenoidal and enneper shape have been investigated. The tectonic expression of these structures serves as an evidence that in tensegrity networks the structural and architectural concepts are inseparable. It also provides a convincing argument that the embedded mathematical processes account for both the structure's controlled complexity and its delicate stability that can be easily turned it to a mechanism. For transferring the virtual models developed in a graphical interface into a real world structure, a method that permits the construction of double layer tensegrity structures from the assembly of collapsible tensegrity units can be used, while the developed algorithmic processes can determine all structures members' dimensions. The developed computational processes and algorithms were utilized in the morphological exploration and materialization of three tensegrity installation structures. The relationship of each one of the installation structures to its physical and conceptual context, and primary to its *raison d' etre*, were determined in the context of an additional exploratory design stage, during their geometric investigation. The outcome of this design stage was integrated into their algorithmic definition, and dictated their final morphology and overall architectural expression, on an effort to enable the structures to convey, through their actual experience, an anticipated meaning or value and, eventually, to contribute to their "Imminence and immanence".

KONSTANTINOS GRIVAS

The Quadripartite Fix as Counteraction to the Transient Architecture of the Early Digital Era

Anticipating the sweeping social changes brought by the total expansion of consumerism, mass media, information, and digital technologies, the 'futuristic', 'apocalyptic' or 'polemic'[1] habitation scenarios by architecture groups of the 1960s and 1970s, destructed the house[2], negating its symbolic centeredness, speculated on fluidity, impermanence and finally the dissolution of the architectural object altogether. 'The pre-packaged frozen lunch is more important than Palladio,' Cook famously claimed in 1967.[3] However, upon closer observation it appears that many projects by Archigram, Superstudio, Archizoom, and others of the same period and in the following decades (1990s, 2000s) when digital technologies begun to infiltrate deeply into the fabric of everyday life, appropriated explicitly or implicitly the *quadripartite* arrangement (*quadrata*)—the square plan cross-axially divided to four equal quarters—in their visions for human inhabitation. This paradoxical (at first glance) repeated use of that classic *parti* has not been adequately discussed neither by those architects themselves or by critical analysis of these works. We argue that this paradox can be explained by examining these projects from two inter-related perspectives.

The first is examining the common allusions to myths of paradisal existence as a vehicle that relates these projects with a very old, pre-modern architectural lineage. The quadripartite arrangement embodies most ancient cultures' conceptualizations of sacred space, its cosmic order, and rites for any new establishment. Then, from Islamic geometric gardens to the secular architecture of Renaissance (Palladio) and up to Ledoux's utopian architecture of the Enlightenment, the quadripartite had been used obsessively as an archetype schema for places that alluded to myths of earthly paradise (heavenly life on earth). The paper argues that in the dawn of the digital age architects revisit(ed) this heritage with renewed interest. The second perspective examines more closely these experimental/radical projects in the context of architectural education, experimentation, and its dissemination during the 1960s-70s, and the role that key figures like C. Rowe, J. Hejduk. E. Ambasz and others have played into re-evaluating the historiography of architecture (Em. Kaufmann, R. Wittkower, etc), questioning the modernist regime, seeking the autonomy of architecture and, again, its deeper foundations in the realm of myths and fables, as an act connected to that of archetypal Creation.[4]

From both perspectives, the *quadripartite fix*[5], like an 'ancient architectural gene' speaking of *paradisal life* and *regeneration*, resurfaces in radical post-modern and early digital-age architecture as a counteraction to the transient nature of post- modern and digital nomadic lives, endowing these projects with amplified resonance for today.

1] Archigram, Archizoom. Superstudio groups themselves describe their projects as such.
[2] Ambasz, Emilio (ed.). (1972) Italy: The New Domestic Landscape. Catalogue of the exhibition. NY: MoMA, p.232
[3] https://www.artforum.com/print/199808/archigram-design-on-the-future-32479
[4] Em. Ambasz "I chose to be a fabulist", J.Hejduk "I assume that any architecture is determined by a myth which is extensively believed."
[5] A "fix" is described as an obsession, an idea one is securely focused upon, or act of repair, or a difficult or awkward situation from which it is hard to extricate oneself; a predicament.

KONSTANTINOS MORAITIS

Aesthetics of Science or Scientific Approach Transmitted into Arts? Topology, Philosophy, Biology and Computational Design as Cultural Transference or Metaphor

'Animate' computational design could be regarded as important expression of contemporary societies, an expressive domain where scientific innovation and cultural apperception of arts seem to positively coincide. We could thus refer to a productive result of cultural 'transience', of trans-disciplinary correlation among different cultural domains, as topological mathematics, computational simulation, evolutionary 'epigenetic' biology, philosophy, psychoanalysis and multiple design expressions. Design practices of many different scales, building and urban design, object design and in a crucial contemplative approach, landscape design - landscape in continuous change, being a 'par excellence' paradigm for the digital apperception of continuous animate possible change.

'Animate' a term indicating motion but also etymologically related to the Latin word 'anima' – 'soul. We thus refer to a principal condition of culture, to 'metaphor', and explain that cultural paradigms are not solely produced through conscious procedures. They are also created through the unconscious implementation of 'exterior' successful exemplary expressions from other cultural domains, from sciences to arts and, probably, vice versa. It is in this context that we may refer to modern 'epistemic' state, describing it as the result of a process of transferences and continuous 'metaphors', from evolutionary Darwinian paradigm, to Marxist dialectical materialism and then to architectural functionalism.

Were the previous cultural mutations stopped at the end of our well-known modernity? On the contrary: after a period of post-modernist aporiae, Derridean 'différAnce' introduced the destabilizing statement of deconstruction and then, we soon reached the philosophical and design conception of 'folding', of the topologically and digitally centered trans-formation. Forms were consequently presented in continuous change and thus a two centuries period was extended, in sciences and arts, to the contemporary cultural identity. As Jacques Lacan's psychoanalysis could assert through the figurative description of the Borromean Knot, contemporary perception of reality and our imaginary cultural demands, may be associated to the semantic, expressive symbolic order of the topologically perceived and digitally simulated forms – in many different fields of contemporary cultural production simultaneously. Let us present some analogous approaches: Lacan himself introduced in his interpretative approach topological references, as the previously mentioned Borromean Knot and the Möbius Strip, the latter being a metaphor of the association of consciousness with unconscious, also correlated to the architectural conception of 'Möbius House'. However it was René Thom's Catastrophe Theory that offered a highly influential group of theoretical stimuli. Thom's topological schemes and Conrad Waddington's landscape evolutionary topological metaphors seem to be extremely close to Deleuze's 'Le Pli' concepts and Bernard Cache's 'Earth Moves' or 'Terre-Meuble' proposals that could be applied in landscape design, in furniture and object design and in architectural 'landscape-like' formations. FOA and surely Zaha Hadid Architects perfectly portray this all-around tendency. Nevertheless computational mechanics and finite elements method of syntactic re-presentation and re-construction of reality may offer the most acute description of the animate-movable and animate-soulful, living beings' dynamics. *'Digital vitalism' could thus be presented as principal characteristic of our computational and real world 'immanence', which offers to Lynn's animate design proposals the halo of Baruch Spinoza's pantheistic apperception.*

MARIANNA CHARITONIDOU

The Digital turn and the Transformation of Architecture's Ontology: Experimenting with Geometry, Virtual Reality and the Big Data

The paper sheds light on the epistemological mutations that are related to the emergence of the "paperless studios" at Columbia University's Graduate School of Architecture, Planning and Preservation (GSAPP). The "paperless studios", which were conceived in 1992, established a new set of terms for the on-going conversation on the role of digital tools in architecture. The paper explains how new concepts of spatiality emerged thanks to the experimentation with geometry and virtual reality. Its main objective is to render explicit that these experimentations should be understood beyond their formalistic characteristics, since their very force lies in their capacity to transform architectural artefacts' ontological status. The paper also examines Greg Lynn's Embryological House (1997-2001), Asymptote Architecture's 3DTF Virtual Trading Floor (VTF) (1997-1999), which was commissioned by the New York Stock Exchange (NYSE) and Securities Industry Automation Corporation (SIAC), and dECOi architects' Aegis Hyposurface (1999-2001). The analysis of the aforementioned case studies intends to render explicit how such the transition towards the generalized use of digital tools in architectural design is accompanied by an ensemble of significant ontological transformations.

