Concrete and the Making of Eastern Europe

From Interimperial Networks to the International Socialist Division of Labor

Virtual Conference
January 26–27, 2027

"Environment and Ecology" Research Group
Zentralinstitut für Kunstgeschichte, Munich

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Introduction

In Eastern Europe concrete architecture has become virtually synonymous with the memory of state socialism. Nostalgically cherished or reviled, prefabricated panel residential buildings recall the distributive project of socialism as well as its intensely-debated deindividualizing bent. Yet Eastern European prefabricated panels are part of a global history of concrete that stretches across and beyond the socialist countries. In the mid-to-late nineteenth century, Portland cement—the binding agent that has since served as the basis for modern concrete—gained international currency thanks to its compressive strength, impermeability, and amenability to standardization. By the beginning of the twentieth century, concrete was deployed to build railway infrastructures connecting resource-rich areas to burgeoning metropolises and to set up modern sewage systems ensuring sanitation in densely inhabited cities, while also inspiring social reformers to dream of an end to scarcity through industrially-replicable residential construction. Concrete's global genealogy has much to reveal about the material and ideological fundaments of industrial modernity. The product of extractive processes and fossil-fueled transformations of raw materials, cement is presently recognized as one of the leading global emitters of CO2 and a 'hard-to-abate' industry. From residential architecture to roads, sewers, and energy infrastructure, concrete is nearly ubiquitous in built environments worldwide. This conference focuses on Eastern Europe as a region that has long harbored politicized relationships to concrete in order to investigate the material's political, economic, and ecological entanglements.

The aims of the conference therefore lie in consolidating the ties between Eastern European architectural histories and global scholarship on modernity, imperialism, and the Anthropocene. The four thematic panels each explore one of concrete's life cycles, from extraction to production, deployment, and waste. The panel "Extraction" establishes concrete as both a product and a conduit of extractive processes whose geographies are indelibly shaped by imperialist projects stretching back to the late nineteenth century. "Development" maps out the technological, economic, and political exchanges that situate concrete as an important node in global processes of economic integration amidst structural conditions of uneven development. Concrete's transnational genealogy as well as its purported universality inspired both aspirational and oppositional projects along the axis of localism to internationalism, whose discursive ramifications are mapped out in the panel "Material Politics". As the panel "Waste" suggests, concrete also belongs to the fallout of industrial modernity, from the cement dust coating ecosystems and people's lungs to the material's ambivalent role in managing radioactivity. True to its nineteenth-century technical promises, concrete appears as a transnational technoscientific and infrastructural medium, linking together the changing political geography of twentieth-century Eastern Europe, from imperial borderlands to National Socialist occupation plans and the disputed international socialist division of labor. Altogether, the contributions to this conference reveal concrete as a product and factor of manifold planetary interconnections—between local and global scales, technology and nature, construction and destruction.

Schedule

The conference takes place online via Zoom. Participation is free of charge. To register, please access https://us02web.zoom.us/meeting/register/b7mfocRoT2-1I9_N1wSdew#/registration.

Recording the event—or any parts thereof—as well as taking screenshots is not permitted. By participating, you accept these terms of use.

For questions, please contact Alexandra Masgras at a.masgras@zikg.eu.

Tuesday, January 26, 2027

14:00 CET / 8:00 EST: Introduction

14:15–15:45 CET: Panel I. Extraction
Chair: Monika Motylińska (Leibniz-Institut für Raumbezogene Sozialforschung)

Lilija Wedel (Georg-August Universität Göttingen), “Building the Oil City: Industrial Infrastructures, Construction Materials, and Extractive Landscapes in Imperial Baku”

Paul B. Jaskot (Duke University), “World War II, Forced Labor, and Cement: Building Capacity through Architectural Production and the German Construction Industry”

Sofia Boldrini (University of Campinas) and Bianca Chescon (University of Campinas), “CRUSP’s Concrete Grounds: Soviet Exchange and Extractive Chains in Brazil, 1961-1963”

15:45-16:15 CET: Break

16:15-18:15 CET: Panel II. Development
Chair: Nikolay Erofeev (Freie Universität Berlin)

Olga Konovalova (ETH Zurich), “Reinforced Concrete and Industrial Development: The AEG Factory by Maillart&Co in Kharkiv, 1916”

Jan Zofka (GWZO Leipzig), “Cement Industry Equipment for the Bloc and Beyond: Polysius Dessau and its Transnational Connections in the Early Cold War Period”

Jelica Jovanović (Technical University Vienna) and Yichuan Chen (University College London), “Freeing the Concrete Knowledge: Flows of Prestressed Concrete Technologies between Yugoslavia and China”

Michael Brinley (Princeton University), “Demos and the DSK: The Sverdlovsk Housing Construction Factory and the Politics of Late Soviet Concrete”

Wednesday, January 27, 2027

14:00 – 16:00 CET Panel III. Material Politics
Chair: Christian Fuhrmeister (Zentralinstitut für Kunstgeschichte, Munich)

Ecem Saricayir (California College of the Arts), “Inconcrete Modernism: Le Corbusier, the Soviet Union, and the Caucasus”

Vendula Hnídková (Czech Academy of Sciences), “The Concrete Fortress: Materializing Development in Interwar Czechoslovakia”

Jérôme Bazin (Paris-East Créteil University), “Domesticating Concrete in the Countryside: The Material Ambiguity of Concrete”

