

Towards an Architectural Theory for Sustainability

International Symposium

05 July 2023

Lancaster University
School of Architecture

Lancaster University Campus
Furness Lecture Theatre 2



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*Towards an Architectural Theory
for Sustainability*

Lancaster University Campus
Furness Lecture Theatre 2
05th July 2023

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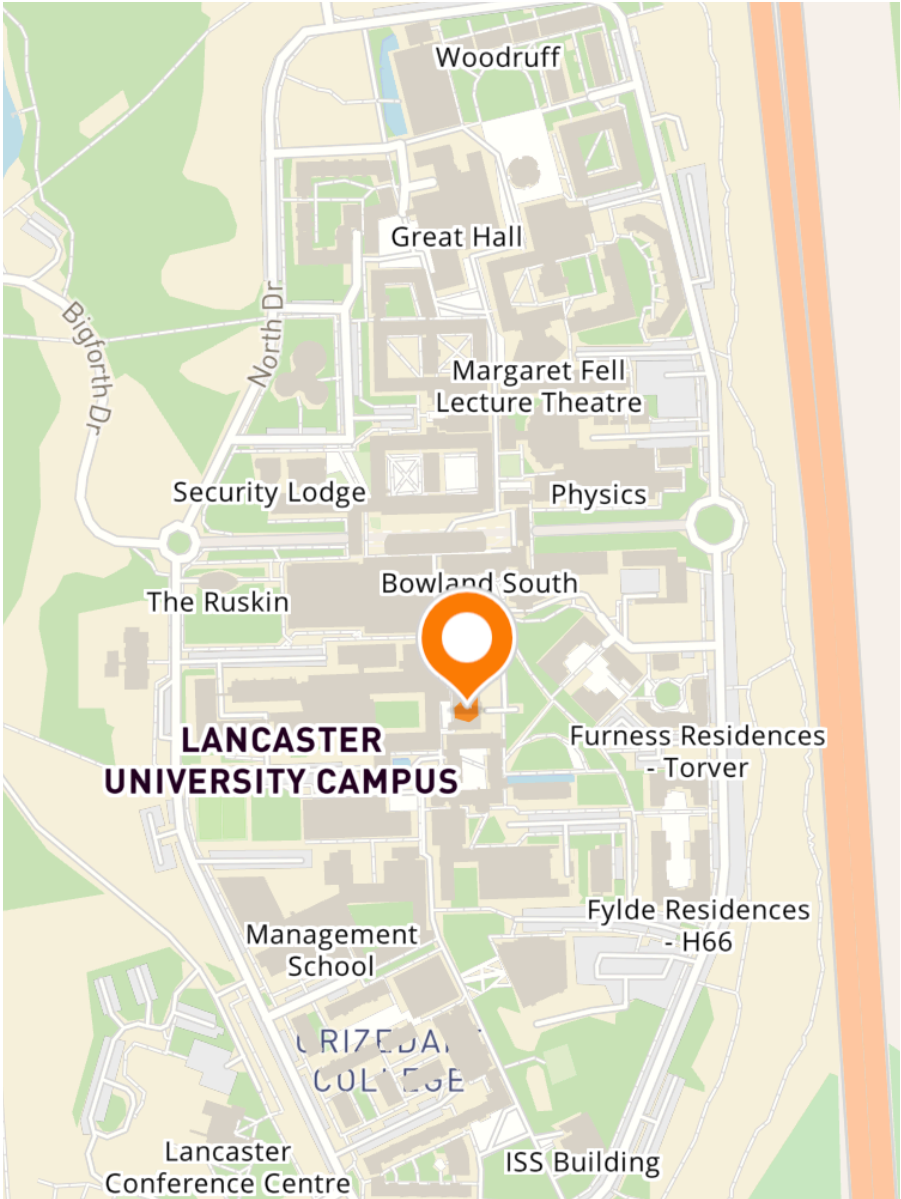
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Assistant Professor

Location

Lancaster University Campus
Furness Lecture Theatre 2





About

With the increasingly visible consequences of local and global climate change, with the threat of resource depletion, increasing air, land and water pollution, and ongoing ecological damage, sustainability has become of paramount importance to the architectural disciplines.

- How can the disciplines of architectural theory, history and criticism contribute to these goals?
- What does this necessary, broad and interdisciplinary debate consist of?

In recent years, thanks to a large number of campaigns, initiatives, commitments and goals by a much larger segment of architects and their institutional bodies, the great freeze in mainstream architecture's attitude to the environment has reached a tipping point towards greater involvement.

- If this is the case, why has the discipline taken so long to engage in this necessary, broad and interdisciplinary debate?
- Why has mainstream architecture culturally lagged behind environmental concerns for the past 50 years?

Today, some argue that architecture should move towards a materiality-based view, in order to increase its effectiveness in the field of sustainability; but we can also ask ourselves about the role and importance of theory and criticism in pursuing and achieving this. This is urgently needed before we find ourselves in a quaint throwback to the past, with engineering and the sciences assuming the role of those called upon to find solutions to problems that are too pressing for a profession unprepared to meet these challenges with its own disciplinary content.

- What are the key concepts and performance criteria that provide the cognitive basis and critical framework needed for future research and professional application?
- How theories of sustainability help to centre a creative critical context for the development of design methodologies and architectural practice is crucial for teaching and practice?

While many take sustainable design for granted, others see environmental performance as a mere outcome of the digital revolution and a techno-centric domain. Some argue that the profession should move towards a materiality-based self-image to increase its effectiveness in sustainability; others question the role and importance of theory, history and critique in pursuing and achieving this. The lack of a theoretical framework that is well connected to established architectural and urban theory needs to be addressed.

- What does this necessary, broad and interdisciplinary debate mean for architectural theory, history and criticism?
- What are the key concepts and performance criteria that provide the cognitive basis and critical framework needed for research and professional application?
- How do we theoretically frame environmental concerns in order to organise our professional activity?
- How has the concept of sustainability in architecture evolved from its beginnings to the Anthropocene?
- To what extent does architectural education need to rethink how and what it teaches in the coming years?

Session 1

- 0900 0915 *Welcome*
Edward Simpson
Lancaster University, Faculty of Arts and Social Sciences
Executive Dean and Professor in Sociology
Richard Brook
Lancaster University, School of Architecture
Director of Research, Professor in Architecture
- 0915 0930 *A Political View of Anthropocene for Architects*
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Andrea Canclini
Lancaster University, School of Architecture
Lecturer in Architecture
- 0930 0935 **Session 1**
Beyond the Divide between Nature and Culture
Introduction
Christian Gänshirt
Politecnico di Milano, Department of Architecture and Urban Studies
Visiting Professor (Sustainability)
- 0935 1005 *Adequacy: Towards a Theory of Architecture in the Age of the Anthropocene*
Keynote 1
Jörg Gleiter
Technische Universität Berlin, Institute of Architecture
Professor and Chair of Architectural Theory
- 1005 1025 *Architecture After the House: a Commitment to Sustainable Practice*
Speaker 1
Teresa Hoskyns
Director of CRAC-UK, Cross-Cultural Research in Architecture Collective
with
Tordis Berstrand Norwegian University of Science and Technology, Faculty of Architecture and Design,
Associate Professor
Amir Djalali CRAC-UK, Cross-Cultural Research in Architecture Collective
Glen Wash Ivanovic Xi'an Jiaotong-Liverpool University, Department of Architecture, Associate Professor
Claudia Westermann Xi'an Jiaotong-Liverpool University, Department of Architecture, Senior Associate
Professor
- 1025 1045 *How Things Change: Five Turning Points in the History of Architectural Ideas*
Speaker 2
Deyan Sudjic
Lancaster University, School of Architecture
Distinguished Professor in Architecture
- 1045 1100 Session 1 Discussion
- 1100 1115 Coffee Break

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1120 1150 Keynote 2	<p><i>Architecture Ltd.: Sustainability as Fostering Dispositions</i> Lutz Robbers Jade University, Department of Architecture Assistant Professor</p>
1150 1210 Speaker 3	<p><i>Intersecting Zero-Carbon Goals with Architectural Heritage Practices</i> Laura Coucill University of Salford, School of Science, Engineering and Environment Senior Lecturer, Head of Architecture + Design with Sherif Goubran American University in Cairo, Department of Architecture, Assistant Professor Tom Jefferies Queen's University Belfast, School of Natural and Built Environment, Professor Gary Boyd Queen's University Belfast, School of Natural and Built Environment, Professor</p>
1210 1230 Speaker 4	<p><i>Trans-Architecture. Five Words for the Transition</i> Francesca Zanotto Politecnico di Milano, Department of Architecture and Urban Studies Assistant Professor</p>
1230 1245	Session 2 Discussion
1245 1335	Lunch Break