The paper also intends to examine the following two themes: firstly, the mutation of the status of the architectural artefact because of the fact that the form is generated through the use of digital tools; secondly, the implications of the possibility of real-time data visualisation for the reconceptualization of the notion of spatiality. Its main objective is to render explicit how digital design tools and hybrid use of software and hardware provide the conditions for more mutable and open-ended generative processes than those provided by conventional methods of architectural design. The distinction between the digital and computation is pivotal for grasping the epistemological mutations that are analysed in this paper. The digital refers to a kind of state of being, or a condition, while the computation concerns active processes. Another issue that is examined, in the paper, is the interaction between physical, virtual and augmented reality and the real-virtual relationship in the case of augmented reality. All the case studies that are analysed in this paper are based on an experimentation with geometry. The reasons for which they have been chosen to be examined are mainly two: firstly, they exemplify an ontological shift of the design process; secondly, they illustrate a reinvention of the established hierarchies of the design process. A common parameter of these case studies that will be explored is their ambition to reshape the relationship between architectural profession and architectural academia.

Mario Carpo in *The Second Digital Turn: Design Beyond Intelligence* draws a distinction between the first and the second digital turn. He claims that the first digital turn was characterised by the invention and interpretation of "a new cultural and technical paradigm [...] [and the creation of] a visual style that defined an epoch and shaped technological change"[1]. The paper argues that the second digital turn is closely related to the role of Big Data, especially in relation to questions concerning the notions of sovereignty, democracy and the public realm, and goes beyond the formal and visual experimentations that were at the core of the first digital turn. The current state of digital turn in architecture is more oriented towards social aspects, placing particular emphasis on questions concerning the democratisation of data and the issues related to the role of "digital commons"[2].

[1] Mario Carpo, *The Second Digital Turn: Design Beyond Intelligence*. Cambridge, Mass.; London: The MIT Press, 2017, 8.

[2] Marianna Charitonidou, "Urban scale digital twins in data-driven society: Challenging digital universalism in urban planning decision-making", *International Journal of Architectural Computing*, 20(2) (2022): 238-253, doi: https://doi.org/10.1177/14780771211070005

MELANIE MARTINS BARROSO

Body-Device

The increasing use of computerized technologies by individuals has intensified the dependency relationship of everyday life mediated by technological devices. The exchanges between virtual and physical environments are creating new dimensions in built spaces, mainly observing the advancement of augmented reality and virtual reality technologies.

The human body, user of these cyberenvironments[1], has intersubjective aspects that guide the lived experience, which, in turn, naturally add to the biological composition that is inherent to it. Therefore, it is important to consider that in the face of such a prerogative, the relationships established between human and non-human beings, aligned or not, with habitable spaces and the devices that exist in them, emerge as essential points to analyze the production of spaces and environments. Given this premise, one must be aware of the fact that the cities that continue to be, par excellence, the locus of production of a material culture, which, despite the transformations wrought by the countless vectors that are established in the urban fabric, still leave indelible marks of social action at a given time. Completing this reasoning, it is worth recalling Lefebvre when he states: Spatial practice is the material dimension of activity and its social interactions, which comprises, in the context of everyday life, the system of communication networks and social interaction, a result of articulation and bonding with objects or even with practices that occur (LEFEBVRE, 1991).

In this context, it starts from the proposition that contemporary bodies coupled distinctive layers to their social relations, layers that were not necessarily foreseen in the conceptions of cities as we know them. That is, the technology and the informational modalities created, pointed to a horizon of exchanges, possibilities and alternatives that until then did not have the scope to transform living in the city into an experience of multiple interactive possibilities. Therefore, I affirm that the digital universe created a transformation process that intensified practices that involved changes in the ways of thinking and experiences with the body, in which the role of social networks, e-mail messages, the use of Wi-Fi networks fi, the modalities for exchanging information and data that are independent of physical environments are stressed. The space-time relationship is shortened, and spaces become a support to house the necessary equipment for virtual exchanges. Therefore, based on this scenario, relations of dependency and exploration of the physical space are created, in order to give life to the invisible network of digital exchanges. Returning to Lefebvre and his vision of space and the society that builds it, the author highlights that the investigated social space is, therefore, a product of society, which takes place in the midst of everyday life through the complex interaction of urban actors from the different classes that there they meet or relate (LEFEBVRE, 1991)[2]

For analyzes that guide this reflection, the interest is to seek the perception of the landscape seen through the body, urban processes and virtual relationships, associated with the hybridity between urban and biological spaces in the construction of cities. Faced with such an agenda of interests, the focus is to find the influence of economic and social dynamics on the urban layout in contemporary times, in the search for updates and results on the future projections of expansion of the physical territory.

With these initial data, a discussion at the conceptual level is established here, referenced by the influence of technological devices as devices for the daily use of the body. The research object and thematic focus are established as the foundation that will help to configure the perception of post-geographical spaces, in which it becomes possible to indicate the borders and the extension of the physical territory. By laying the foundations of spatial reference, and resizing its areas of action, the body becomes, from that moment on, the protagonist of a debate directed at spatial cognition and its senses in front of machines.[3]

[1[BRISSAC, Peixoto Nelson. *Paisagens Urbanas*. ed. São Paulo: Senac, 2003

[2] LEFEBVRE, Henri. *The production of space*. Maiden: Blackwell Publishing, 1991.

[3] LEMOS, André. *Cidade Ciborgue*. In: Cibercidades (2004)

MYRTO A. KOSTAROPOULOU

Architectural Design in the Information Technology Era: A Prompt to Travel through Design

In the age of Information Technology, the field, in which architectural design is exerted, is no longer a piece of paper and a pencil; rather, it is an intelligent medium's artificial environment, a computer and more specifically the *CAAD* software. Computer Aided Architectural Design implies that the designer is offered the help of a computer, in which design as method has been decoded and further analyzed and programmed in a software that provides the designer with the appropriate tools he or she needs. These are: lines, shapes, and commands, such as move, copy, rotate, mirror etc. Hence, the design process has been reduced to a series of *objects* and *functions*, that make the design a dynamically developing drafttable. Despite the facilities of CAAD, the issue of *creation* comes up. Is the designer free to make his or her own decisions or is he trapped in the environment of his or her intelligent medium? Is the intelligence of the designer over control of the medium or is he or she submitted to the software designer's plan, who stands behind the digital canvas? Is design a matter of cooperation between the two designers or does the conscious designer stand beyond the dictatorship of media, able to use them on his own pace?
Who is in control of the design and/or are there layers of *translation* between the designer and his or her medium, that reserve an evolved understanding of the process of architectural design itself? Is architecture trapped or welcomed in a new era of advanced meaning, that turns the design process into an interactive field of communication rather than a univocal procedure of control of the result? Is it finally a fact that in the Information technology era, design is *democratized* because of its dissemination through a variety of media that make it widely known and accessible, whereas one day the architect might find himself out of the picture? Does Information Technology make Aart Bijl's vision of "design as a transportation medium" a reality? Or Le Corbusier's prompt to use airplanes, ships etc... to travel, to think, to design. To travel and explore, to evolve design, one needs to get rid of unnecessary things and weights. Maybe CAAD provides us with the methodological tools that make this trip possible, while the designer exceeds the burdens of design as draftsmanship in favor of the production of buildings that firstly evolve in the digital environment of CAAD.

PARASKEVI PANTELIADOU

QUASI OBJECTS_ Introducing the Concept of Vagueness and the Mechanism of Amphiboly in Architecture and in Non-Architectural Regimes of Transformation and Deformation

The concept of *quasi-object* allows us to think of the architectural work in a multitude of possible cases, interconnections and interweavings, as a nebula of 'potential' situations which change over time. The idea that the destabilized object of architectural practice can be described as a 'quasi' object encourages theoretical considerations and unlocks interesting design possibilities. It is not accidental, therefore, that the theoretical control and construction of the concept of 'quasi' object meets a series of related views, critically correlates with them, highlights similarities and differences, covering a wide range of cognitive areas.
In this paper, quasi-objects are analyzed in their various manifestations in architecture, in the cases of Peter Eisenman, through the concepts of 'weak form' (Eisenman, 1997) and 'near figures' (Kipnis, 1993), Stan Allen, who proposes the schema, not as a fixed description of the object, but as changing 'moments of tension' (Allen, 1997) and Jean Nouvel in his dialogue with the philosopher Jean Baudrillard regarding the 'singular objects' against the spread of media and the globalization of culture (Baudrillard & Nouvel, 2005). At the same time, the paper includes the views of philosophers, such as Michel Serres, Bruno Latour, Brian Massumi, Bernard Stiegler, analyzing the effect of new technologies on the means of communication with references to the concept of 'temporal' object (Stiegler, 1999), and the views of artists, such as Jean-Louis Boissier regarding the 'object – image relation' that is constantly changing through interactivity (Boissier, 2001).
A common characteristic of these views is that they all incorporate to a significant extent the critical view of the impact of the information society on their subject.
The paper argues that the inclusion of digital / computing capability in objects occupying or constituting space, but also the interaction between them in a variety of ways, create an open and adaptable system. That is why their design must be reconciled with the idea of constantly revising their boundaries and identity. In this context the paper introduces the concept of vagueness in design processes, proposing shapes, functional diagrams, forms, that without being involved in futurologies related to the application of new technologies, do not avoid instability, accept the movement of things, always propose the temporary synthesis of fixed and evolving elements and offer a 'topos' where intense discussion takes place leading to new associations.
Furthermore, the concept of vagueness is activated through the mechanism of amphiboly, which does not turn towards a pre-planned system of response to every possible future change, nor to a formless architecture, but to an architecture of changing geometry, which accepts that it is possible to acquire forms and house functions, which the original design did not foresee, while at the same time causing this kind of changes. The spaces that will potentially emerge, even though they will have an identity, will be constantly available for change. The inexperience of predictable or not micro-changes of the 'quasi-objects', is one of the indications that we are already in an expanded zone of transition.