Kristóf Nagy (Princeton University), “Loving Concrete – Hating Concrete: The Paradoxes of Building Materials among Nationalist Architects in Socialist Hungary”

16:00 – 16:15 CET: Break

16:15 – 17:45 CET: Panel IV. Waste
Chair: Adam Przywara (University of Basel)

Katherine Zubovich (State University of New York, University at Buffalo), “‘The Wind Scatters Grey Dust’: Cement Production, Movement, and Toxicity at Local and Soviet Scales”

Oxana Gourinovitch (Berlin), “Concern Wismut: Concrete and Waste in the Spatial Production of the Soviet-German Uranium Mining”

Ksenia Litvinenko (Leibniz-Institut für Raumbezogene Sozialforschung), “Moving Beyond Concrete? Material Experiments in Late-Soviet Portable Architecture for Resource Extraction”

18:15 – 19:30 CET: Keynote lecture

Kim Förster (University of Manchester), “The History of Cement: Economic Foundations, Cultural Transformations, and Material Continuities in Twentieth-Century Germany”

Keynote Lecture

“The History of Cement: Economic Foundations, Cultural Transformations, and Material Continuities in Twentieth-Century Germany”

Kim Förster (University of Manchester)

Over the course of the twentieth century, cement became a quintessential modern building material and the predominant binding agent in both capitalist and socialist societies. Though its grey appearance may suggest neutrality, cement conceals a complex history shaped by economic, cultural, and ecological forces. In this keynote lecture, Kim Förster offers a new perspective on cement in Eastern and Western Europe through the lenses of environmental history, architectural humanities, and political ecology. Around 1900, German art history acknowledged cement production’s effect on the landscape, yet rarely considered cement plants a subject of study. From the interwar period onward, cement production came to represent far more than industrial infrastructure: it underpinned industrialization, modernization, and urbanization. The sector was at once an employer, supplier, and source of profit—as well as a symbol of progress. Examining actors including the Bauhaus Dessau, founded in 1926, and the Dessau-based machine manufacturer Polysius, then a global leader in cement-plant engineering, the lecture explores the intersections of state, industry, and culture. Its primary focus is the postwar period, contrasting reconstruction and expansion in the cement and construction industries of the German Democratic Republic (GDR) and the Federal Republic of Germany (FRG). Key players include Dyckerhoff (Wiesbaden), Dywidag (Munich), and the VEB Zementkombinat (Dessau), as well as decentralized concrete plants. In both German states, prefabricated concrete components—made possible by standardization and rationalization—played a central role in housing construction and in roofing industrial facilities. Drawing on archival research, the lecture traces continuities, competition, and cross-border knowledge transfers associated with the export of materials and entire cement plants. Finally, the lecture concludes by examining the transformations that followed 1989: initial skepticism toward international collaboration, the dissolution or acquisition of Eastern European production sites, and the ecological consequences of the multinational cement industry, illustrated by companies such as Heidelberg Materials. It invites audiences to reconsider architectural, urban, and landscape development, presenting cement as both a constructive force and a destructive legacy in both Eastern and Western Europe.

Abstracts

Panel I. Extraction

Lilija Wedel (Georg-August Universität Göttingen), "Building the Oil City: Industrial Infrastructures, Construction Materials, and Extractive Landscapes in Imperial Baku"

The rapid expansion of the oil industry in Baku during the late nineteenth century transformed the city into one of the most important extractive centers of the global petroleum economy. At the same time, it produced a distinctive industrial landscape shaped by large-scale infrastructures of extraction, processing, and transport. By the early twentieth century, Baku had become a key node linking the Caspian Basin to imperial and international markets, while its urban environment was increasingly dominated by refineries, pipelines, railway installations, port facilities, and emerging construction industries, including early cement production. This paper examines the emergence of Baku as an extractive industrial landscape between the 1880s and the First World War, focusing on the material infrastructures that enabled the rapid expansion of oil production. Building on Eve Blau's work on architecture and urbanism in Eastern Europe, this paper shifts the perspective toward extractive-industrial environments and the material conditions underpinning rapid urban and industrial growth.

Rather than analyzing the oil boom solely in terms of technological innovation, entrepreneurial activity, or global capital flows, the paper argues that the development of the petroleum industry depended fundamentally on the construction of extensive industrial and urban infrastructures. Refineries, storage facilities, pipelines, transport networks, and new industrial districts such as the so-called "Black City" created the spatial and material conditions necessary for large-scale extraction and distribution. In this sense, the built environment—composed of industrial construction, transport systems, and urban infrastructure—functioned as an essential enabling framework for the extractive economy. Situating Baku within broader debates on extractivism and industrial modernity, the paper highlights how the rapid growth of oil production reshaped both urban space and the surrounding environment. Oil spills, refinery emissions, polluted coastlines, and frequent fires turned industrial districts into hazardous environments, while large-scale industrial construction and infrastructural expansion transformed the material fabric of the city. Historical newspapers, photographs, technical journals, and administrative sources documented these conditions and debated possible responses ranging from improved safety regulations to infrastructural interventions. By examining the material infrastructures and environmental consequences of the oil boom in Baku, the paper contributes to a broader understanding of how extractive industries transformed urban landscapes and ecological conditions in the region. It thus emphasizes the importance of industrial construction, building materials, and infrastructural development as central components of extractive economies in the late period of the Russian Empire.