Session 3

- 1335 1350 *How to Redefine the Theoretical Basis of Architecture?*
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Christian Gänschert
 Politecnico di Milano, Department of Architecture and Urban Studies
 Visiting Professor (Sustainability)
- 1350 1355 **Session 3**
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Andrea Canclini
 Lancaster University, School of Architecture
 Lecturer in Architecture
- 1355 1425 *Instigating Architecture's Climax Change. History, Theory and Curating as Transformation Drivers*
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Pedro Gadanho
 Universidade da Beira Interior, Departamento de Engenharia Civil e Arquitetura
 Professor Auxiliar Convidado
- 1425 1445 *Architecture in the Future Imperfect*
 Speaker 5
James Soane
 The London School of Architecture
 Research Fellow and Founding Director
- 1445 1505 *An Anti-colonial Architectural Theory for Sustainability?*
 Speaker 6
Nora Wuttke
 SOAS, University of London
 Graduate Teaching Assistant
- 1505 1525 *Towards an Architecture of Translations & Cosmic Relations*
 Speaker 7
Fadi Shayya
 University of Salford, School of Science, Engineering and Environment
 Lecturer in Architecture & Urbanism
- 1525 1540 Session 3 Discussion
- 1540 1555 Coffee Break

Session 4

- 1555 1600 **Session 4**
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Christian Gänschirt
Politecnico di Milano, Department of Architecture and Urban Studies
Visiting Professor (Sustainability)
- 1600 1630 *From Spaceship Earth to Earthship*
Keynote 4 **Andrea Alberto Dutto**
RWTH Aachen University, Department of Architectural Theory
Research and Teaching Associate
- 1630 1650 *Repair as a Meaningful Architectural Practice*
Speaker 8 **Vasileios Chanis**
Swiss Federal Institute of Technology in Lausanne, Laboratory LAPIS
Doctoral Assistant
Nicola Braghieri
Swiss Federal Institute of Technology in Lausanne, Laboratory LAPIS
Associate Professor
- 1650 1710 *Re-Architecture: a Theoretical Approach to Reusing, Readapting, Repurposing and Recycling*
Speaker 9 **Ana Costa**
Lancaster University, School of Architecture
Senior Lecturer in Architecture
Luis Pinho
Lancaster University, Faculty of Science and Technology, Chemistry
Research Associate in Green Hydrogen and Catalysis
- 1710 1730 *Embracing Appropriate Technologies: a Theoretical Framework for Resilient, Ecological, and Locally
Embedded Architectural Interventions*
Speaker 10 **Alessio Battistella**
Politecnico di Milano, Department of Architecture and Urban Studies
Assistant Professor of Building Technology
- 1730 1745 Session 4 Discussion
- 1745 1800 Coffee Break
- 1800 1900 **Final Plenary Discussion**
Moderator
Deyan Sudjic
Lancaster University, School of Architecture
Distinguished Professor in Architecture

Edward Simpson

Lancaster University
Faculty of Arts and Social Sciences
Executive Dean and Professor

09:00 - 09:15

Welcome Session

Short Bio

Edward Simpson is an anthropologist whose research focuses on the thought politics of climate change in South Asia.

He is a Professor in Sociology at Lancaster University and Executive Dean of the Faculty of Arts and Social Sciences.

He is the author of *Highways to the End of the World Roads, Roadmen and Power in South Asia*.

Richard Brook

Lancaster University
School of Architecture
Director of Research, Professor in Architecture

09:00 - 09:15

Welcome Session

Short Bio

Richard Brook is an architect and architectural historian whose work focusses on the mainstream modern architecture of the post-war. He is Professor of Architecture and Director of Research for the School of Architecture at Lancaster University.

He acts as advisor to the Modernist Society and is an active member of the Twentieth Century Society. In 2022 he co-convoked the annual conference of the Society of Architectural Historians of Great Britain, for whom he also judges the Colvin Prize. This year will see the publication of his monograph *The Renewal of Post-War Manchester: Planning, Architecture and the State* with Manchester University Press.

Andrea Canclini

Lancaster University
School of Architecture
Lecturer in Architecture

09:15 - 09:30

Morning Session Opening

Short Bio

Andrea Canclini is currently a Lecturer in Architecture at the School of Architecture at Lancaster University, and a former Lecturer at the Faculty of Architecture of the Politecnico di Milano and Visiting Professor at Beirut Arab University.

He holds a PhD *cum laude* from Politecnico di Torino, participated in several international conferences, including the PhD Schools in Politecnico di Milano, Politecnico di Torino and Tor Vergata University in Rome, The Courtauld Institute of Art at the University of London, the Istituto Universitario di Architettura di Venezia, the University of Nottingham Ningbo, the Katholieke Universiteit Leuven in Brussels, the AHRA 2021 at Loughborough University, the Jade Universität, the Leibniz University Hanover, the 2022 EAHN at ETSAM Madrid, published in Italy, Portugal, Turkey, China, England, Lebanon, Scotland, Belgium, and in Scopus indexed journals such as *The Plan Journal* and *aut aut*, the leading Italian periodical of aesthetic philosophy, about his main research topics: the cultural basis of Modern and Contemporary architectural criticism.

A Political View of Anthropocene for Architects

Abstract

Despite the fact that architects have often overestimated themselves by calling themselves *problem solvers*, there seems to have been little professional recognition of their role in the environmental problem over the last 50 years. This is urgently needed before we find ourselves in a curious throwback to the past (“Technology is the answer, but what was the question?” wondered Cedric Price in 1966), with engineering and the natural sciences assuming the role of those who are looked to for solutions to problems that are too pressing for a profession unprepared to meet these challenges with its own and exclusive disciplinary content.

But perhaps we should remind ourselves of what exactly the natural environment means. From the beginning of logico-rational thought and up to at least the eighteenth century, man has returned to the concept of nature, feeling the idea of the limit of the very idea of nature, and repeatedly attempting to overcome the abyss between the reality of nature and the reality of history, between nature and society, between nature and *human* nature. For this is where the game is played, right from the start, this otherness of the human species within nature itself.

That is, the *Welt* is culture as classically understood by anthropologists, artefacts both symbolic and tools. It is precisely the symbolic value, rather than the strictly functional value, that transforms ape behaviour into human behaviour, an artefact.

But it is precisely the reality of the *human* environment, the reality that for centuries has represented the real and concrete space in which we have operated, lived and survived. The modern world, then, is no longer inherited, it is no longer an escape from the intimidating force of nature, it is, on the contrary, our realisation, it is inseparable from our self-realisation.

But it is not only the philosophical sciences that problematise the awareness of the existence of a human environment. It can be seen as a membrane between man and reality, between man and himself, between man and history, as studied by the naturalists. In fact, it was they who, in the nineteenth century, established the basic criteria of general ecology and then, together with sociologists, psychologists, anthropologists and, today, geologists, defined the concept of the Anthropocene, up to the definition and development of human and social ecology as part of ecology itself.

What is the *human* environment? Is it something devoid of intentionality and coherence, a superstructure, arbitrary, made up of isolated facts, and therefore an uncontrollable and uncontrolled phenomenon? Well, if we look at the relationship between man and objects, it seems to be an irrational relationship: do buildings belong to these objects?

Jörg Gleiter

Technische Universität Berlin
Institute of Architecture
Chair of Architectural Theory

09:35 - 10:05

Keynote 1

Short Bio

Jörg H. Gleiter (Dr.-Ing. habil.) since 2012 Professor of Architectural Theory at the Technical University of Berlin. 2008-12 Professor of Aesthetics at Free University of Bolzano/Italy. Among others, Gleiter held visiting professorships at Waseda University (Tokyo), Bauhaus University Weimar (Germany), Brown University (Providence/RI), Politecnico di Torino and Politecnico di Milano. Doctorate (2001) on the topic of *Critical Theory of Ornament* and Habilitation (2007) on the topic of *Friedrich Nietzsche and Architecture*, both at Bauhaus University Weimar. Gleiter is editor of the book series *ArchitekturDenken* (Transcript Verlag Bielefeld). Main research interests are: Critical theory of Sustainability, transformations of knowledge, critical theory of ornament, architectural philosophy and semiotics. Among his recent book publications are: *gleiters universum. architektur* (Dejavue Verlag, Berlin 2023); *Architekturtheorie zur Einführung* (Junius Verlag 2022), *Architekturtheorie 1863-1938* (DOM Publishers 2018), *Ornament Today. Digital, Material, Structural* (Bozen/Bolzano 2012).