PEDRO BORGES DE ARAÚJO, SÉRGIO PINTO AMORIM

Two Hands to Philosophize

Architecture in the age of digital media covers a relevant spectrum of research from which we intend to highlight 'drawing' as a mode of production that synthesizes *observation*, *discovery*, and *invention*. What architects' practice commonly refers to as *imagination*, implying the *best beliefs* and *clear thinking*. This presentation focuses on the authors' personal experience during the ongoing transition period from analogue processing of the architects' work to its digital counterpart, from 'hand' drafting, 'hand drawing/drawing by hand', to CADD Computer Aided Design and Drafting, and then to digital graphic modelling. The ever-widening contrast in modes of production has fuelled and continues to fuel debates beyond cultural and local differences. What binds us to these debates comes from our professional practice as architects and this experience as a support for teaching, not forgetting the state of the art that supports both, whether Philosophy, Architecture or their intersections. However, these debates cannot do without questioning 'technical/technological' historical issues and their renewed interest. The critical analysis of the analogue/digital antinomy leads us to the technological environments of the systems where we anchor our possibilities to determine how we act and transform reality. 'Digital Age' is an abstraction that tries to capture formal relationships with reality and experience through discrete variations. An abstraction because it is just a model of representation in contrast to 'experience'. 'Experience' is inexorably continuous, that is, in our words, *analogical*, *lived in real-time*, continuously. The condition of humanization that the animal engenders, the relationship between the animal and the tools – the machines – is also a source of perplexity. Critically analysing the intimate relationship between the modes of technical production – the tools and their use – chosen by architects and philosophers sets the analysis of these tools under our perspective. To write a history of Philosophy, cave walls cannot be discarded; the same goes for Architecture. *Drawing* inevitably takes us to the threshold that unites the private and the public, the interior, and the exterior. Long before orality formally gives way to writing, history will have begun to write itself. The contrasting 'Experience/Information' paradigms epitomize what is otherwise proposed as *analogue versus digital* and critical analysis belongs to philosophical work. 'Information' – as in the 'Information Age' – is the core concept underpinning the *digital media age*. 'Information' intends to represent the reality lived *conventionally*. To perform this *representation*, the experience must be fragmented and compressed to be 'manipulated' algorithmically. It is about compressing time and abstracting experience. At the level of our phenomenal perception of reality, it is about accepting the exchange of ineffable atoms for bits (unique morph for the minimal binary unit, yes/no) of conventional logical states. The mixed perplexities at the crossroads of the 'Industrial/Digital' *ages* have evolved, rapidly outgrowing 'experience' as such. *Digital media* has taken the lead, going digital/*being digital becoming a way of life*, as summarized in the CfP. Architects, architecture, and the experience of lending a hand in state of the art: *reflections* from a two-handed philosophical matrix.

PHOEBUS PANIGYRAKIS

Beginnings of “Architecture and the Computer”. The First Conference on Digital Architectural Design at the Boston Architectural Center, 1964

On December 5 1964, the Boston Architectural Center organized the first conference on the use and impact of the computer on architectural design and the architectural and engineering professions. Under the title “Architecture and the Computer” the conference centered around technical subjects of computer and design graphics as well as deeper concepts of creativity and design intuition. Although the conference seems to belong to the prehistory of digital architecture the problems that it set continue to attract the interest and anxieties of 21st century architectural discourse. The address will 1) establish the historical context of the 1964 conference (organizers, participants, financing etc.); 2) will present the contributions and questions set by architects (Walter Gropius, Serge Chermayeff, Edward Durrell Stone) and AI foundational experts (Marvin Minsky); 3) and will report on the consecutive coverage of the conference and its subject by the architectural press. Archival material will be presented from: the Boston Architecture College Archives, Columbia University (Serge Chermayeff papers), and Harvard (Walter & Ide Gropius).

SAUL FISHER

Authorship, the Digital, and the Abstract Architectural Object

What is the relationship between digital media for architectural design and architectural creative authority or authorship? In addition to enhancing design possibilities, do digital media wrest architectural creativity away from architects?

On a pessimistic stance, digital design techniques and instruments degrade authorial agency of architects in virtue of their formal notation systems, which not merely constrain architects' creativity but as well render it 'subordinate' to those systems. Architects who work in digital media, then, are merely realizing possibilities set by the media. Yet the pessimistic stance can't be entirely right if, as the evidence suggests, architects can do *more* with digital media, generating diverse and powerful creative possibilities, than they could with previous instruments. Moreover, as the architecture theorist Jörg Gleiter suggests (2016), architects may more robustly realize their creativity within the framework of those media, such that merits of authorship as we attribute to them are tied to their working within that framework.

In this, Gleiter sees a continuity with one of the great advances in Western architectural history. Starting with Alberti's focus on scale drawing, Gleiter contends, architects moved from more intimate engagement with construction processes as part of the design process, to more of an upfront design process in which they conceive of buildings as wholes before anything is actually built. Whether in scale drawing or in digital media, as Gleiter has it, such transitions bring increasingly abstract means of representation which allow the design process to dominate and dictate the building process. Accordingly, it's not the architect's creativity or authorship that is subordinated to the new medium of design; it's the process of design which is subordinated, in ways that *advance* the agency of the architect rather than diminish it.

This much suggests historical development of the architectural object as a work independent of any built structure, somewhat along the lines of Lydia Goehr's characterization of historical development of the musical work in the Western art music tradition (1992). What the architecture case suggests, to go one step further, is that the object of design need not be realized before its design, or even at all. In short, the historical developments of design media in architecture point to an ontology of the architectural object as created abstracta. What increasingly powerful design media represent, from this perspective, are new ways of working with architectural objects that take advantage of their features *qua* abstracta. As contrasts with Goehr's historical trajectory in which musical works developed towards their present, materially-grounded status, a history of architecture as outlined here suggests an abstract status of architectural objects all along. It just took the right sorts of notation systems or other media of representation for architects to recognize and exploit those features.

One might worry that an abstractist view occasions a retreat from architects' authorial agency, where such objects don't even require creation so much as a Platonist 'discovery'. Taking the abstract architectural object as architect-created, however, dodges this concern and highlights the potent, generative nature of that creative act.

Gleiter, Jörg H., "Notation und Autorenschaft. Zur wechselvollen Beziehung von Architekt und Architektur", 195- 211, in Ekkehard Drach (ed.), *Das Verschwinden des Architekten. Zur architektonischen Praxis im digitalen Zeitalter* (Architekturen 31), transcript Verlag (2016).
Goehr, Lydia, *The Imaginary Museum of Musical Works*, Clarendon Press (1992).