Paul B. Jaskot (Duke University), "World War II, Forced Labor, and Cement: Building Capacity through Architectural Production and the German Construction Industry"

How is architecture a *characteristic* of war itself? My paper will address this topic through a focus on World War II and the German construction industry. Within this analysis, I will certainly look at buildings influenced by war or resulting from war. But more importantly, I want to ask how architecture enabled war, how it created the capacity for war, and how it influenced the enactment of war. That is to say, this presentation will ask whether architecture can tell us something about the nature of war itself. Architecture plays an active role and, as such, becomes a crucial way of clarifying and explaining aspects of war.

One through line in this argument between architecture and war is cement. There is hardly a building material more centrally associated with modern architecture and avant-garde experimentation, but it also forms not only a response to war but a means of enacting war too. I will look at war and cement in both an art historical and political economic sense: art historically, clear moments of innovation in cement as an expressive and structural material come into focus by looking at individual building sites; political-economically, however, the distribution and prioritization of cement in war for both architect-designed and vernacular construction poses a broader structural question especially evident in World War II and in Nazi construction goals in occupied Eastern Europe. These are not mutually exclusive uses of the material, but the weight between design and political economy does shift depending on its relation to war. The analysis of the uses of cement highlights that balance between design and political economy as essential characteristics of war.

Architects and engineers carried innovations from World War I and the Weimar Republic into the Nazi period, and their experimentation helped them adapt further with new uses in World War II. Following the trail of construction and materials through this period will help us distill which cultural ideas and values influenced the systemic political economy of Europe under Nazi occupation and, indeed, became central to the most nefarious plans of the Holocaust. This included the systematic exploitation of forced labor in the construction industry, especially in the use of cement as a building material. In this regard, art history has something to say about the key terms of a military conflagration, especially mobilizing, preparing, and enacting war as well as war's transformative end goals perpetrated through violence and destruction.

Sofia Boldrini and Bianca Chescon (University of Campinas), "CRUSP's Concrete Grounds: Soviet Exchange and Extractive Chains in Brazil, 1961-1963"

In September 1962, Eduardo Kneese de Mello traveled to Moscow as the sole architect from the Americas to participate in a research commission of the International Union of Architects on prefabrication. He visited factories producing heavy precast concrete panels and newly built residential districts in Moscow and Leningrad, documenting metal molds, steam curing, and crane-operated assembly. Less than a year later, construction began on the Conjunto Residencial da Universidade de São Paulo (CRUSP), a student housing complex of twelve prefabricated concrete blocks on the campus of Brazil's largest university and one of the first large-scale prefabricated construction projects in the country.

This paper examines the CRUSP as a case study in the entanglement of transnational architectural exchange and extractive concrete production. Drawing on archival research into the primary sources documenting the project, including the architectural journal *Acrópole* (no. 303, 1964), the construction industry journal *Dirigente Construtor* (1964), the architect's records, and technical reports by construction firms, we reconstruct two intertwined histories of the use of concrete on CRUSP's campus. The first is the history of its typological and technical form. We trace how Soviet models of collective housing and prefabrication circulated through institutional networks such as the Instituto de Arquitetos do Brasil (IAB-SP), international architecture congresses, and travel reports, and were translated into a Brazilian context marked by developmental urgency and Cold War ambiguity—a country officially aligned with the United States, building Soviet-inspired housing with a French curtain wall system and domestic steel. The second is the history of its material composition. An on-site concrete plant produced 109 columns, 546 beams, and 2,016 slabs at 300kg/cm². Asbestos-cement Eternit panels clad the blind facades, supplied by a company that would later publish Kneese's own essay on the building. High-resistance Resistähl reinforced the structure. And

yet the provenance of the aggregates, the gravel, sand, and limestone that gave the concrete its body remains entirely undocumented in the existing historiography. This paper proposes to take that silence seriously, treating the absent supply chain not as a gap to be filled but as evidence of how the history of modern concrete in Brazil has been told: from the standpoint of form and technology, never from the standpoint of extraction. The CRUSP, suspended between Soviet typology and uncharted territorial supply chains, offers a productive site from which to reconstruct concrete as a meta-infrastructure and to ask what the ground gave up so that modernization could be built.

Panel II. Development

Olga Konovalova (ETH Zurich), "Reinforced Concrete and Industrial Development: The AEG Factory by Maillart&Co in Kharkiv, 1916"

Photographs documenting the construction of the AEG factory in Kharkiv in 1916 show a freight train loaded with stone circulating on railway tracks traversing the interior of the building. Evacuated from the frontline city of Riga, the factory was rebuilt during wartime in just nine months as an early reinforced concrete structure. The design and construction process was carried out by the Swiss engineering office and construction company Maillart & Co., which for this purpose employed approximately 1,000 workers and opened a local firm at Torgova Ploscha 3. The new industrial complex consisted of a main assembly hall with an administrative wing, a forge, storage facilities, a power station, a foundry, and a building for the manufacture of equipment. Owing to its strategic importance for the Russian Empire, the factory had to be completed urgently, while production was already continuing at a nearby industrial site in order not to interrupt the manufacturing process.