Adequacy

Towards a Theory of Architecture in the Age of the Anthropocene

Abstract

Against the background of the climate and resource crisis, there is much talk of the need for a new theory of architecture. What discipline today would want to be excluded from self-criticism and from the demand for change. In architecture, too, it is repeatedly pointed out that the building sector is one of the largest producers of CO₂. However, the question arises whether the reduction of CO₂ is really an “architectural” issue. Nevertheless, architecture seems to be at an epochal turning point. The demand is for a whole new theory. New terms like connectedness, entanglement and chthulucene etc. are introduced. However, they are more buzzwords that do a poor job of hiding the lack of theoretical foundation. As a result, they fade away as quickly as they came. The lack of sustainability in the field of energy and resources seems to be reflected in the lack of sustainability of theoretical terms. Contrary to the alarmism popular today, it will be argued here that the climate and energy problem is an opportunity to correct the misguided developments in architecture of the 20th century. According to its cultural function, architecture has always been designed for sustainability. In order to regain this quality, however, architecture must be freed precisely from today’s hardened ideology of sustainability. For a contemporary theory of architecture, one of the oldest concepts in architectural theory must be brought to the center: adequacy or, in the words of Leon Battista Alberti, *adeguatezza*.

Teresa Hoskyns

Director of CRAC-UK

Cross-Cultural Research in Architecture Collective

with

Tordis Berstrand

Norwegian University of Science and Technology, Faculty of Architecture and Design

Associate Professor

Amir Djalali

CRAC-UK, Cross-Cultural Research in Architecture Collective

Glen Wash Ivanovic

Xi'an Jiaotong-Liverpool University, Department of Architecture

Associate Professor

Claudia Westermann

Xi'an Jiaotong-Liverpool University, Department of Architecture

Senior Associate Professor

10:05 - 10:25

Speaker 1

Short Bio

CRAC is an international collective of scholars, architects, and artists engaging in research on China's places, and the complexities of relations these places embody between modernisation and tradition, local, regional and global, the rural and the urban. CRAC is developing a platform for crosscultural and interdisciplinary discourse and collaborative research on contemporary architectural issues and knowledge exchange that situates China within an unfolding global narrative.

Teresa Hoskyns, PhD, is the Director of CRAC UK. She worked at the Universities of Cambridge and Sheffield and as an Associate Professor at XJTLU in China. Her practice and research focuses on the intersection between architecture, spatial practice, and public space and she is the author of *The Empty Place: Democracy and Public Space* published by Routledge New York (2014).

Tordis Berstrand, PhD, artist, architect, and Associate Professor at the Norwegian University of Science and Technology (NTNU), Trondheim, Norway. Tordis has taught architectural theory and practice in the UK and China, and she is a member of the CRAC Collective.

Amir Djalali, PhD, writes about the politics of the production of architectural knowledge. He worked at the Berlage Institute, TU Delft, the Rotterdam Academy of Architecture, University of Bologna and Xi'an Jiaotong-Liverpool University (XJTLU). He is co-author of *Tehran: Life within walls* (Berlin: Hatje Cantz, 2017).

Glen Wash Ivanovic is an architect, researcher and educator, currently an Associate Professor of Architecture in XJTLU. Holding a PhD in Architecture from the University of Tokyo, his research is focused in developing methodologies for data visualization applied to Place-based architectural design.

Claudia Westermann, PhD, is an artist, architect, and Senior Associate Professor at (XJTLU) in Suzhou, China. She is an editor of the journal *Technoetic Arts*, an executive board member of the American Society for Cybernetics, and a member of the CRAC Collective (Crosscultural Research on Architecture in China).

Architecture After the House

A Commitment to Sustainable Practice

Abstract

As the world has been experiencing a prolonged state of crisis, it has become increasingly evident that the problems of the Anthropocene cannot be effectively addressed from ontological perspectives that emphasise the boundaries of categories and prioritise the static over the dynamic. Technological fixes are short-term solutions, not effectively addressing any crisis. Solutionism obfuscates the problems that need to be addressed. Like in many other fields, the practice of architecture has embraced technical approaches that constitute a reduction of the possibilities of technology as a means to ecological practice and thereby has contributed to an amplification of the problems of the Anthropocene. In a radical reversal of conceptualising the problems, we suggest thinking architecture after the house, beyond the authored edifice, and refocusing the discourse on transformation and dynamic relations that include aesthetic experiences and enact ethical concerns.

CRAC, a collective of scholars, architects, and artists engaging in research on contemporary architectural issues and knowledge exchange that situates China within an unfolding global narrative, proposes a cross-cultural approach to architecture after house, including a re-evaluation of Eastern traditions.

The Chinese philosophical tradition introduces a different logic that can be linked to the discourse of ontological expansion or relational ontology, where instead of a clean separation between 'nature' and 'culture' they mutually construct each other in the ongoing process of action and becoming. It offers an opportunity to radically rethink sustainability with its zoetological approaches[1], understood as an art of living, as they shift the focus of enquiry from entities to dynamic relations. Zoetological approaches to architectural design may emphasise the interdependencies of art, technology and the environment. They may construct frameworks for methodologies of design that reach across disciplines and cultures to create relations where they are needed. Forming a relational practice that reframes modesty as a value, further invites us to rethink architecture as a form of ethical expression that integrates technology as a means to respond to future aspirations.

CRAC proposes presenting the above-outlined themes in five scenes: sheltering zoetology, living modesty, writing forms, cultivating landscape, framing air.

[1] Ames, Roger T. (2023), *'Zoetology': A New Name for an Old Way of Thinking*. Royal Institute of Philosophy Supplements, 93: 81–98.

Deyan Sudjic

Lancaster University
School of Architecture
Distinguished Professor in Architecture

10:25 - 10:45

Speaker 2

Short Bio

Deyan Sudjic was born in London, studied architecture in Edinburgh, edited *Domus* magazine in Milan, taught design in Vienna, and has curated exhibitions in Istanbul, Copenhagen, Taiwan, and Seoul. He was the director of the Venice architecture Biennale in 2002.

He is a professor at Lancaster, and director emeritus of the Design Museum in London, which he was responsible for moving from its original building in Shad Thames to its new home in the former Commonwealth Institute building in Kensington.

He has been a critic for the *Observer*, the *Sunday Times* and the *Guardian*. As an author he has been published in eleven languages.

His most recent book, *Stalin's Architect*, a biography of Boris Iofan was shortlisted for the 2022 Pushkin House prize.

In 2023, he was the founding editor of *Anima*, a new review of architecture and design.

How Things Change

Five Turning Points in the History of Architectural Ideas

Abstract

By exploring five turning points in architecture and design, some theoretical, others actual objects, we have a way to understand the mechanisms of change. Of all the conflicting ideas about the way that we should live, now two urbanists have offered more far reaching and more widely divergent ideas than Ebenezer Howard and Le Corbusier.

The Garden City of Tomorrow, published by Howard in 1902 still resonates today in the policies of Britain's conservative government, and has impacted on every culture from the Soviet Union to South Africa. He postulated an ideal society of 30,000 people, while Le Corbusier's *Ville Radieuse* from 1935 explored a city of 3 million, and for better or worse has shaped our thinking ever since. In terms of understanding the relationship between energy and architecture, nobody laid out the issues with greater clarity than Reyner Banham when he wrote *The Architecture of the Well Tempered Environment* in 1969.

There are moments when an architectural exhibition can codify the issues with unmatched directness. In living memory Paolo Portoghesi's Venice architecture Biennale of 1980, titled *The Presence of the Past* caused a radical, if short lived reassessment of the parameters of architectural debate.

Finally, Steve Jobs and Jony Ive's work on the first iPhone, launched in 2007 has done more to change the way that we live than any building, book, or theory.