SÉRGIO PINTO AMORIM

How to do Architecture: Analogue versus Digital

The paper develops a reflection on *how to do* architecture and it's onto-epistemological structure. The main analysis is focused on the architectural design process activities, through the analogue and digital elements produced in it (i.e., drawings and models).
The paper is structured in three parts/contents: 1. About the act of *making* things; 2. About the different ways of *doing* architecture and its experiential and conceptual contingencies; 3. About the qualitative impact of the analogue and digital elements in the knowledge structures inherent to the architectural design process.
The first part presents and analyzes the act of *making* things as a primordial act of building associated with the practical knowledge (i.e., *phrónēsis* and *tékhnē*) but also as the essential basis for structuring the *how to do* (i.e., thought, theory and idea-form). Under the context of John R. Searle's direct realism and Vilém Flusser's concept of 'gesture', it is constituted a brief introduction about the condition of Man as an artificiality producer since the beginning of humanity. It is recognized that architecture emerges from this artificiality, as a meaningful expression to human existence in the world. Built forms express meanings while organize space through matter. From this point of view, form, space and matter are interdependent factors and, therefore, *making* the physical form (building) is a true existential experience in which the body participates directly in the matter transformation to achieve the form-object. The act of building is recognized as a cultural dependency, as Andrew Ballantyne argues in *What is Architecture?* Thus, architecture simultaneously expresses necessity and freedom, showing how Man has positioned himself, through aesthetic experience, under the limitations imposed by nature.
In the second part, the *how to do* things (in this case architectural forms) is contextualized and analyzed though the *form* concepts synthetized by Władysław Tatarkiewicz. However, despite the recognition of thought structures that support the architectural forms production in space, it is intended to demonstrate that the act of *doing* architecture contains reminiscences from the artisanal process of building (*making*). Despite this interpretation, the how to do architecture is considered under the constitution of different epistemologies, trying to highlight what Mark Gelernter characterized as the duality created by the subject-object problem between 'art' and 'science'.
In the third and final part, considering that the concept of *how to do* architecture process integrates digital media, also as a 'tool for ideas' (Chistian Gänshirt), it is pretended to understand/evaluate the qualities that this 'tool' can introduce into the traditional/analogical project design process. Considering that the process of designing architecture – projecting (drawing/modeling) idea-forms – has an essential necessary purpose – to organize space in the real world – to build forms with matter, the paper main objective is to identify and contextualize the analogue and digital process elements contribution in the onto-epistemology structure from the *how to do* architecture.

SMARO KATSANGELOU

From Piranesi to Midjourney: The Future of Avant-Garde Architectural Conception

Utopian, unbuilt and avant-garde architectural depictions have contributed to pushing architectural thinking forward and raising questions about the future of built environment. Throughout history, imaginary works such as those of Piranesi, Escher, Boullée, Soleri and Archigram have acted as catalysts for deepening the thought about architectural conception and its depictions. Currently, AI tools such as Dal-E and Midjourney expedite the process of creating abstract environments, that are used as a starting point for reflecting upon the philosophical nature of the material world or that are merely used as inspiration for upcoming projects.

The work of Piranesi has been analysed and critiqued by different researchers and architects since it was first published in the 18th century.[1] After a series of works he produced portraying roman ruins and scenes with antique architecture, Piranesi went on to create a series of 16 etchings depicting imaginary scenes from a gloomy yet captivating universe. Through labyrinth like structural sequences, the work of Piranesi "Carceri d'Invenzione" depicts fictional prison interiors, drawing inspiration from different elements of Roman and Antique architecture that he had previously encountered and observed in his earlier series. Piranesi combines elements from different eras and sites, creating architectural fantasies which seem inescapable, incoherent, and non-corresponding to the physics of reality.[2]

Drawing parallels between the methodology that Piranesi used to produce his etchings of Carceri d'invenzione and the way that Midjourney's deep learning AI model was trained on image-text pairs to produce images through combining this data and the written descriptions of users called prompts, this research aims to experimentally approach the way that interpreting architectural composition and vocabulary into written text can shift the resulting images. Ultimately, the goal is to draw some conclusions on how this AI tool interprets existing subjects of abstract spatial concepts.

A significant part of this research is to illustrate how the linguistic elements of the description affect the produced image and also if the use of emotional, historical or social connotations could further define the results. The multiple reviews, analysis, and critiques of Piranesi's Carceri have left behind a wide array of choices of words and descriptions to choose from and develop. Notably, Tafuri[3] and Eisenman's[4] approaches on the work of Piranesi, can be used as a point of departure for the descriptions used in Midjourney. Moreover, as Sergei Eisenstein suggests the composition of Piranesi's images constitute an "intellectual montage"[5], that deploy a distorted sense of perspective. These recurrent themes and notions, underlined by the aforementioned works are utilised in the prompts to be interpreted by the AI. Lastly, the ability of Midjourney's model to process and illustrate complex mental concepts and meanings is assessed through this experiment. In conclusion, the resulting images will be analysed and reviewed in comparison to the prompts that were used to create them.

[1] Korte, W. (1933). *Giovanni Battista Piranesi als praktischer Architekt. Zeitschrift Für Kunstgeschichte*, 2(1), 16.
[2] Mastrigli, G. and Toti, A. (2014) . *Operative differences: Eisenman, Tafuri and the lesson of Piranesi*. SAJ - Serbian Architectural Journal, vol. 6, iss. 3, 238-255.
[3] Tafuri, M. (1990) *The sphere and the Labyrinth*.The MIT Press Cambridge, The wicked architect: G.B. Piranesi, 25-54.
[4] Eisenman, P. (2004) *Giovanni Battista Piranesi. A critical analysis. In Barefoot on White-Hot Walls*. Wien, Ostfildern-Ruit: MAK, Hatje Cantz, 84–85.
[5] Tafuri. Op.cit, 56

SOFIA SOUVATZOGLOU

Pseudomedic Abodes Culture VS Pseudocodes' Metastructure

The Covid-19 pandemic turned us into "Homo Medicus" (hypochondriacs) and quarantine transformed us into "digital avatars" (Homo Digitalis). Metaverse is not even "on" yet and has already become a cliché by mass media meanwhile "The Economist" defines "data" as the "new oil" within the financial world.
Architects should acknowledge that "healthism" and "dataism" do not contradict each other but they practically intergrade to improve everyday life "via" material or immaterial architectural "assemblages". An architectural placebo, meaning structures affecting the healing result, could collaborate with a technological placebo, meaning digital metaspace (databases, social media, applications, virtual reality simulations, artificial intelligent tools etc.) in order to optimize and accelerate treatments of patients, to help the diagnosis of an adverse health condition and to facilitate medical staff in their role.
Architecturally intelligent structures with digitally intelligent technologies, could change medical architecture, and compose an architectural vocabulary that heals, relieves, supports human beings forming a "pseudomedic" abode culture" to holistic treatment cases.
"Holistic" design will reshape hospital and its hospitality facilities, clinics, diagnostic, medical and rehabilitation centers, even hotels enabling people with chronical diseases, disabilities and health problems to wish and manage to live an easier everyday life. It is important to investigate the need to apply digital experiences, such as travelling through VR technology and metaverse, as a Digital Placebo Effect, in order to evolve and improve patients' health status, change their mood, appetite, psychology and give them the ability to live a digital substitute virtual life as a break from the real-life struggles.
People obsessed with their health status are absorbed by thousands of advertisements and posts on social media that tend to control their lives via applications and digital tools referring to the perfect appearance, or a healthy lifestyle. Human activities, from sleep, work and leisure to habitation and reproduction are intertwined with the digital helpers or the virtual reality environment, resulting to opposite health effects namely Digital Nocebo Effect (negative health outcomes or experiences as an effect from the use of digital space).
In developed countries, there is a "trend" towards home care, meaning that 46% of medical equipment can be used at home and triggers "the up to now" architectural healthcare design. If we want to handle technology in architecture in "the right way" within the contemporary framework, the answer could lie in discovering the true meaning of big data, machine intelligence, pseudocodes and blockchains. The application of digital architectonics shares common language and terms (such as portal, window, crypt, (fire)wall, block) with in vivo architectural design. The understanding of new technologies can be brought into the architectural design of healing spaces under the light of the placebo effect. The creation of an architectural manual that includes and combines healing and virtual spaces, may lead architects and designers on how to implement the use of virtual and real tools, in combination with elements and historical references.
In conclusion, various types of structures and abodes are currently developing due to the medicalization and digitalization of architecture. The architecture placebo effect should be included in the process of the healing "synthesis" acting as an accelerator of the cure combined with digital technologies aiming to accomplish the vital need of Digital Spaces becoming Healing Spaces. After all, architectural placebo abodes and virtual reality environments have at least one thing in common: the sense of an image. They both refer to the visual effect aiming primary to the satisfaction of the eye and secondary the tranquility of the mind and the soul.