At the time, Kharkiv was emerging as a strategically significant industrial center in the southeast of the empire. It functioned as a key railway junction, connecting the region to major cities and resource-rich industrial areas. Due to its proximity to centers of iron and steel production, the city developed into an important hub of industrial expansion. New industrial facilities and infrastructures were required to enable the production and transport of steel elements across the Russian Empire, a necessity that encouraged the early use of reinforced-concrete construction. This development was supported by foreign companies like Maillart&Co that boasted more extensive experience with the building material. This paper situates the AEG factory within broader processes of industrialization, infrastructural development, and urbanization accelerated by reinforced concrete construction in the early twentieth century. The research is based on official documents from Swiss institutional archives, recollections of employees, local technical periodicals, and the Maillart private family archive. The paper contributes to a more detailed understanding of development in Eastern Europe as a materially grounded, contested, and transnational process.

Jan Zofka (GWZO Leipzig), "Cement Industry Equipment for the Bloc and Beyond: Polysius Dessau and its Transnational Connections in the Early Cold War Period"

While cement is produced in many places, the production of equipment for cement production is and was rather concentrated. After World War II, East German authorities inherited one of the global 'hidden champions' supplying the global market with equipment, if not entire factories, for cement industries. In one way or the other, the enterprise survived war destruction and continued to function under the Soviet Military Administration as well as later in the GDR. As the whole East Central European economy in the process of early Cold War bloc-building seems to have been redirected towards Moscow, the question asked here is what happened to the global interconnections of Polysius under these circumstances. How did outlet markets, supply chains, and technology transfers change? What were the new markets, or what was the enterprise's impact on the geography of cement industries in the Soviet bloc or the socialist world? The hypotheses are that the East German market was too small for such an industrial equipment factory specialized in cement and that there was some continuity in the technology transfer networks that crossed bloc lines. Preliminarily, one can state that the reparations to the Soviet Union played an important role in keeping the factory alive in the immediate postwar years, and that during the Sino-Soviet alliance in the 1950s the giant industrialization project in China was one important outlet market, which was not entirely

new to the enterprise. The paper is meant to advance discussions about socialist globalization or autarky, respectively, and the polyvalence of scientific and technical knowledge in early Cold War state socialism. It builds on the archival fonds containing the enterprise's documentation at the regional archives in Dessau (Landesarchiv Sachsen-Anhalt) as well as documents from the Federal Archive Berlin-Lichterfelde from the department of international relations of the Ministry of Heavy Industry and the State Planning Commission.

Jelica Jovanović (Technical University, Vienna) and Yichuan Chen (University College London), "Freeing the Concrete Knowledge: Flows of Prestressed Concrete Technologies between Yugoslavia and China"

Much of our current history of international technologies transfers, whether in capitalist or socialist contexts, has been framed by ideas like invention, intellectual property, contracts, copying, and adaptations. While invention-based narratives have long been challenged in the history of technology, there have been few attempts to imagine a freer system of global technology flows. Are international technology flows possible without any contracts and financial transactions? This was exactly the case of the flows of prestressed concrete technologies, mainly the IMS system—a skeletal prefabricated system predominantly aimed for rapid housing construction—between Yugoslavia and China in the late twentieth century.

The flows of prestressed concrete technologies between Yugoslavia and China were triggered by the disastrous Tangshan Earthquake in 1976. Both countries had already begun dismantling conventional technology-transfer models prior to that event. When transferring the IMS system to Cuba in 1967, Yugoslav engineers waived licensing fees and authorship rights, though contracts were still signed for factory setup (Jovanović and Rivera 2026). Almost simultaneously, Chinese engineers and technicians went even further. Most engineering journals in the country were suspended in 1966. The dissemination of concrete prefabrication technologies, like the prefabricated double-curved bridge, was carried out by technicians with Maoist political views. They saw the glorifying of individual inventors as intolerable 'capitalist' traits (Chen 2023).

After the 1976 Tangshan Earthquake, technical publications on the IMS system were provided by Yugoslavian engineers for their Chinese colleagues without charging any license fees. Unlike the case of Cuba, however, not a single contract was signed. While China was about to enter a new era with more capitalist policies, the dissemination of the IMS system was still largely based on unofficial technical pamphlets and the Maoist idea that knowledge should be public. The technology, however, was used for large-scale commercial projects like shopping malls and luxury hotels. In this case, the belief in the free flow of knowledge did facilitate the flow of concrete technologies between the two socialist countries, but the apparent success also relied on specific conditions, like the adaptability of the IMS system and prior experiences with prefabricated concrete in China. Furthermore, this investigation reveals how socialist ideals from both Eastern Europe and Maoist China are still shaping ideas about intellectual property in post-reform China.

Michael Brinley (Princeton University), "Demos and the DSK: The Sverdlovsk Housing Construction Factory and the Politics of Late Soviet Concrete"

This paper examines the Sverdlovsk Housing Construction Factory (DSK) as a key institutional site for understanding the coherence of late Soviet politics in the decades of industrialized mass housing. Taking prefabricated concrete panel housing construction as more than a technical solution to urgent dwelling needs, it argues that the DSK helped produce a distinct political logic of development: one organized around standardization, logistical coordination, and the territorial management of rapid urban growth. The scale of construction sector investment on a territorial principle ratcheted up the significance of the "local" in political

discourse. In Sverdlovsk, concrete was not only a building material. It was a medium through which planners, party officials, engineers, and factory administrators learned to govern. Late Soviet urban development institutions were the training ground for the political entrepreneurs of *perestroika* and the post-independence era. In effect, the material limitations and possibilities of prefabricated concrete construction conditioned the transformation of Soviet "prefects" into populist politicians.