Lutz Robbers

Department of Architecture
Jade University
Assistant Professor

11:20 - 11:50

Keynote 2

Short Bio

Lutz Robbers is an architectural theorist and historian whose research focuses on the media conditions of architectural knowledge. He holds an M.A. and a Ph.D. in the History and Theory of Architecture from Princeton University. He taught architectural history and theory at the RWTH Aachen, at the Bauhaus-University and Columbia University. In spring of 2023, he was Visiting Professor at Tel Aviv University. From 2010-2013 he was a postdoctoral research fellow at the Internationales Kolleg für Kulturtechnikforschung und Medienphilosophie (IKKM), Bauhaus-Universität Weimar, where he was part of the research group “Tools of Design”. He held research positions at the Cité de l'architecture et du patrimoine in Paris, the London School of Economics' “Cities Programme”, the Canadian Center of Architecture (CCA) and the German Forum of Art History in Paris. He served as editor of the journal *Candide – Journal for Architectural Knowledge*. Currently he teaches architectural theory at the Jade University of Applied Sciences in Oldenburg, where he has been instrumental in establishing a new program in Urban Design.

Architecture Ltd.: Sustainability as Fostering Dispositions

Abstract

In her recent book “Medium Design” (2021) the architectural theorist Keller Easterling makes a passionate plea against design’s persistent preoccupation on fixed objects. Criticizing the continued privileging of “nominative and quantitative” solutions that take form as buildings, master plans, or algorithms she shifts the focus to notions such as ‘disposition’, ‘potential’, and ‘interplay.’ Medium design, the argument goes, is not about making inert things and locating them in space but about imagining “protocols of interplay” in order to determine parameters for how things interact with each other. Easterling’s approach is only the latest manifestation of a long line of scholarly writing criticizing design’s (and especially architecture’s) continued conceptual dependency on static objectivity and empowered subjectivity – a dependency which from the onset was concomitant with both a suppressed awareness of architecture being part of the animate/animated lifeworld and dormant desire to engage with architecture that is alive.

My contribution will take Easterling’s argument as a point of departure to probe a number of assumptions that govern current strategies in architecture to become ‘sustainable’. Smart houses, net-zero energy buildings, cradle-cradle life cycles, tiny houses, various forms of commoning and participation – they all appear like belated reform efforts in the face of global capitalism’s de facto “Scorched Earth” (Crary 2022). During the half a century after the “Limits of Growth” (Meadows, 1972) were presented as factual evidence and in spite of the relentless warnings from most scientific disciplines, architecture never assumed its task as the material arbiter of conditions that permit our biological, social, political and economic lives to take place. Instead, architecture has perpetuated its role as the willing executioners of the dominant regimes, whether neo-liberal capitalist or state authoritarian, either by celebrating the “Dreams of Disconnection” (Lopez, 2021), glossing over the ubiquity of junkspaces with cynical brilliance, or by pragmatically accepting its professional and technological prowess.

I will make the argument that architecture’s current commitment for a sustainable built environment – whether through optimization of processes, reduced consumption, bio-diversity, or ‘smart’ technological ‘solutions’ – is by definition limited. Architecture’s continuing infatuation with the deliria of subjective agency (Siegert, 2015) and transcendent objecthood prevents it from being thought as a medium which, as I will attempt to argue, is by definition sustainable. I hence propose a fundamental stocktaking by returning to some of the pivotal discourses of the 1920s avant-garde when the prospect of vitalist bodily materialism (in the sense of Bergson) had been a feasible possibility for a truly sustainable, dispositional modern architecture to emerge.

Laura Coucill

University of Salford

School of Science, Engineering and Environment

Senior Lecturer, Head of Architecture + Design

with

Sherif Goubran

American University in Cairo, Department of Architecture

Assistant Professor

Tom Jefferies

Queen's University Belfast, School of Natural and Built Environment

Professor

Gary Boyd

Queen's University Belfast, School of Natural and Built Environment

Professor

11:50 - 12:10

Speaker 3

Short Bio

Dr. **Laura Coucill** is a Head of Architecture at University of Salford, Manchester, responsible for establishing the Salford Laboratory of Architecture (S-LAB). Her interest is in the spatial manifestation of culture, policy and technology. Her research covers major infrastructural development in the post-WWII welfare state (UK) and reflects on lessons to be learned from the practices which delivered national scale modernisation for contemporary global challenges. Laura's contemporary exploration of these themes adopts cross-thematic spatial analysis techniques, which combine historical and theoretical methodologies with contemporary data mapping to capture spatial capacity, operation, performance and experience.

Sherif Goubran is an assistant professor of sustainable architecture in the department of architecture, School of Sciences and Engineering, at The American University in Cairo (AUC), where he joined as joined is as an instructor in the fall of 2020. He completed his PhD in the Individualized Program (INDI) at Concordia University in 2021. His PhD research was funded by several prestigious grants and awards, including the Vanier Canada Graduate scholarship. Before that, he completed a MSc in building engineering in 2016, focusing on energy efficiency in commercial buildings. He holds a BS in architecture from AUC.

Tom Jefferies is Professor of Future Cities in the School of Natural and Built Environment, a prize-winning architect and urban designer. Prior to joining Queen's University Belfast Tom was Head of the Manchester School of Architecture, and Birmingham School of Architecture. He has taught, lectured and examined internationally. Tom's research investigates relationships between culture, space, landscape process to propose new forms of contemporary urbanism. Expertise in architecture, urban design, landscape, master planning and design codes, architectural history, theory and context, sustainability and heritage is a basis for developing symbiotic relationships between research and inter-disciplinary practice.

Gary A. Boyd is Professor of Architecture at Queen's University, Belfast. Between 2018 and 2022 he was a Leverhulme Major Research Fellowship and from 2018 to 2020 project leader for a Getty Foundation Keeping it Modern grant. The latter project won the Royal Institute of Architects in Ireland (RIAI) Prize for Research in Architecture in 2021. The Leverhulme grant resulted in the publication of the monograph Architecture and the Face of Coal: Mining and Modern Britain (Lund Humphries, January 2023).

Intersecting Zero-Carbon Goals with Architectural Heritage Practices

Abstract

Are approaches to zero carbon development compatible with protected heritage in the built environment? Can UNESCO values be reconciled resilient urban futures? What will future zero carbon, or carbon negative, settlements look like and what can be learnt from built historic models and hypothetical urban ideals?

Since sustainability in architecture became mainstream, sustainability theory has become increasingly heterogeneous (Guy & Farmer, 2001; Vandevyvere & Heynen, 2014) and the formal architectural results it produces are arguably increasingly homogenous. The authors report on the results of a transnational design studio between UK and Egypt, established to explore the relationship between heritage and sustainability and the production of future heritage in a global societal crisis.

Heritage assets in the built environment are both a problem and solution to the climate emergency.

Changing weather patterns will accelerate damage and decay to historic structures and landscapes, but retrofit can displace original design values, notwithstanding tensions between conservation and performance policies (Ziedler, Hari & Bell, 2020: 4). This is a situation which reinforces that significant and effective strategies rely on connected, scalar, design-led, multidisciplinary approaches (see for example, Jefferies & Keeffe, 2011).

The *Distributed Design Studio* – a transnational project between Belfast, Salford and Cairo – has engaged architectural design thinking to re-evaluate decarbonisation strategies across scales, cultures, and climates to explore the value potential of zero-carbon and carbon-negative landscapes and architecture. Funded by the British Council, Queen's University Belfast, the American University in Cairo, and the University of Salford examined the heritage-rich contexts of Northern Ireland, Egypt, and England. This spatial research enabled design questions to be explored through experimental and digitally infused co-production, alongside fieldwork focused on natural and constructed forms of heritage. Presentations of design research findings at COP27 highlighted the limitations of current decarbonisation strategies, and generated a shared understanding of local responses to global challenges, forming the basis of propositionally based themes that overlap.

The paper reflects on innovative approaches to teaching, design and research to remark on the potential of this method to equip graduates with the technical and design thinking skills needed, and enable design professions to radically reimagine the role of architecture, community, and technology through stakeholder engagement practices.