SOPHIA VYZOVITI

The Ground as Concept Model

Architects are bound by the tools that shape their design worlds. In the archaeology of digital[1] architecture we unearth an ontology where the notion of ground, informs concepts, methods, and tools for understanding and designing the building as a landscape. In the Avant guard architecture of the 1990's reconstructing and calibrating the earth's surface was rigorously investigated towards new building prototypes; from the urban ground as folded magic carpet in *Inside Out City: 2 Bibliotheques at Jussieu*, Paris by OMA in 1993[2] and the interior landscapes of inclined floor slabs of the SuperDutch[3] generation to Greg Lynn's *pliant architecture*[4] and Stan Allen's *landform building*[5]. Immersed in the Deleuzean conceptualization of the *pleats of matter*[6] designers experimented with earthworks and artificial terrains employing abstract material techniques- primarily paper folding[7] - complementing digital surface modeling that defined the era's medium specificity. In this design world the building figure is in continuity with the ground as a topological *single surface* lingering between the *abstract and the ultra-material*[8]. Throughout the digital turn in architecture few yet significant paradigms established crossdisciplinarity between architecture and landscape, generating multiple small-scale examples of best green deal practices, of green roofs, living walls, permeable paving, and porous facades. In the practices of activist Gaia-cultures the *sand grain model* delivered as counterpoint of *Le Pli* may be just as pertinent working metaphor; a point cloud, a swarm, a network of dispersed micro-locations articulated by global information flows. Bruno Latour' *grounding*[9] as fundamental human right in the context of constant displacements refocuses our attention to the *plot of land* with planetary access. In these recent significations the ground is gritty, *making soil* is envisioned as a nutrient practice of retro futuristic *terraforming*: biodegradable ultra-materiality enhanced by ubiquitous computing, not a virtual surface but an entire ecosystem: a hybrid ecology of metabolizable *edible*[10], decomposable and interconnected living grains.

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[3] Bart Lootsma (2000) SUPERDUTCH, London: Thames and Hudson
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[7] Vyzoviti, S. (2003) Folding Architecture: Spatial, Structural, and Organizational Diagrams. Amsterdam, BIS.
[8] Antoine Picon (2010) Digital Culture in Architecture, Basel: Birkhauser
[9] Bruno Latour (2019) Down to Earth: Politics in the New Climate Regime, Cambridge, UK: Polity Press
[10] Lydia Kallipoliti and Areti Markopoulou (2022) eds. Edible, Tallinn Architecture Biennale

SOTIRIA ALEXIADOU

Authenticity in Architecture of the Digital Media Age and Challenges in its Future Conservation

In the era when the building in the western world was meant to stand eternally promoting the need of better construction with tangible materials and the concern for protection – conservation- restoration, the eastern world accepted the fact that time will affect the building, which will lead to its future replacement by a new construction of the same or new technology. These two concepts were forced to converge when new experimental materials were introduced to the construction, such as reinforced concrete, since the new materials had a limited life expectancy unlike older traditional materials.
In the concept of conservation, the authenticity is a key parameter. In the ancient remains, only the building material has survived and is acknowledged to determine the authenticity of the monument. In the modern era, the architect of the building has designed and signed the architectural plans of the buildings. In these cases, not only the building but also the plans share the idea of authenticity and add authorship as an extra parameter in the definition of authenticity. The new definition claimed to be able to overcome the lack of means on conservation techniques, surpassing the narrow definition of the conservation of materiality.
In the Digital Media Age authorship refers not only to the plans and building, but also to the method and the code behind them. Furthermore, authorship can be stated in tools and even fabrication means that are trained to produce form, such as the "Digital Tectonics" that Archi-Union by Dr. Philip F. Yuan experiment on. Could authenticity be claimed through authorship in the Digital Media Age? Recently, there are several platforms that are developing as artificial intelligence image generators resulting into rather elaborated and complex results. The interesting part is that the "designer" is an author that feeds the bot a keyword description, acting as a post-author of the AI era. The post-author can be anyone since the design method turns into a narration, but the more articulated the narrator, the more guided the bot according to the given references. Is this a control release that will drive from AI-generated concepts to AI-generated model-building, directing to the "post-human aesthetic/ecology" as Matias del Campo refers to. Which comes first? The project or the code?
This paper will focus on the potentials and the challenges that rise from declaring authorship and authenticity in the intangible Digital Media Age, in which the codes generates concept, form, and/or architecture, while "blurring the distinction between original and copy". The research will explore the changes for a future conservation need of the results of our Digital Media Age and the agenda that will shape the conversation on their conservation. The study will be based on bibliography and especially on examples concerning the work and research of architectural offices, which develop or use current tools of the Digital Media Age.

SPIROS I. PAPADIMITRIOU

Narratives of Technical Images; The Smart Phone Architect

THE SMART PHONE ARCHITECT _ The new generation, as described by Michele Serres in his book "Thumbelina, The Culture and Technology of Millennials" is the "thumb" generation, referring to the dexterity today's youth with their fingertips, keyboards and touch screens. Vilem Flusser in his book "Into the Universe of Technical Images" argues that the difference between traditional and technical images is that, the former arise from the imagination, the latter from a peculiar ability of image composition. The difference between imagination and the ability to image composition is structural, because the former produces analog images of things that are "out there", while the latter synthesizes and projects "out there" images that have been produced through an algorithm. The former are products of seeing objects, the latter synthesis of concepts.

THE DECOMPOSITION OF REALITY INTO POINTS _ As waves are decomposed into drops, thoughts into binary digits, and actions into praxeological units, reality has been decomposed into points. These dimensionless point elements, which are neither tangible, nor representable, nor conceivable, are inaccessible to hands, eyes and fingers. But they can be digitized one by one and through special machines, equipped with keys that can condensed and accumulate these elements. This gesture, when fingertips exert pressure on device keys, we can call it "digitization". Thanks to this procedure an accumulated universe is created where condensed point elements are transformed into synthetic images, like mosaics, the technical images. This emerging universe of technical images need make the surrounding situation conceivable, representable and tangible.

TECHNICAL IMAGES AS DIGITAL DENSIFICATION OF POINTS _ Technical images[1] at a glance, turn out to be surfaces, which are due to the fact that we do not see them in depth. When we observe a photograph through a magnifying glass, we see particles. When we approach a TV screen, we see dots. If one observes the technical images closely, it turns out that they are composite surfaces, a synthesis of digitized point elements. A variety of digital cloud densifications, deep technical images, as case studies will be presented. Paraphrasing Michel Serres, the architect of the "thumb", when she is using the computer, she has before her, between her hands, a vast store of information. Search engines turn on text and images at her will, and multiple software can handle vast amounts of data, much faster than she could by herself. All this knowledge which formerly was within her, now it rest outside of her. Between her hands, the computing device contains and operate all that that we used to call skills and abilities. It has a memory a thousand times stronger than ours, an imagination enhanced and adorned with endless images. A logic even more ingenious, as various software can solve multiple problems, which alone could not be solved. If within this small black box all the discipleship is included, the question arises as to what remains? It seems that this new architect is more ready than ever for the fiery joy of invention and creation!

[1] Examples of technical images: Very Long Baseline Interferometry (VLBI) that scientists used to capture the first Image of a Black Hole, X-radiation images, Magnetic Resonance Tomography Images, Ultrasound images, Thermal imaging, Infrared thermography (IRT), Photogrammetry, 2D,3D Scan images.

VASILIKI GEROPANTA

Digital technologies in city planning in the Global South: an overview of selected case studies

In the last two decades, smart technologies, digital platforms, and data-based intelligence of the smart city paradigm are being used in cities as drivers for urban innovation and spatial rearrangements of urban ecosystems (neighborhoods, districts, clusters, etc) (Batty, 2013a, Castells, 1999, Mora et al 2021). Examples of these include the complete redesigning of networks, infrastructures, urban assets, land uses, public spaces, and the public realm, based on real-time data sets, and communication flows. The impacts – positive/negative -are yet to be fully experienced, but coordinated urban planning and design have embraced them as a fundamental component of spatial reconceptualization.

No similar consensus exists in the Global South, nor are there established metrics for assessing the innovation of these technologies when involved in the design-planning processes of the urban poor. The only agreement among scholars is that in these areas innovation refers to 'how to produce, deliver, distribute and encourage the utilization of potentially life-saving and life-enhancing interventions" (Soman, Dilip, et al 2014, page 24). For example, it is well documented that technologies like Blockchain, artificial intelligence, augmented reality, machine learning, big data, and 5G, among others, offer possibilities for connectivity and accessibility to basic services in the slums (Kibala Bauer, 2020). Some scholars claim that handmade technologies are more impactful in redesigning the built environment (Cortés et al, 2021), while others bridge the impact of technology with its ability to build new skills and capacities (Bashir et al, 2021). Urban planners attribute certain technologies the power to solve problems out of regulatory and legal frameworks and work in parallel with existing systems of urban administration, thus raising hope for addressing patterns of segregated urban development. In all cases, however, a common finding is that these technologies are mainly human-centered, they cause spillover effects in the region, nationally or internationally, and that have the ability to create human synergies, and interactions - in ways that alter completely urban planning processes.