By centering the DSK, the paper argues that late Soviet politics was in an important sense downstream of panel housing. The industrialization of construction did not merely follow state policy; it helped reorganize the relationship between development, expertise, and authority at the urban and regional level. Sverdlovsk's house-building combine thus offers a way to connect the material history of concrete to the emergence of a specifically late Soviet politics of developmental urgency, one whose afterlives extended well beyond the one-party state itself.

Panel III. Material Politics

Ecem Saricayir (California College of the Arts), "Inconcrete Modernism: Le Corbusier, the Soviet Union, and the Caucasus"

Following the invitation to a competition for the Moscow branch of the USSR's Central Union of Consumer Cooperatives in 1928, Le Corbusier, together with Pierre Jeanneret, designed the largest building of his career until that point and, according to some, also the most complex one of his oeuvre: the Tsentrosoyuz Building. Le Corbusier's ambition was to achieve what he called an "exact breathing" system with "neutralizing walls," using concrete and glass. However, due to shortages in the Soviet construction sector at the time, Le Corbusier was forced to abandon concrete, his preferred material, for pink hued tuff stone from the quarries of the Soviet Socialist Republic of Armenia. Moscow thus received a modernist building designed by Le Corbusier, albeit in Caucasus tuff stone—a material near synonymous with traditional Armenian architecture.

This paper asks: What is revealed about the modernist movement by the failure to source concrete for the construction of Le Corbusier's Moscow design? And, specifically, what does the apparent substitutability of concrete by tuff stone—a supposed traditional construction material, reveal about the modernist movement in general and its manifestation in the NEP-era Soviet Union, including its Armenian periphery, in particular? Drawing on newspaper clippings, opinion articles, and essays from the National Archives of Georgia and Armenia as well as archival materials on the Tsentrosoyuz Building from the Le Corbusier Foundation, this paper examines the construction and reception of Le Corbusier's modernist building as refracted through concrete's substitution by a traditional building material. It shows that, while the modern movement embraced concrete as a universal material—allegedly easy to produce and to construct without specialized labor—the shortage of concrete and of laborers familiar with concrete in these early years of the Soviet Union made visible the material's embeddedness within a complex of epistemic and material preconditions. Its substitutability by the comparatively traditional and parochial tuff stone moreover subverted the very modernity of concrete as a construction material. By highlighting the connections between center and periphery in the Soviet Union, this paper decenters the Soviet core in examinations of modern architecture in Eastern Europe, and suggests that a material and discursive alternative to the region's dominant concrete modernism can be found in the socialist architecture of Armenia.

Vendula Hnídková (Czech Academy of Sciences), "The Concrete Fortress: Materializing Development in Interwar Czechoslovakia"

The Müller House (1928–30), designed by Adolf Loos, provides a revealing entry point into the entanglement of concrete, capital, and modernity in interwar Czechoslovakia. More than a technical substrate enabling the spatial logic of the *Raumplan*, reinforced concrete was embedded in circuits of industrial production and private capital: the client, František Müller, was one of the owners of a major construction firm specializing in concrete technologies. The house thus exemplifies how architectural innovation was materially and financially underwritten by the expansion of the concrete industry.

Taking this nexus as a starting point, the paper reconceptualizes concrete as a central medium of state-led development. Drawing on recent work in infrastructure studies (e.g., Brian Larkin) and theories of material agency (Jane Bennett), this paper approaches concrete not as a neutral building material but as an active participant in shaping social and political relations. Concrete is thus understood as a historically contingent "developmental substance"

that linked architectural experimentation to processes of industrialization, territorial integration, and geopolitical mobilization. In a newly established and highly industrialized state, concrete underpinned a broad spectrum of interventions—from transport infrastructures (highways and airport runways) and hydraulic engineering projects to functionalist public architecture and, crucially, an extensive system of border fortifications constructed in response to the escalating threat of Nazi Germany. These projects did not merely reflect development; they actively produced it by reorganizing space, labor, and resources.

Methodologically, the paper foregrounds the Ministry of Public Works as a key institutional actor orchestrating these processes. By coordinating investment across civil engineering, architecture, and military construction, the Ministry operated as a crucial interface between technological innovation, economic policy, and competing imaginaries of modernization. Drawing on archival sources and contemporary discourse, the paper traces how concrete was mobilized to articulate divergent yet overlapping meanings: as an index of progress, a vehicle of economic rationalization, and a material guarantor of national security. By following concrete across domestic, infrastructural, and military domains, the paper demonstrates how material practices actively constituted the social and spatial transformations associated with modernization. It argues that in interwar Czechoslovakia, concrete functioned not merely as a building material but as a strategic medium through which the state sought to stabilize its territory, to project sovereignty, and to negotiate its position within an increasingly polarized European landscape.

Jérôme Bazin (Paris-East Créteil University), "Domesticating Concrete in the Countryside: The Material Ambiguity of Concrete"

This presentation focuses on one source preserved in the regional archives of Smolyan in the Bulgarian Rhodopes. It consists of a series of reports written by a single engineer between 1961 and 1975 as part of the ‘technical inspection’ of construction sites at the time. The source is valuable because the engineer visited site after site, ranging from large-scale construction projects to single-family houses. He reconstructed the diverse financial and institutional constraints weighing on construction activity but, above all, he observed and described. He documented the materials used, their quality, their distribution, how they were employed.