Francesca Zanotto

Politecnico di Milano

Department of Architecture and Urban Studies

Assistant Professor in Architecture

12:10 - 12:30

Speaker 4

Short Bio

Francesca Zanotto is an Italian architect and researcher based in Milan. Her work examines the ecological implications of architectural and urban design, focusing on circular design processes in the built environment and the integration between architecture and urban forestry to enhance urban biodiversity. She is currently an Assistant Professor of Architectural and Urban Design at the Department of Architecture and Urban Studies of Politecnico di Milano, working within the National Biodiversity Future Center research group. Prior to that, she was a research fellow at the Department of Architecture and Arts of Università Iuav di Venezia - taking part in the scientific activity of the national research project “Sylva” (2020-2022); research fellow at Politecnico di Milano (2020); guest Ph.D. researcher at Delft University of Technology (2017). The project *Highway to Wilderness*, developed with the research group Walden Architects (PoliMi-Iuav) to investigate the relationships between city, forest, and architecture, was exhibited at the 2021 Seoul Biennale of Architecture and Urbanism. Francesca is the author of *Circular Architecture. A Design Ideology* (LetteraVentidue, 2020) and she regularly publishes essays in periodicals and books. Among her recent publications: *Borders. Parks, Sanctuaries, Reserves, and the outlining of American Wilderness* (Mimesis, 2022); *Nonexploitative Architecture. Beyond a Utilitarian Perspective on Wood* (Graz Architecture Magazine, 2021); *Architecture and Scarcity. From the Design of the Hardware to the Use of the Software* (Quodlibet, 2020). Francesca holds the degree of Architect from Politecnico di Milano (2013), and a Ph.D. *cum laude* in Architectural, Urban, and Interior Design from the same institution (2018).

Trans-Architecture

Five Words for the Transition

Abstract

During the last 15 years, the condition of global complexity and the undeniable unsustainability of the patterns of growth drove the architectural debate – along with the public debate on the use of resources and production and consumption models – to focus the research on a change of paradigm, framed by a vocabulary dominated by the prefix re-. Serge Latouche identified eight words to start from to overturn the current myth of progress toward the degrowth: reevaluate, reconceptualize, restructure, redistribute, relocate, reduce, reuse, and recycle. Today, the urgent challenge of transition, a global crisis getting more and more severe, complex, and unpredictable and the answers elaborated until this moment revealing themselves as weak and ineffective call for a change of focus in the design domain, starting from the language we use to define long-lasting challenges that unveil their complexities and hidden entanglements over time. This change entails the permanent expansion of the idea of sustainability, a concept including environmental, economic, social, and political sphere and their many and diverse local and minute declinations. Architecture not capable of this multifaceted gaze runs the risk to turn irrelevant soon. In this condition, re-think, re-design, and re-made is still necessary but not sufficient to cope with current conditions: it is necessary to embrace unpredictability and contradictions with a fluid, interdisciplinary design approach, following a set of ideas framed by the prefix trans-. Trans- indicates the change from one condition to another, the overcoming of a limit. Therefore, within the common ongoing effort to radically redefine the theoretical basis of architecture, the paper will discuss five tentative keywords chosen to define the theoretical framework of a trans- architecture, capable to confront current conditions with a sustainable but not predetermined approach: 1. Transcalar. The design focus is across scales – even very far from each other – to reconstruct existing entanglements at different dimensions; 2. Transversal. The design focus involves different fields, in a systemic vision; 3. Transfinite. The lifecycle of buildings, artifacts, and materials starts way before the construction and ends way after the dismissal. 4. Transparent. The design process unveils what is traditionally hidden, both regarding the chains behind its construction process (e.g. labor conditions), both regarding their functioning (e.g. maintenance). 5. Transformative. Trans- architecture aims to generate benefit in the environments where it stands and along the whole chains behind its design and construction, turning into a device able to transform existing conditions for the better.

Christian Gaenshirt

Politecnico di Milano

Department of Architecture and Urban Studies

Visiting Professor (Sustainability)

13:35 - 13:50

Afternoon Session Opening

Short Bio

Christian Gänshirt is a Visiting Professor at the Department for Architecture and Urban Studies of the Politecnico di Milano. He was a Senior Associate Professor and Master Programme Director at Xi'an Jiaotong-Liverpool University in Suzhou, China, and taught at the Virginia Polytechnic Institute and State University (Virginia Tech), the Berlin University of the Arts (UdK), Leibniz University Hanover, and the Brandenburg University of Technology (BTU Cottbus). He was a Visiting Professor the University of Hong Kong and at Kassel University, Germany.

He holds a PhD (Dr.-Ing.) from the Brandenburg University of Technology (BTU Cottbus), Germany, and an architecture diploma from Karlsruhe University (now Karlsruhe Institute of Technology), Germany.

He was a Project Architect in the office of Álvaro Siza in Oporto, Portugal, and worked with architect José Paulo dos Santos in Oporto. He is registered with the Berlin Chamber of Architects since 1996. He co-edited the Internet architectural theory magazine [www.cloud-cuckoo.net] and published in magazines, journals, and national newspapers like Archithese, Bauwelt, Süddeutsche Zeitung, Frankfurter Rundschau, Stadtbauwelt, and L'Architecture d'Aujourd'hui. His book *Tools for Ideas – Introduction to Architectural Design* has been published in German, English and Chinese.

How to Redefine the Theoretical Basis of Architecture?

Abstract

Despite many laws and regulations, plans and promises, humanity is far from achieving sustainability. On the contrary, CO₂ emissions continue to rise every year and the state of the biosphere continues to deteriorate at an alarming rate. That's why, in the minds of many, the term 'sustainability' is vaguely defined, if at all, and often used to describe projects and practices that are not really what they claim to be. What are the reasons for this? Is there a theoretical gap between 'mainstream' and 'sustainable' architecture that is deeper and wider than expected, preventing actors from understanding the situation and developing real solutions? What if the challenge of creating an architecture that is truly sustainable in the long term and applicable on a global scale requires more than vastly improved building materials and technologies? What if the very basic assumptions of architecture are preventing us from finding ways to achieve sustainability? Assumptions so fundamental that we have almost forgotten they exist, even though they still frame and guide our design thinking? If architecture is to contribute its part to humanity's quest for sustainability, we may need to revise and rethink the discipline's fundamental assumptions. The very definition of architecture, its purposes and criteria, its relationship with nature and society, the notions of private and public, and the meaning of sustainability are all up for debate.

Sustainability will only become a reality if humanity develops ways of inhabiting the Earth that are viable for the vast majority of its members in the long term, without over-consuming or even destroying the resources on which it depends, and without damaging the climate, atmosphere and biosphere beyond regeneration. This requires a fundamental rethinking of architecture and its role in the natural and built environment. The understanding of buildings can no longer be limited to more or less usable and beautiful, ideally iconic, isolated objects. Buildings need to become more than well-functioning machines for the privatisation of space. They need to be analysed as crucial elements of simultaneously ecological and technological, social and economic systems of different scales, and conceived as apparatuses for the careful manipulation of a wide variety of metabolic flows in these systems. This requires a better understanding of how all these flows and systems work and what their effects are, to be measured and evaluated at large and individual scales and over the long term. The ethical challenge is to define an acceptable balance between privatised benefits and externalised effects of all these metabolic flows, and ways to compensate for the negative ones.

Pedro Gadanho

Universidade da Beira Interior
Departamento de Engenharia Civil e Arquitetura
Professor Auxiliar Convidado

13:55 - 14:25

Keynote 3

Short Bio

Pedro Gadanho is an architect, curator and writer. A 2020 Loeb Fellow from Harvard University, Gadanho holds an MA in art and architecture, and is a PhD in architecture and mass media. From 2012 to 2016, he was the curator of contemporary architecture at the Museum of Modern Art, New York. Between 2015 and 2019, he was the founding Director of MAAT, the Museum of Art, Architecture and Technology, in Lisbon, where he initiated more than 50 exhibition projects, including shows and publications such as *Utopia/Dystopia*, *Tension & Conflict*, and *Eco-Visionaries*. After the Executive Direction of a bid for European Capital of Culture 2027 by a coalition of 17 cities in Portugal's interior, he became a Guest Professor at the University of Beira Interior. He has edited the *BEYOND* bookazine, the *ShrapnelContemporary* blog, and contributes regularly to international publications. He wrote *Climax Change! How Architecture Must Transform in the Age of Ecological Emergency* (ACTAR, 2022) and *Arquitetura em Público*, a recipient of the FAD Prize for Thought and Criticism in 2012.