In this line of thought, this presentation features findings from a systematic literature review, first-hand material, and an online search of about 65 technology initiatives in more than 250 municipalities in Africa, Asia, Europe, Latin America, and North America. The selected case studies reflect a mix of examples from civil society, local/regional governments, and the commercial sector. Special attention will be given to the several dimensions in which urban planning practices in these areas transform and ways to assess these transformations at the community level. Rather than reaching a manifesto or specialized guideline, the presentation serves as a knowledge resource to present best practices that reflect how digital technologies might alter urban planning in the global south, gaps in digital transition mechanisms, and the various elements to consider when governing the planning and implementation of smart city initiatives.

VASILIS STROUMPAKOS

Words, Hybrids and Copilots: Exploring the Application of Diffusion Models and Natural Language AI Systems in Architectural Design Research and Concept Generation

The paper discusses the integration of artificial intelligence in architectural design research and concept generation and focuses on three particular methods that relate to: a) image composition through natural language prompts (Words), b) writing code through natural language description (Copilots) and c) intricate hybrids breeding (Hybrids)
Platforms such as midJourney, Dall-e, Stable Diffusion and Open AI chatGPT, became widely available during 2022. The first three create image compositions from text prompts utilizing diffusion models, while the latter is a bot that by responding to text prompts, it can compose intricate text, write code, and even participate in forms of discussion. These systems share common characteristics: a) they use natural language as their input, b) they are extremely fast in producing the outcomes (images or text) c) they are publicly available either as free or paid services.
There is a precedence in the application of artificial intelligence systems in architecture, mainly in academic and research niches (Castro et al, 2021). However, the essay focuses in the systems mentioned above due to the fact that they allow for widespread application, leading to a probable paradigm shift analogous to the one the first digital turn introduced thirty years ago (Carpo, 2013). During the 90s intricate computation processes became available in design, with the introduction of new tools and methods (animation, simulation, scripting). Those shared the common characteristics of a) a shift from metaphor to behavior, and b) an increased degree of *autonomy*.
At a great extent this cultivated a kind of *hybrid creativity* in architectural design (Chao Yan, 2019) that is enhanced with the current digital turn, which is characterized by emphasized intelligence (Leach & Yuan, 2021), and increased autonomy (Carpo, 2017) of tools, by the utilization of artificial intelligence and neural network processes.
The essay concludes with the documentation of intricate hybrid breeding, attempting to formulate an architectural concept generation methodology.

BIOGRAPHIES

AGAPI PROIMOU

Agapi Proimou was born in Chania, Greece.
She studied architecture at the Aristotle University of Thessaloniki (AUTH_1994-2000) and Advanced Architectural design at the Graduate School of Architecture, Planning and Preservation, Columbia University (MSc in AAD, 2001-02). She has participated in Erasmus program studying architecture at Ecole Nationale Superieure d' Architec- ture de Paris La Villette (1998-99) and in Leonardo da Vinci III program, studying landscape architecture at ETSAB, Barcelona School of Architecture (2004).
She has worked in architectural offices in Athens and Crete on architectural projects of various scales and was a founding partner of Room For Though architecture design in Athens (2006-2013). In 2013 she founded her own architecture office in Athens. She has participated in conferences and exhibitions and she has received distinctions for her architectural work.
She has taught as an adjunct lecturer at the Department of Products and Systems Design Engineering, Aegean University (2003-08) and at the School of Architecture, Technical University of Crete (2008- 10).
Since 2010 she is teaching at the Department of Architecture, University of Patras and at 2019 she became an Assistant Professor.

ANTONIO J. CIDONCHA

Graduated Architect (2013) and PhD (2018) at the University of Navarre, Spain. Editor of *RA, Revista de Arquitectura*. Since 2018 he is professor at ETSAUN teaching on Graphic Expression Workshop, Architectural Creation Workshop and Virtual Architecture.
Specialized in 20th century Spanish architecture, is author of the doctoral thesis "Architecture, sport and society. Football stadiums in Spain: 1940-1960", qualified in September 2018 with cum laude, and has also published articles in academic magazines, lectured in congresses, symposiums and in other cultural associations. His built work career has been published in international magazines and digital media such as *Arquitectura Viva*, *Ondiseño*, *Dezeen* and has received recognition in the FAD, Coavn and BigMat awards.

CONSTANTINOS V. PROIMOS

Dr. Constantinos V. Proimos received a MA (1993) and a Ph.D. from the New School for Social Research, NY, NY, USA in 2001, after studying sociology at Pantion University, Athens, art history and philosophy at the EHESS and at Paris I, Pantheon-Sorbonne in Paris and at Columbia University in New York. He has been twice awarded a state scholarship,once for his graduate studies and a second time for his postdoctoral research and he was a Helena Rubinstein Fellow at the Whitney Museum of American Art in New York. He has published one book and several articles in Greek, English and French venues, has curated a great number of exhibitions in Greece and abroad and has written extensively art criticism for a number of Greek and foreign artists. He has worked for Nancy Spector at the Solomon R. Guggenheim Museum in New York for the retrospective exhibition of Rebecca Horn. He has taught at Reid Hall in Paris with Luce Irigaray, at the universities of Crete and Cyprus, at the Technical University of Crete and at Cyprus University of Technology. He currently teaches at the Hellenic Open University. He is a member of AICA-Hellas and an independent art critic and curator. He also serves in the board of trustees of Chrysostomos, The Literary Society of Chania and is the secretary of the artistic committee of the Municipal Art Gallery of Chania.

DIANE GRUBER

Dr. Diane Gruber is an award-winning teacher of art and art interpretation. She is a Senior Associate Fellow ofthe International Institute for Hermeneutics (IIH). Dr. Gruber has made presentations to groups in both the US and Europe on art,museums,and interpretation, as well having taught in IIH Summer Schools in Krakow, Poland.

DIMITRIOS MOUTAFIDIS

Dimitrios Moutafidis is an architect, graduated from the School of Architecture, Aristotle University of Thessaloniki(2021). He studied architecture in Escuela Técnica Superior d' Arquitectura Valencia as Erasmus exchange student. He practiced architecture in Thessaloniki and Paris. His works have been published and he has participated in exhibitions. Also, he has received awards in international student competitions. His research interests concern the interrelations of design, media theory and new materialisms and how speculative historical narratives can be materialized through their study. He also studies the tensions between representation and reality and the ways that memories are mediated through materials.

DIMITRIS GOURDOUKIS

Dimitris Gourdoukis is an Assistant Professor at the School of Architecture in the Aristotle University of Thessaloniki. He is also director of the architectural practice object-e architecture. He teaches courses of architectural design, architectural theory and digital media. He has taught at the School of Architecture at Washington University in St Louis. He is part of the teaching team at the post-graduate program "Advanced Design: Innovation and Transdisciplinary in Design" since the start of the program in 2015. He has published many articles in international publications, while his academic work has been presented in several international conferences. His academic work has been repeatedly awarded.
Dimitris is director of object-e architecture, an architectural practice that has been awarded with several prizes in architectural competitions. Object-e's work received the 'Best Project' award in the 2021 Greek Architecture Awards. His design work has been published and exhibited extensively.
Dimitris Gourdoukis holds a PhD in Architecture from the School of Architecture of the Aristotle University in Thessaloniki, a Master in Architecture from Washington University in St. Louis and a Diploma in Architecture from the Aristotle University.

FABIANO MICOCCI

Fabiano Micocci graduated from the Faculty of Architecture of the University of Roma Tre in 2002 where he also specialized in History of the Design Process (2003). He obtained his PhD degree in Architecture and Urban Design from the University of Florence (2010). He is Assistant Professor at the Department of Architecture at the University of Thessaly, Greece, where he also teaches at the Postgraduate Program Reuse of Buildings and Complexes. He published the books *Zissis Kotionis. The Architecture of Becoming* (Libria, 2020), *Athens by Collage. The Image of the Metropolis between Realism, Intervention and Autonomy* (Anteferma, 2021), co-edited the volume *Energy for Hotels. Refurbishment Strategies in the Mediterranean area among Technology, Architecture and Communication* (Franco Angeli, 2022), and edited the special issue *Lebanon: Refugees and Urbanization* (Camera Cronica, n. 17, 2017). His architectural practice is based in Athens and Rome, working mainly on public spaces and buildings, cultural heritage, and reuse.