The engineer described many instances of concrete use, providing insights into the diffusion of concrete in this part of Eastern Europe during the 1960s. Knowledge about concrete production constituted what the engineer called “the constructive culture of citizens.” The reports describe each step: the origin of the materials (a wide variety of extraction sites for sand and aggregates), the water-to-cement ratio, the problems of laitance and spalling, the many improvisations, etc. Above all, the documents reconstruct the practices of mixing materials, showing that a wide variety of materials went into concrete, which had highly variable consistencies.

One might think that the source primarily shows how builders domesticated concrete, to borrow the title of Gerald Creed’s book on the Bulgarian countryside, *Domesticating Revolution*. But the main conclusion lies elsewhere. It is surprising to see how, in the corpus, concrete was never conceived as a new technique; there was no discussion of its modernity. The engineer was indifferent to a distinction between “traditional” and “modern” construction (terms he did not use), just as he was indifferent to the distinction between city and countryside or to the identification of constructors as Bulgarians, Pomaks, or Turks. Concrete appears less as a material of modernity than as a material that lends itself to mixtures of all kinds, including waste. What these sources illustrate most clearly is the inconsistency of concrete.

Kristóf Nagy (Princeton University), "Loving Concrete – Hating Concrete: The Paradoxes of Building Materials among Nationalist Architects in Socialist Hungary"

“All my life, I have wanted to build with reinforced concrete, and in Hungary, you cannot build with reinforced concrete”—so declared Imre Makovecz in a 1980 interview, denouncing the quality of the socialist construction industry. The paradox is striking: Makovecz was an architect celebrated by international architectural magazines and by Prince Charles for his traditionalist, organicist timber aesthetic, yet he was speaking in a country flooded by concrete buildings during exactly those decades. By the 1990s he had become the foremost right-wing intellectual in Hungary and a cultural mentor to Viktor Orbán. Yet his career began in the early 1960s with brutalist concrete buildings in rural regions, intertwined with the socialist industrialization of agriculture. By the 1980s he had abandoned the large socialist design studios to work for a forestry company, building almost exclusively in wood while denouncing the damages of socialist modernization. In his post-1989 phase, Makovecz returned to concrete to accommodate larger commissions—creating buildings with concrete skeletons clad in timber and folk-art ornament.

This paper interrogates these concrete paradoxes through Makovecz’s buildings and writings, thereby connecting the political economic and ideological facets of architecture. Drawing on archival materials assembled for my current book project on the socialist origins far-right cultural politics in Hungary, the argument runs along two lines. First, I contend that Makovecz’s shifting relationship to concrete mirrors the dynamics of the broader socialist political economy. During the economic boom of the 1960s, concrete opened spaces for expanding professional autonomy—exemplified by his shark-shaped restaurant building of 1963–64—but as prefabricated panel construction accelerated through the 1970s, the material became instead a symbol of architectural deskilling—the reduction of architectural design to technical execution. Makovecz’s turn to wood in the 1980s was thus driven less by a straightforward anti-modernist ideology than by a countermovement against professional deskilling. Second, I examine how Makovecz’s legacy was selectively canonized as anti-concrete. When Viktor Orbán issued a government decree in 2015 protecting Makovecz’s buildings, his early concrete works were initially excluded—revealing how the concrete-versus-wood opposition was retrospectively hardened into an ideological binary that never truly existed. Together, these two lines of argument offer a new perspective on anti-concrete and anti-modernist voices in socialist and post-socialist architecture, showing that debates over materials were predominantly debates over professional autonomy and authority. This historical case study gains added urgency today, when far-right political movements are championing an architectural neo-traditionalism that is traditional in form but concrete in its actual materials—replicating, perhaps unknowingly, the very paradox Makovecz embodied.

Panel IV. Waste

Katherine Zubovich (University at Buffalo, SUNY) "'The Wind Scatters Grey Dust': Cement Production, Movement, and Toxicity at Local and Soviet Scales"

When the Soviet Union annexed and occupied Estonia in the 1940s, the communist state gained control not just of new territory, but of valuable facilities created decades before that could turn clay, stone, and marl into the building blocks of urban and industrial infrastructures. From limestone to cement, Estonian building materials would begin to move eastward under Moscow's direction, rotating away from capitalist markets towards communist spaces, where they were set, initially, into monumental skyscrapers in Moscow and hydroelectric dams in Russia and Ukraine. Drawing on work from a larger book project exploring Soviet Estonian limestone, cement, brick, and wood products and their movement, this paper proposes to focus on Estonia's Kunda cement factory, founded near the Gulf of Finland in 1870. The paper takes material movement—both long-distance and local—as its central focus, juxtaposing the distant movement of cement and cement workers from Estonia to Siberia in the 1980s with the local dispersal of particulates from cement production into pine needles and rivers, soil, air, lungs and skin on Estonia's north coast. The paper asks how the movement of cement was bound up in both Soviet state building and Estonian national narratives at a moment of political transition. In tracing cement production across the Soviet and post-Soviet divides, it also engages and probes the limits of narratives emphasizing the durability of infrastructure across moments of political transition, asking what attention to waste, toxicity, and pollution—that is, to local physical, ecological, and epidemiological layers—adds to the picture.

Oxana Gourinovitch (Berlin), "Concern Wismut: Concrete and Waste in the Spatial Production of the Soviet-German Uranium Mining"

In both the construction and extractive industries of state socialism, concerns—the established icons of imperialist capitalism in the socialist ideological order—occupied, as organizational models of high complexity, a surprisingly central position. The Soviet-East German uranium mining company Wismut offers perhaps the most apt example here, merging these industries into a conglomerate to serve the military interests of the Soviet Union in the Cold War. On the affected territories and ecologies, the mining concern inflicted a spatial transformation that cut through various geological and biospheric strata. Geopolitically, it established intricate networks of political domination and extortion.