Instigating Architecture's Climax Change

History, Theory and Curating as Transformation Drivers

Abstract

When conceiving and anticipating a major change in the impulses and drivers of architectural practice after the ecological crisis, it is quintessential that we return to history, theory and curating as inevitable tools of motivation. Revisiting alternative histories, rereading less obvious historical trends, and even historicizing previously unestablished narratives provides us with the foundations of change. Using theory as a form of speculation and questioning, allows us to reinforce the potential for transformation, reconnecting architectural practice to broader contemporary discussions. And curating prompts us to collect and communicate the signs of the field's prospective renovation to an expanded audience. The presentation will dig into how these different strategies – and the resulting arguments and insights – informed the writing of the book *Climax Change! How Architecture Must Transform in the Age of Ecological Change*.

James Soane

The London School of Architecture
Research Fellow
Founding Director

14:25 - 14:45

Speaker 5

Short Bio

James Soane is a qualified architect, writer and educator who set up Project Orange with his partner Christopher Ash in 1997. We believe in working collaboratively to generate purposeful and sustainable projects. In the face of the ecological crisis we are actively taking an ethical position that values resilience, innovation and society.

Recently he has been working with Peabody at Thamesmead on master planning and the refurbishment of the Moorings Social Club as well as a new build low carbon house in Suffolk. The practice is designing 45 new passive house homes in rural Suffolk and a mixed-use regeneration scheme in Dalkey, Dublin. James has also been part of the team writing the Lavenham Neighbourhood Plan.

He has taught architecture at the Bartlett and Kingston University and was the chair of the RIBA New Courses Committee for six years. He has been an RIBA Awards Judge and an external examiner at Westminster University. He was a member of the RIBA Ethics Committee in 2019 and was the Presidents Champion for Education in 2021. Along with Will Hunter, James helped set up the London School of Architecture launched in October 2015, where he was director of Critical Practice and Research until 2021. He is now a Fellow of Critical Practice at LSA and delivers the *Humanity and Planet* lecture series. As an author he wrote *New Homes* published by Conran. His most recent book is *A Gendered Profession* published by RIBA where he was a contributing editor. The studio has published four research 'zines', PO Box, a collection of essays by the studio. The latest is titled *HELP* and considers how architects can respond to the climate emergency.

Architecture in the Future Imperfect

Abstract

Preface When Le Corbusier wrote his 1927 treatise *Towards a New Architecture* he proclaimed: “The problem is one of adaptation, in which the realities of our life are in question.” While for many readers past and present his manifesto spoke to questions of design, aesthetics and theory, there is also a profound reflection on the nature of society. The past century has seen unprecedented growth, extraction and extinction; what are the realities of our lives in the near future? What ideas and theories can replace our worn-out mantras?

Introduction This paper challenges the practice of architecture as we have been taught. The Climate Emergency demands that the production of space is radically altered from colluding with the extraction economy to becoming a regenerative process. For Daniel Wahl, global warming is mass extinction. He invites us to reflect that humanity has stolen from the future by plundering materials from deep within the earth and we must learn, through nature, to live ecologically. This inevitably means building less, repairing and nurturing more; truthfully the end of architecture as we know it. When activist George Monbiot challenges the status quo of the mono-capitalist ideology, he argues discredited narratives cannot just be discarded, they need to be replaced with a new narrative. This paper seeks to look at how these stories might come to be written in the age of climate emergency.

The Modernist Project The unchecked growth of the human project has come at the expense of the natural world in favour of creating frictionless man-made environments. We therefore must challenge our own understandings, emotions and ambitions in order to be able to act differently. Anyone connected to the world of architecture, building or construction is beginning to see how the foundation of their design ethos and know-how is beginning to crumble. This is a systemic and seismic problem that cannot be solved through ‘doing more better’ but demands new models of engagement with each other and the planet. We therefore question the project of Modernism, its mastery and quest for perfection. Our cities are polluted and our countryside is despoiled all in the name of progress. What kind of response should we be imagining ‘after progress’? How do we reverse the ravages of Modernity?

Future Imperfect Defining futurity as the quality or condition of being in or of the future, we can understand that new forms of designing and writing that are explicitly fictional can be framed as a narrative, parable or fantasy, taking on both allegorical and projective forms. Activist Rupert Reed suggests that you can easily imagine a future of ever more prosperity and freedom when looking back on what human beings have achieved. Yet the presence of climate change exposes this imagined future to be a profound illusion. The re-activated architect operates a multidisciplinary practice founded on a radical set of theoretical ideas and values. Their role is to be accountable, to critically read the city and to offer alternative versions that are more equitable challenging the political and destructive forces at work. New practices emerge as critiques of the existing patriarchal model, employing a high degree of collaboration, networking and sharing experiences.

Conclusion However impossible it may seem, there has to be a forced break with the past as we face up to discontinuity and disruption. This can be understood as a process that makes us resilient, encouraging innovation which leads to a period of relinquishing aspects of our lives that are non-essential in order to move to a period of restoration. The future is imperfect.

Nora Wuttke

SOAS, University of London
Department of Anthropology and Sociology
Graduate Teaching Assistant

14:45 - 15:05

Speaker 6

Short Bio

Nora is a Social Anthropologist, Architectural Designer, and Artist, currently finishing her PhD at SOAS, University of London. She received her architecture degree at the Technical University of Munich (TUM) in 2009 and went on to complete an MA in Social Anthropology of Development at SOAS in 2010.

Following her studies, Nora spent 10 years in China and Myanmar. She was based for four years in Shanghai (2011-2015), where she worked for local firms as designer and site architect, and project architect at David Chipperfield Architects. In 2015 Nora moved to Yangon to work for Article 25, a London-based NGO, on the Reinvigoration of Yangon General Hospital and developed the masterplan for the hospital campus. Since 2017 she is an independent architect with projects in Shan State, Myanmar. In 2018 Nora returned to SOAS for her PhD in the Department of Anthropology and Sociology. From 2020 to 2022 she was the departments first Artist in Residence.

Currently, Nora is the Artist in Residence at UCL's Thomas Coram Research Unit. Her main research interest is the reciprocal effect of the built and natural environment, individuals, society, and the state. Broader research interests include material culture; anthropology of the (built) environment; anthropology of infrastructure; collaborative and multidisciplinary approaches; multi-modal methodology and writing. Her regional interest is Myanmar (Burma).

An Anti-colonial Architectural Theory for Sustainability?

Abstract

This paper offers provocations for an anti-colonial perspective of architecture and sustainability/sustainable architecture. Grounded in my ethnographic research, and taking a decidedly social anthropological stance, I am in conversation with architectural theorists and political scientists such as Hannah Le Roux, Jiat-Hwee Chan, and Kuukuwa Manful. I hope to contribute to the discussion of what a theory of sustainable architecture can look like, with an anti-colonial and anti-extractivist perspective.

I am challenging ideas of *universal comfort* at hand of, for example, tropical modernism, a movement that largely overlooked in discussions thereof non-Eurocentric contributions. Another theme is the building boundary, an important element in sustainable construction and theory. Lastly, air, in and outside the buildings we live in, will lead us to think about colonial and global atmospheres. In this context I will discuss the idea of *imperial debris* as put forward by anthropologist Ann Stoler, taking a look back in order to look forward. This will include discussions of colonial and contemporary *sustainable* planning.

I am bridging my disciplinary allegiances, in taking a material oriented, practical, and anti-colonial approach to sustainable architecture.

As architectural engineer/designer and social anthropologist, I spent ten years in international practice (DCA, Shanghai) and NGO (Article 25, Yangon) before coming back to academia. For my PhD dissertation in social anthropology I wrote about a public hospital in Myanmar, the same hospital where I lead the development of its masterplan from 2015 to 2017.

I bring together my two disciplines, architecture and social anthropology, to open questions on what kind of and whose (to borrow from Emma Crew's book title on Development), sustainability we are talking about, and how a critical understanding of our practice as architects during a climate crisis can be taught to future generations.

Fadi Shayya

University of Salford

School of Science, Engineering and Environment

Lecturer in Architecture & Urbanism

15:05 - 15:25

Speaker 7

Short Bio

Dr Fadi Shayya is a Lecturer in Architecture & Urbanism at the University of Salford. He teaches in the Master of Architecture programme, leads the design studio for second-year BSc (Hons) Architecture, convenes the modules of spatio-structural assemblies for first, second, and third-year BSc (Hons) Architectural Engineering, and supervises theses and dissertations within the School of Science, Engineering and Environment. He holds an Advance HE Fellowship (FHEA) and previously taught at the University of Manchester, the Manchester School of Architecture, the Parsons School of Design, and the American University of Beirut.