FOTIS SAGONAS

Fotis Sagonas [b.1983] is an architect and visual artist. His works have been exhibited at the Museum of the City of New York, the Venice Biennale of Architecture, the Stavros Niarchos Foundation Cultural Center, the Thessaloniki Biennale of Contemporary Art, the State Museum of Contemporary Art in Thessaloniki et al. In 2012, he received a Fulbright Scholarship for Visual Arts at the School of Visual Arts in New York and in 2018, the ARTWORKS Stavros Niarchos Foundation Artist Fellowship Award. Since 2018, he has been teaching the courses of Spatial Representation and Introduction to Architectural Design, at the Department of Architectural Engineering at the University of Ioannina.

GIANNIS PERPERIDIS

Giannis Perperidis is a Ph.D candidate at the Philosophy department of the University of Ioannina and has received a scholarship from the Hellenic Foundation for Research and Innovation (H.F.R.I.). His thesis concerns Andrew Feenberg's philosophy of technology applied in innovative digital environments as that of the Internet or that of smart cities and the digital commons. He is the translator of one of Feenberg's books in Greek and has participated in many conferences with presentations on technology, critical theory and new digital environments. One of his latest presentations was in Turin, Italy on the Philosophy of the City where he attempted to reconcile Feenberg's theory and smart cities research. His paper "The Politics of the City in the Digital Age: Critical Theory of Technology and Urban Design(s)" is forthcoming. The development of Games, Gamification and Urban designs are some of the topics that he's interested in the most.

GIANNIS TSIARAS

Giannis Nikos Tsaras, completed his studies in AUTh (Aristotle University of Thessaloniki), got his master in ETSA in Barcelona (Universitat Politecnica de Catalunya) and his PhD title in Architecture Technology and Design in AUTh.
He has taught classes of Design Studios, Architectural Technology and Building, Architectural Acoustic and Digital Representation courses in Department of Architecture of
Aristotle University of Thessaloniki, Democritus University of Thrace and in School of Architecture and Design of Bachesehir Universitesi in Istanbul.
He is an active architect since 2002, specialized in design of private houses, hotels and places of performance. He has won several prizes in international and national competitions.

IOANNA SYMEONIDOU

Dr Symeonidou is an architect, researcher and educator. She is Assistant Professor of Architecture with Digital Media and has previously served as Adjunct Lecturer at the Institute of Architecture and Media at Graz University of Technology in Austria and the Aristotle University of Thessaloniki, Greece, where she has taught digital design courses. Her research interests include the broad field of architectural design with digital media, with regards to design thinking, architectural representation, VR/AR/XR, novel methods of architectural design and production, algorithmic design strategies, robotic construction and 3D printing. She has lectured in Conferences in Europe and Asia and her work has been exhibited and published by the international press. She is the author of 2 books and a large number of articles in Scientific Journals, Conference Proceedings and book chapters. During the last two decades she has won several international awards for her research achievements and design work.

KONSTANTINOS GRIVAS

Associate Professor in the Department of Architecture, University of Patras, Greece, in Architectural Design. Architecture Degree from the N.T.U.A. (1996), M.A. from the Royal College of Arts in London, (2001), and PhD in the field of Architecture and Digital Culture (2018). K. Grivas' research and works have been presented, published and awarded nationally and internationally. His research focuses on the theme of the domestication of digital technologies, and the implications for architecture.

KONSTANTINOS MORAITIS

Architect Engineer - Professor Emeritus, School of Architecture - N.T.U.A.
Ph.D. in Architecture and Landscape Architecture, under the title "Landscape – allocating place through civilization. Exposition and theoretical correlation of the most significant modern approaches concerning landscape". Postgraduate degree, "Université de Paris I - Panthéon – Sorbonne". Research field (U.E.R.) of Ethical and Political Philosophy, seminar of "Critical Theory of Art". Postgraduate degree in Arabic and Islamic Studies, of the 'Hellenic Centre of Arabic and Islamic Studies – EKMAIS' (Panteion University of Athens). Numerous publications of architectural work, of articles and essays - participation in collective books editions, translations of scientific texts - publication of tutorial handbooks concerning history and theory of landscape design. 25 awards in National Architectural, Landscape and Urban Design Competitions - 2 First Prize awards in International Architectural Competitions.
Membership in: Technical Chamber of Greece, Architectural Association of Athens, Greek Association of Philosophy, Greek Association for Aesthetics and International Association for Aesthetics. Membership in: ICOMOS and U.I.A.

MARIANNA CHARITONIDOU

Dr. Ing. Marianna Charitonidou is Principal Investigator and Postdoctoral Researcher at the Department of Art Theory and History of Athens School of Fine Arts, where she is leading the project *Constantinos A. Doxiadis and Adriano Olivetti's Post-war Reconstruction Agendas in Greece and in Italy: Centralising and Decentralising Political Apparatus*. Apart from her PhD thesis *The Relationship between Interpretation and Elaboration of Architectural Form: Investigating the Mutations of Architecture's Scope* (National Technical University of Athens, 2018), she completed the following two postdoctoral projects: *The Travelling Architect's Eye: Photography and the Automobile Vision* (Department of Architecture, ETH Zurich), and *The Fictional Addressee of Architecture as a Device for Exploring Post-colonial Culture: The Transformations of the Helleno-centric Approaches* (National Technical University of Athens). She curated the exhibition *The View from the Car: Autopia as a New Perceptual Regime* (ETH Zurich, 2021). She has more than 90 publications. Among them: Drawing and Experiencing Architecture: *The Evolving Significance of City's Inhabitants in the 20th Century* (Transcript Verlag, 2022), "Denise Scott Brown's Nonjudgmental Perspective: Cross-Fertilization between Urban Sociology And Architecture" in Frida Grahn, ed., *Denise Scott Brown In Other Eyes: Portraits of an Architect* (Birkhäuser, 2022), and "Housing Programs for the Poor in Addis Ababa: Urban Commons as a Bridge between Spatial and Social", in the *Journal of Urban History*, 48(6) (2022).

MELANIE M. BARROSO

Architect and urban planner graduated from the Faculty of Architecture and Urbanism of the Federal University of Rio de Janeiro (UFRJ) and a master's student (CNPq) of the Graduate Program in Architecture (PROARQ/UFRJ), part of the research group, Culture, Landscape and Environment Built. Member of the Hybrid Landscapes research group - GPPH (School of Fine Arts, EBA-UFRJ). Had exhibited the video installation: Framed City: A body in transit, at the 13th International Architecture Biennial of São Paulo in 2022. Has experience in architecture, audiovisual projects and interest in the areas of research on Cyborg, Art, Landscape and Culture.

MYRTO KOSTAROPOULOU

Dr. Myrto A. Kostaropoulou studied architecture in the National Technical University of Athens (2000). She holds the MSc in "Design and Digital Media" of the Edinburgh University. Her PhD (2007) in the Department of Philosophy of the University of Athens is in the area of aesthetics and architectural creation, through the examination of the gradual composition of the city, considered as the ultimate composite aesthetic, architectural and social form. Her professional interests are both practical and theoretical, maintaining architecture as the axis around which she revolves philosophical framework, contemporary design theories and applications. She is the writer of the book Aesthetic approach of architectural creation: from drama to architecture, Ekkremes, 2008. She also runs an architectural workshop in primary schools, called "I build my city". She also studies and is about to complete her studies in Musical Composition.

PARASKEVI PANTELIADOU

Paraskevi Panteliadou is a Tutor (NSRF Scholarship) and a Postdoctoral researcher at the AUTh School of Architecture. She holds a PhD in Architectural Theory and Design entitled 'The concept of fallacy from philosophy to contemporary architectural design. Theoretical and Design Approaches', an MSc. in Architectural Design-Space-Culture (NTUA), an MSc. in *Enivironmental Design of Cities & Buildings* (HOU), a Diploma in Architecture (AUTh) and a Diploma in *Interior Architecture, Decorative Arts and Design* (UNIWA). Since 2010, she is a co-founder of 'Apopsis Architects', an architectural and design practice based in Thessaloniki, Greece. She is currently active in both professional practice and academia teaching undergraduate courses at the AUTh Department of Architecture. Through her academic research, she combines concrete investigations of architectural works with critical, theoretical perspectives, relevant to architecture and philosophy. She has received awards and distinc tions both for her performance during her studies and for her work (theoretical and design).