Concrete, as one of the principal construction materials, was variously involved in the concern's operations, linking a range of scales, stages, and functions: the Soviet cement imports for Wismut's industry of construction materials; recycling of radioactive tailings for concrete production; Wismut's underground and above-ground construction—industrial, civil, administrative, infrastructural; outsourced industrial housing programs; demolition, recycling, and utility works; finally, the versatile deployment of concrete in the remediation of damaged landscapes. Thus, concrete offers a perfect guide through the concern's mycelial organizational structures. The paper traces the presence of concrete within Wismut's operation. It shows practices in which contaminated waste was transformed into construction material alongside practices in which concrete itself was used to remediate contaminated waste, thereby reconstructing complex regimes of spatial production under the conditions of socialist extractivism.

Ksenia Litvinenko (Leibniz-Institut für Raumbezogene Sozialforschung), "Moving Beyond Concrete? Material Experiments in Late-Soviet Portable Architecture for Resource Extraction"

The resourcification of petroleum and natural gas in Western Siberia, one of the world's largest extractive regions, required new approaches to labor mobilization and construction during the 1960s–80s. Soviet trusts and industry administrators sought rapidly deployable structures to provide basic housing, equipment and supplies for fly-in/fly-out crews and mobile maintenance brigades operating thousands of kilometers away from their home bases. This paper examines Soviet experiments in portable architecture designed for these emerging logistical ensembles of extraction. Contrary to associations of state-socialist urbanism with monumentality and the relative permanence of concrete mass housing, many fly-in/fly-out settlements were conceived to accommodate obsolescence. They provided minimal infrastructure for long-hour shift work and were intended to endure only for the life of a particular field or task. Framed as an "architecture of positioning" (Harwood 2019: 169) with roots in military logistics, these projects prioritized movement, storage and installation speed, prompting widespread experimentation with lightweight materials and prefabrication. This paper focuses on the work of the Leningrad Zonal Research and Design Institute of Standard and Experimental Design (LenZNIIEP) from the late 1950s through to the 1980s, which was central to the late Soviet search for rapid-deployment solutions "in the North". In particular, LenZNIIEP sought alternatives to the Soviet preference for heavy reinforced concrete, exploring aluminum, asbestos-cement and plastics—materials that were themselves connected to the extractive and energy sectors—that promised improved transportability and rapid assembly across Western Siberia's large distances, swampy soils and permafrost. Drawing on archival design records, technical assessments and professional publications, the paper analyzes both realized and unrealized proposals and argues that political priorities, logistical limits, industrial-supply networks, climatic constraints and institutional preferences for established construction systems produced uneven adoption of these experiments, leaving timber and concrete the dominant construction materials. Reflecting on the surge in portable architecture thus affords access to the imaginaries and material realities that both propelled and constrained the formation of the last Soviet hinterland regime.

Participants

Jérôme Bazin is an associate professor at the University of Paris-Est Créteil in France. His research focuses on social history, art history, and architectural history in Eastern European countries during the twentieth century. In January 2026, he defended his habilitation on rural architecture in communist Poland and Bulgaria. For this research, he drew on a wide range of sources to gain an understanding of construction processes in rural areas (materials, skills, forms of building, transformed landscapes). Ultimately, he sought to understand the reasons why those who remained in rural areas built there.

Sofia Boldrini is an architect and urbanist trained at the Escola da Cidade (2020). She is currently a PhD candidate at the PPGATC of the University of Campinas, Brazil. Boldrini completed her master's degree at the same institution with the dissertation *Electrified Image* (2025) on the Balbina hydroelectric dam and its visual archive. Her doctoral research examines the locust and the technoscientific regimes that classified it as an agricultural pest in Brazil. Her work focuses on what is typically left in the background—images, species, infrastructures. She is a member of ruinorama and the ARP collectives.

Michael Brinley is Assistant Professor of History at Princeton University. He is a historian of the Soviet Union and modern Russia whose research focuses on twentieth-century urbanization, city planning, and the social and political conflicts generated by rapid urban growth. He is currently completing a book, *Model Cities and Mobilized Citizens: Contesting Soviet Urban Growth in the Era of Developed Socialism*, which examines the evolution of Soviet planning institutions during the postwar decades of industrialized mass housing construction. His work explores questions of citizenship, state formation, techno-politics, and expertise in the late socialist city. He has also published on Soviet intellectual history, including an award-recognized 2023 article on Roman Jakobson in the *Journal of the History of Ideas*. More broadly, his research contributes to the history of socialist world-making projects and their material and political legacies in Eurasia.

Yichuan Chen has recently obtained his PhD from University College London (UCL). Yichuan's PhD research concerns concrete technologies, the mid-twentieth-century great transformation in China's built environment, and their environmental consequences. His current research focuses on the global dissemination of modern infrastructure through the perspectives of Science and Technology Studies and environmental and political histories. He has published research papers on wide-ranging topics including prefabricated concrete bridges, rural housing and small-scale water control projects in twentieth-century China.