Dr Shayya's transdisciplinary research cuts across science and technology studies, spatial theory, the social studies of architecture, design thinking, and the philosophy of technical thought. He serves as a member of the UKRI Talent Peer Review College, and he is a peer reviewer for Routledge, Palgrave Macmillan, *Ardeth*, *The Journal of Architecture*, and the *International Journal of Islamic Architecture* – in addition to the *UIA World Congress of Architects*, Copenhagen 2023. He is the editor of *At the Edge of the City: Reinhabiting Public Space Toward the Recovery of Beirut's Horsh Al-Sanawbar* (2010) and the awardee of the 2008 Competition for Innovative Good Governance in the Public Sector (Basil Fuleihan Foundation, Lebanon + Columbia University). He is a licensed architect with the Order of Engineers and Architects-Beirut; up till 2013, he practised and consulted on architecture, master planning, and international development in Bahrain, Egypt, Iraq, Jordan, KSA, Lebanon, Oman, and UAE with Dar Group (as LEED Green Associate), UNESCWA (as Associate Human Settlements Officer), and others.

Towards an Architecture of Translations & Cosmic Relations

Abstract

In this contribution, I argue for a methodological shift from explaining to translating within architectural pedagogy and education. Engaging with a translation practice extends architectural concerns to the complex entanglements of localising the global in the era of Climate Change and the Anthropocene rather than attributing problems to sweeping explanations and established social structures. Such shift implies that architectural theory must evolve to the theory of the architectural to encompass the expanding interdisciplinary field of architecture, frame its complex environmental concerns, and realise better translations between humans, technical objects, and environments. My argument builds on sociologist and philosopher Bruno Latour's inspiring work on sociotechnical associations (Latour, 1992, 2004, 2005; Latour & Yaneva, 2008) and sociologist and architectural theorist Albena Yaneva's pioneering work on architectural associations as dynamic modes and intensities of connection (Yaneva, 2009b, 2009a, 2010, 2012, 2017a, 2017b, 2022). It situates architecture within a philosophy of nature and technology. It expands the imagined boundaries and real-world impact of architectural pedagogy, education, and practice beyond the static figure of the building as the object of study for architecture (see Shayya, 2021) and into the fuzzier frontiers of technology (see Shayya, 2023).

I will map this proposed methodological shift to translating in a second-year design studio brief and its subsequent student projects, which I convened this year at the University of Salford. The brief titled "A New Design Cosmology: Salford STEM Academy" introduced the active concept of "site-ing" (after Yaneva & Mommersteeg, 2019) to replace the static notion of site analysis. This hybrid present-participle-gerund form of "site-ing" acts as a method for tracing architectural associations through legacy and evolving translations between actor-networks as they localise the confluence of entanglements and furnish the conditions for generating architecture. The brief also introduced the Cosmogram (see Latour, 2007; Tresch, 2007) as a creative representation method to capture the translations traced through "site-ing" as part of an "empirical metaphysics" (Latour, 2005, p. 59) to re-figure human activity's relationship to nature (Aït-Touati et al., 2022). The students reimagined dynamic and relational ecological networks – including their solidity and breakdown – and engaged with sustainability as an integral part of theorising and historicising rather than an ideological outside to the design process.

Andrea Alberto Dutto

RWTH Aachen University
Department of Architectural Theory
Research and Teaching Associate

16:00 - 16:30

Keynote 4

Short Bio

Andrea Alberto Dutto is currently Research and Teaching Associate at the Department of Architectural Theory at RWTH Aachen University in Germany. Prior to his current position, he worked as a Postdoctoral Researcher at the Department of Architecture and Design at Politecnico di Torino between 2018 and 2021. While there, he was also appointed as an Adjunct Professor in Architectural and Urban Design in 2019.

In 2017 he completed his PhD as part of a cotutelle agreement between Politecnico di Torino and RWTH Aachen University, with a dissertation focusing on a corpus of architectural handbooks published in the first half of the 20th century. His research was awarded the Research Quality Award at the Politecnico di Torino in 2014. Moreover, he received a Dual Degree Master in Architecture as a joint degree between the École Nationale Supérieure d'Architecture de Marseille and the Politecnico di Torino in 2010.

From Spaceship Earth to Earthship

Abstract

When a wise man points at the moon, the fool looks at the finger. If we adhere to this proverb, the history of architectural theories, starting from 1972 onwards, would more closely resemble like a treatise on palmistry. Architects have been fixated on the 'finger,' namely self-contained entities like buildings and cities, despite the 1972 United Nations Conference on the Human Environment in Stockholm and the Club of Rome emphasizing the urgent need for a collective agenda: to prevent the deterioration of life on 'planet Earth.'

In the field of experimental construction, the publications that have best captured environmentalist concerns have left out a link to architecture theory. This is the case, for example, with the *Whole Earth Catalog*, a masterpiece of American counterculture first published in 1968, which revealed a coherent pool of do-it-yourself (DIY) experimentation that had been active since at least the days of the Great Depression, outside the official architectural discourse. Particularly in response to the 1973 oil crisis, DIY experimentation diverged from architecture for contrasting reasons. Firstly, existing architectural theories seemed burdensome and inadequate for fostering innovation in the eyes of these experimenters. Secondly, the architectural culture viewed these improvised DIY experiments as transient avant-garde phenomena that emerged during the transition from modernity to postmodernity, thus deeming them unworthy of forming the basis of a comprehensive theory. While extensive scholarship has explored the historical context of this DIY experimentation, its contribution to the development of a theory of architecture addressing sustainable development goals still lacks clear interpretative categories. In this paper, I propose two interlocked categories or theoretical models: 'spaceship-earth' and 'earthship.'

The first model draws inspiration from Buckminster Fuller's book "Operating Manual For Spaceship Earth" (1969) and encompasses a systemic theory that combines physics and metaphysics. It addresses the planning, management, and engineering construction of a planetary ship, with fundamental concepts such as topology, geodesy, synergetics, and general system theory underlying Fuller's proposal. Although not strictly a DIY approach, this model is relevant because it foreshadows and establishes some conceptual foundations for the second model: the earthship.

Michael Reynolds, a pioneer of experimental construction with recycled materials based in New Mexico, introduced the concept of the 'earthship' in the mid-1970s. Through his series of handbooks, Reynolds envisioned the earthship as an autonomous off-grid vessel that incorporates improvisation and complete symbiosis with the environment. Driven by considerations of energy resource autonomy, insulation, and environmental integration, the earthship echoes the spaceship-earth concept. However, it places a stronger emphasis on adapting to local contexts and rejects the top-down planning approach. Both the spaceship-earth and earthship models strive to establish a holistic relationship between individual parts and the larger whole, rejecting architectural concepts that are incongruent with practical application and incompatible with the demands of addressing large environmental patterns and global challenges. This approach can be seen as an extension of the notion of non-pedigreed architecture previously elaborated by Bernard Rudofsky, emphasizing the incorporation of materials produced by non-architects in architectural theories. Paradoxical as it may be, the cases presented shows how a theory of architecture that addresses sustainability issues has no particular need for professional architects.

Vasileios Chanis

Swiss Federal Institute of Technology in Lausanne
Laboratory LAPIS
Doctoral Assistant

Nicola Braghieri

Swiss Federal Institute of Technology in Lausanne
Laboratory LAPIS
Associate Professor

16:30 - 16:50
Speaker 8

Short Bio

Nicola Braghieri is a Milanese architect who lives and works between Geneva and Lausanne. Since 2013 he has been teaching Theory and Techniques of Representation at the Swiss Federal Institute of Technology in Lausanne (EPFL), where he has been director of the School of Architecture until 2019. Currently, he directs the Digital Fine Arts Laboratory under the name LAPIS-Archives of the Imaginary.

Vasileios Chanis is an architect, educated in Greece and the Netherlands. He currently works as a doctoral assistant of Laboratory LAPIS at the Swiss Federal Institute of Technology in Lausanne (EPFL). His thesis focuses on the postwar environmental interpretations of vernacular architecture and it is part of the EPFLglobalLeaders program, funded by the Marie-Curie Actions of the EU.