PEDRO BORGES DE ARAÚJO

Pedro Borges de Araújo (b. 1950, Porto) Architect (Escola Superior de Belas Artes do Porto, 1975) MA Philosophy (Faculty of Arts and Humanities, University of Porto 2009) Metadisciplinary PhD dissertation in Architecture and Philosophy, 2015. He is a researcher at the Institute of Philosophy, University of Porto, a founding member of MLAG, Mind, Language, Action Group / Coordinator of Project Autofocus Research Seminars on Architecture∩Philosophy∩Neurosciences. Currently, he is carrying out architectural projects, teaching at the University of Porto and producing research in the academic domains on the above- mentioned intersections. Recently co-authored with Juhani Pallasmaa the book *Building Views on Alvar Aalto* (2019); *How the Architect Does Things with Words* in (Ever)green Alvar Aalto (Alvar Aalto Academy/Foundation, 2021); *What the Architect Does, What the Philosophers Do* (Vision, Possibility, Virtuality, Porto: FilArch/OA, 2022) Borges de Araújo is a member of the ANFA-ACE Academy of Neuroscience for Architecture – ANFA Center for Education.

RAMSEY ERIC RAMSEY

Prof. Dr. Ramsey Eric Ramsey is a philosopher of hermeneutics and the author ofa number of books, articles, and book chapters dealing with hermeneutics in a variety of contexts. He is editor of the international journal *Analecta Hermeneutica* and a *professor honoris causa* of the International Institute for Hermeneutics.

SÉRGIO PINTO AMORIM

Sérgio Pinto Amorim graduated from the Faculty of Architecture of the University of Porto (FAUP) in 2000. At the Faculty of Architecture and Arts of Lusíada University - North (FAALUN-Porto) he takes his Master's Degree in 2009, and PhD in 2018.
He is a member of CITAD/UL (Center for Research in 'Territory, Architecture and Design') since 2008, and since 2021 he is the coordinator of the 'Architecture and Philosophy' Research Line and the R&D Project 'Architectural Design Practice and Phenomenology'.
He is also a member of CEAU/FAUP (Center for 'Architecture and Urbanism Studies') since 2019, as a PhD Researcher Collaborator, in the 'Project Theory and Practice Research Group' (T2P).
His research interests focus on the scientific area of Architecture, in the specific context of how phenomenological thought structures and participates in the process of conformation/signification of architectural form, within the scope of the architectural design practice.

SMARO KATSANGELOU

Smaro Katsangelou was born in Thessaloniki in 1999. She has graduated from the Aristotle University of Thessaloniki school of architecture. Her research diploma thesis was titled “Max Rubens and his contribution to the construction of interwar Thessaloniki”. She has participated in various research projects in the field of history of architecture. More notably, she was part of the research team for the creation of “Jewish Architecture of Thessaloniki” digital application, the research for the exhibition for the centennial anniversary of the Asia Minor Catastrophe (TCH, 2022). Amongst the architectural projects she has been part of, are those of the Salt Museum in Missolonghi (2020), the Museum/Archive of Stephanos Kotsianos in Polygyros (2022) and the Pavilion of the municipal Gallery for Art Thessaloniki 2022. She speaks fluently English, French, German and Russian. She has been experimenting with video and mix media art, having participated in Athens Digital Arts Festival (2021) and Video Arts Project (Thessaloniki, 2022). She is currently pursuing a MSc degree in Conservation of Cultural Monuments, AUTh.

SOFIA SOUVATZOGLOU

Sofia Souvatzoglou was born in Athens and studied Architecture in Patras University. She is an Architectural Engineer with postgraduate studies in Architecture and Urban Design (MAUD). She has participated in several architectural and artistic competitions, with her most important distinctions being the 1st Individual Prize in the International Architectural Academic Competition “Villard ‘20: In Fragilia - Reconstructing through the Waters of Ischia” and the win and the implementation of her project in the ABSOLUT Art Competition “Painting the Absolut Mural” in collaboration with the artist Soteur.

SOPHIA VYZOVITI

Sophia Vyzoviti is an architect and professor in architecture at the School of Engineering, University of
Thessaly, Greece. Her research investigates the impact of emergent social and spatial practices in the development of new architectural paradigms. Her design methods integrate form-generation with participation considering agency as architectural function that shapes future habitat.
She has authored articles for *Architecture and Culture*, *Daidalos*, *DOMES*, *Flat Out*, *OASE Journal for Architecture*, and a plethora of international conference proceedings and collective volumes. She has authored “Mikrokatoikia. Atlantas gia Arhitektones (microdwelling. an atlas for architects)” (University Studio Press 2017) “Emergent Places for Urban Groups without a Place” (TUDelft 2005) and the trilogy “Soft Shells: Porous and Deployable Architectural Screens” (BIS 2011) “Supersurfaces” (BIS 2006) and “Folding Architecture: Spatial, Structural and Organizational Diagrams” (BIS 2003). Sophia holds a PhD in design knowledge systems from Delft University of Technology (2005). She was Fulbright Visiting Scholar at the School of Architecture – University of Illinois at Chicago (2022) and has taught at University of Cyprus (2011), National University of Singapore (2006), and Delft University of Technology (2003).

SOTIRIA ALEXIADOU

Sotiria Alexiadou was born in Thessaloniki. After studying Architecture at the University of Thessaly (2007), she attended the MSc. in Urban Strategies of the University of Applied Arts in Vienna (2010). Later, she studied at the Aristotle University of Thessaloniki following the interdisciplinary MSc. in Protection, Conservation and Restoration of Cultural Monuments (2016). Recently, she successfully defended her PhD Thesis in the University of Thessaly's Architecture Department (2022).
She has participated in teaching teams at the University of Cyprus, the University of Thessaly, and the Aristotle University of Thessaloniki. As an architect, she has participated in architectural competitions with distinctions. Her research and architecture projects have been presented at conferences, seminars, and exhibitions. Her work has been published in conference proceedings, collective volumes, journals, catalogs, and websites.
Her research interests concern the mechanisms of urban transformation, the evolution of postwar architecture and its future in terms of protection, restoration, and reuse.

SPIROS I. PAPADIMITRIOU

Spiros I. Papadimitriou he is an architect, graduated from the Aristotle University of Thessaloniki (A.U.Th.) (1999) and he received his Master degree in Architecture and Urbanism from the Architectural Association (2003) School of Architecture in London. He is Assistant Professor in Architectural Design and Digital Medium at the Architecture School of A.U.Th., where he teaches since 2004. He is a member of the coordinating committee and the teaching staff of the Postgraduate Program "Advanced Design, Innovation and Transdisciplinarity in Design". Since 1999 he has been practicing architecture as an independent architect. He has received many awards and distinctions in international and national competitions and he has participated in many exhibitions, publications and conferences in Greece and in Europe.

VALINA GEROPANTA

Vasiliki (Valina) Geropanta is an Assistant Professor of Urban Planning with New Technologies at the Technical University of Crete's Faculty of Architecture. She holds a Ph.D. in the field of the Smart City from the Università degli studi di Roma, Sapienza, Italy, an MA in Housing & Urbanism from the Architectural Association School of Architecture, London, UK, and a Master's Degree in Architecture and Engineering from the University of Patras. Her current research explores the potential of ICT in making human settlements more inclusive, safe, resilient, and sustainable.

VASILIS STROUMPAKOS

Vasilis Stroumpakos is an architect and educator. He is Assistant Professor at the Architecture Department University of Patras. Vasilis has previously taught at the Architectural Association Design Research Lab (AADRL M.Arch), AA Media Studies and AA Diploma. He has co-founded the Architectural Association New Media and Information Research Cluster and was Head of AA Digital Platforms. He co-founded the architecture practice ARCHElab. He has received international awards and distinctions including European Design Awards, Feidad, Possible Futures (Miami Bienale), Plecnik Institution, Interactive Media Awards, AVA Digital Awards, Design Licks. His work has been exhibited worldwide including London Architecture Biennale, Milan Triennale, Miami Biennale, Arco Madrid, Software Boundaries Israel, Digital Topographies Thessaloniki, National Museum of Contemporary Art, Athens. His publications include AD Wiley, Blueprint, World Architecture Review, Piranesi Periodical, Feidad Exhibition Catalogue, Il Projetto, European Design Awards Catalogue, Spazio Architettura, New Italian Blood, AB magazine. He is co-author of Negotiate My Boundary! (AA Publications , Birkhauser). Vasilis received his Diploma of Architecture from Aristotle University of Thessaloniki and his M.Arch with Distinction from the Architectural Association (AADRL M.Arch).

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KEYNOTE SPEAKERS:

Andrew Wiercinski
Professor of Liberal Arts at the University of Warsaw and President of the International Institute for Hermeneutics

Theodore Spyropoulos
Head of the Architecture and Urbanism (DRL) Programme at the Architectural Association, London

ORGANIZATION:

Constantinos V. Proimos
University of Patras, Department of Architecture

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University of Patras, Department of Architecture

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