Repair as a Meaningful Architectural Practice

Abstract

The proposed text aims to explore the significance of the notion of repair as a meaningful architectural practice as well as its transformative potential for an architectural theory of sustainability. In present times, a significant portion of contemporary literature emphasizes the significance of architectural sustainability, primarily through a narrow focus on specific quantitative parameters imbued with an air of modern scientific determinism. While these parameters are undeniably important, they fall short in providing architects with comprehensive solutions, as they fail to address the pervasive loss of meaning within the built environment. Unlike the past, where meaning was cultivated through an incremental process of building-in-time, contemporary architecture is predominantly characterized by a fear of time (chronophobia) and a predisposition towards obsolescence. What is common in both respectively (past and present) is the presence and the absence of the practice of repair. However, when referring to repair, we are not solely alluding to the implementation of standardized techniques. Instead, we highlight repair's capacity to function as a craft, rooted in human labour and contemplation. Within the realm of architecture, repair held a fundamental position as a pillar of the vernacular approach to construction. This approach prioritized the onsite conception over the predefined appearance of a building. By recognizing the aforementioned insights and with the aim of fostering a paradigm shift, the paper will explore the concept of repair as it was revisited by renowned architects and theorists. To illustrate this concept, the discussion will focus on the intellectual positions and built examples from the work of two esteemed architects: Dimitris Pikionis and Christopher Alexander.

Ana Rute Costa

Lancaster University
School of Architecture
Lecturer in Architecture

Luis Pinho

Lancaster University
Faculty of Science and Technology, Chemistry
Research Associate in Green Hydrogen and Catalysis

16:50 - 17:10

Speaker 9

Short Bio

Ana Rute Costa is the Course Leader for the BA (Hons) Architecture at Lancaster University, she is a chartered architect and certified Passivhaus Designer/Consultant, fostering to create dynamic links and knowledge exchange between academia and architectural practice. She is currently leading the 'Accelerating Material Re-use in Construction' project funded by AHRC. Her research focus lies on enabling a circular economy in the construction sector through material passports. She is also an educational researcher with a strong specialism in Learning and Teaching spaces. Her research focuses on analysing the impact of the built environment in teaching and learning through ethnographic and visual research methods. She is specialised in policies and practices that affect the design of spaces and products that enable learning to take place. She see the world as a big house that we all need to look after; together we can make a change and contribute to a better built environment.

Luís Pinho is a material scientist with a specialism in porous materials for sustainable applications. His research focuses on improving the properties of these materials towards faster elimination of air and water contaminants, and more recently, as platforms for efficient hydrogen production. His research is driven by gaining an improved understanding of long-term material performances, whole material life cycles and safety and sustainability by design. He is also interested in finding the nexus that bring together human-driven energy and material flows, the concepts that inspire user practices and the ways in which materiality can impose constraints over these processes.

Re-Architecture: a Theoretical Approach to Reusing, Readapting, Repurposing and Recycling

Abstract

The dramatic increase in world's population and economic growth triggered a higher demand for natural resources and increased carbon emissions (Krausmann, et al., 2009) to which the construction industry is one of the most important contributors (McKenna, 2022). Since 80 percent of the predicted building stock for 2050 is already in existence today (Blanco, Engel, Imhorst, Ribeirinho, & Sjödin, 2021), reuse and adaptation strategies for existing assets are a fundamental part of any approach related to more sustainable construction.

Although the reuse and adaptation of building elements and the recycling of materials are not new ideas (Addis, 2006), there is a gap in theoretical knowledge of reuse of architectural elements. In this contribution, we will answer three questions: why we reuse (including historical and more recent approaches), what we reuse (defining the object of reuse) and how to reuse (defining its fundamental categories).

We argue that the motivations for reuse go beyond the good of the environment, the good of the project and the good of the organisation (Addis 2006). Our approach considers: a) the intrinsic architectural qualities in building elements that align with Vitruvius' attributes: *firmitas* (structural stability), *venustas* (beauty) and *utilitas* (functionality); b) the intrinsic character of objects such as Riegl's deliberate monuments that underpins their reuse. Most importantly, the quintessential concept for reuse is value. It derives from the descriptors in a) and b) and can also include more contemporary ecological and sustainable attributes (Andersen, 2020).

The object of reuse in Architecture are all those architectural elements that are or have already been in use, i.e. the reused architectural element is necessarily the one that has already been used and therefore is not new. Therefore, the reused architectural element defines itself in opposition to the new one (Groys, 2000) and allows the mitigation of negative environmental impacts (Josefsson & Thuvander, 2020).

Re-Architecture comprises four categories in its making:

Reclaim for Reuse: Equivalent use of architectural elements without no loss any of physical, functional and aesthetic qualities,

Reclaim to Adapt: Adapt use of architectural elements with partial loss of physical, functional and aesthetic qualities,

Reclaim for Repurpose: Change of use through an upcycling/downcycling process, with loss / partial loss of physical, functional and aesthetic qualities,

Reclaim for Recycle: loss of physical, functional and aesthetic qualities to produce new architectural elements.

We argue that we need a temporal imagination (Facer, 2023) that provides a critical and reflexive capacity to analyse existing architectural elements and to engage in dialogue with others who have different perceptions of physical, functional and aesthetic qualities and ecological ethics of use. We claim for a re-architecture of the built environment that is able to preserve the architectural elements already in existence, reclaim these materials for future reuse / adapt / repurpose / recycle and use radical creativity to extend the lifecycle of these materials and minimise waste.

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17:10 - 17:30

Speaker 10

Short Bio

President of ARCò – architecture and cooperation (ar-co.org) where he leads sustainable design and applied research activities in humanitarian field.

Member of the Scientific Committee of Postgraduate Masters Program “Circular architecture - Shapes and Methodologies of the Circular Architecture” at Scuola di Architettura e Design, Università di Camerino.

Member of the Scientific Committee of Postgraduate Masters Program “Design for Development; Architecture, Urban Planning and Heritage in the Global South” at Politecnico di Milano.

Italian Fellow in Architecture, Urban Design (2021) at American Academy in Rome.

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Embracing Appropriate Technologies: a Theoretical Framework for Resilient, Ecological, and Locally Embedded Architectural Interventions

Abstract

This paper presents a theoretical framework that embraces the concept of “Appropriate Technologies” to guide research and development efforts in the field of architecture. Appropriate Technologies refer to those technological solutions that effectively address the specific cultural, social, economic, and technological contexts in which they are applied, while also considering the ethical implications of resilience, ecological balance, and local relevance.

In an increasingly interconnected and rapidly evolving world, the application of Appropriate Technologies is essential to ensure sustainable and contextually sensitive architectural interventions. Traditional approaches often prioritize uniform, generic solutions that may not fully consider the diverse needs and complexities of different communities and regions. By contrast, the proposed framework emphasizes the importance of tailoring technologies to local conditions and requirements, fostering a deeper understanding of the cultural and socio-economic dimensions inherent to architectural interventions. This theoretical framework acknowledges the significance of addressing the multidimensional aspects of appropriateness. It highlights the need to integrate ecological considerations, recognizing the importance of sustainable design principles that minimize environmental impacts. By embracing environmentally friendly practices and materials, architecture can contribute to the conservation of resources and promote long-term resilience. Furthermore, the framework recognizes the interplay between technology and society, acknowledging that appropriate technologies should be accessible, adaptable, and socially acceptable. It underscores the importance of active community involvement in the design and implementation processes, promoting local ownership and fostering a sense of empowerment. By engaging with local stakeholders, architects and researchers can gain valuable insights into community dynamics, ensuring that technological solutions align with the specific socio-cultural context. Ethics and social responsibility are integral aspects of the proposed framework. It calls for a conscientious examination of the potential consequences of architectural interventions, striving for equitable outcomes and minimizing negative impacts. The framework encourages ethical decision-making processes that consider the social implications, cultural preservation, and the well-being of individuals and communities affected by the technologies. The integration of the proposed framework into architectural research and practice can yield transformative results. It empowers architects, researchers, and policymakers to navigate the complexities of technology adoption, fostering innovation that is rooted in local wisdom and knowledge. By acknowledging and responding to the unique contexts of different regions, Appropriate Technologies can enhance the effectiveness and sustainability of architectural interventions, contributing to the well-being and resilience of communities.

In conclusion, this paper presents a theoretical framework centered around Appropriate Technologies, which embraces the cultural, social, economic, and technological contexts of architectural interventions. By incorporating ecological considerations and emphasizing community engagement, this framework promotes ethical decision-making and locally embedded solutions. Through its adoption, architecture can become a catalyst for positive change, fostering resilience, sustainability, and a sense of belonging within communities.