Bianca Chescon is an architect and urbanist. She obtained a master's degree from the PPGATC the University of Campinas, Brazil (2025), with a dissertation titled *Transnational Dialogues on Housing Architecture in São Paulo with the Socialist Bloc: Travels and Encounters* (1951–1964). Currently a PhD candidate at the same institution, her research examines architectural historiography through a critical lens, focusing on collaborative networks between Brazil and the countries of the Socialist Bloc, prefabrication technologies, and the circulation of architectural knowledge across geopolitical boundaries during the Cold War. She is a member of ARP collective.

Nikolay Erofeev is a historian of socialist urban development, with a focus on mass housing and socialist development assistance to the Global South. He received his DPhil in History

from the University of Oxford in 2020. His forthcoming book, *Prefabricated Frontiers: Manufacturing Soviet Mass Housing* (Cornell University Press, under contract), reconstructs the understudied architectural history of Soviet prefabricated housing as a project of social engineering, territorial conquest, and technological experimentation. He is currently a postdoctoral fellow at Freie Universität Berlin, supported by the Carl Friedrich von Siemens Stiftung, and has previously held postdoctoral fellowships at the University of Kassel, the University of Basel, and New York University's Jordan Center for the Advanced Study of Russia. His research has been supported by the Hill Foundation, the Alexander von Humboldt Foundation, and the Swiss Government Excellence Scholarship).

Kim Förster is an architectural historian, critic and curator, and Senior Lecturer in Architectural Studies at the University of Manchester. His work examines institutional politics, architectural knowledge and cultural production, and environmental, energy and material history. Previously, he was Associate Director of Research at the Canadian Centre for Architecture in Montréal. His books include *Building Institution* (2024) and *Undisciplined Knowing* (2022); he also edited the series *Environmental Histories of Architecture* (2022). His current research, teaching, exhibition, and publications explore the global history of cement, with a particular focus on cement modernity and culture. His contributions include book chapters in *Überbau* (2021), *Beyond Concrete* (2022), *Solarities. Elemental Encounters and Refractions* (2023), and *Desire and Denial* (2025), as well as articles in *Werk, Bauen und Wohnen* (2022), *e-flux Architecture* (2023), and *Oase* (2025 and 2026).

Christian Fuhrmeister is Professor at the Institute for Art History at the Ludwig-Maximilians-Universität (LMU) and a researcher at the Zentralinstitut für Kunstgeschichte, Munich. He received his doctorate in Hamburg in 1998 with a monograph on the political iconography of building materials in Weimar and Nazi Germany, published under the title *Beton, Klinker, Granit: Material, Macht, Politik. Eine Materialikonographie* (2001). He was habilitated at LMU in 2013. Currently, his work focuses on all aspects of the production, distribution, and reception of art during National Socialism and the postwar period, including cultural property transfer, transactions and translocations, changes of ownership, and provenance research, often in the form of third-party funded projects, such as the *Große Deutsche Kunstausstellung 1937-1944* (DFG, 2009-2011) and numerous provenance research initiatives.

Oxana Gourinovitch, PhD, TU Berlin, is an architectural historian, architect, and curator focusing on built environments of the state socialist world. She has taught and researched at the TU Berlin, RWTH Aachen, and HCU Hamburg, and has held, among others, the CCA/WRI fellowship at the Canadian Centre for Architecture in Montreal, the Egon Eiermann Postdoc Fellowship at the ETH Zürich, and a research fellowship at the University of Konstanz.

Vendula Hnídková is a Senior Research Fellow at the Institute of Art History of the Czech Academy of Sciences in Prague. Her research critically rethinks the historiography of modern architecture by foregrounding the roles of institutions, state actors, and economic frameworks in shaping the built environment. She has published widely on modernism, exhibition cultures, and the politics of architecture in Central Europe, and has curated major exhibitions including “The National Style: Art and Politics” at the National Gallery in Prague (2013) and “Electricity in the City: Electricity in Architecture” at Kunsthalle Praha (2022).

Paul B. Jaskot is Professor of Art History and German Studies at Duke University as well as the Director of the Digital Art History & Visual Culture Research Lab. His scholarship focuses on National Socialist cultural policy and its postwar impact. His books include *The Architecture*

of Oppression: SS, Forced Labor and the Nazi Monumental Building Economy, *The Nazi Perpetrator: Postwar German Art and the Politics of the Right*, as well as *New Approaches to an Integrated History of the Holocaust: Social History, Representation, Theory* (co-edited). He is a founding member of the international Holocaust Geographies Collaborative. He was the Andrew W. Mellon Professor in the Center for Advanced Study in the Visual Arts 2014-2016 (National Gallery of Art, Washington, DC) and the Ina Levine Invitational Scholar in the Mandel Center for Advanced Holocaust Studies 2020-2021 (U.S. Holocaust Memorial Museum, Washington, D.C.).

Jelica Jovanović is a PhD student at the University of Technology Vienna, working on the topic "Possibilities for sustainable restoration of the second half of the 20th century mass housing of Yugoslavia." She graduated from the Faculty of Architecture, University of Belgrade. Jovanović is a co-founder of DOCOMOMO Serbia and the Grupa arhitekata NGO in Belgrade. She served as curatorial advisor to the Museum of Modern Art, New York, for the exhibition "Toward a Concrete Utopia: Architecture in Yugoslavia 1948-1980". Jovanović is co-author of the book *Bogdan Bogdanović Biblioteka Beograd - An Architect's Library* and has worked on the projects "PATINA / ПАТИНА" and "PREFABRICATING SOLIDARITY: IMS-Žeželj Between Yugoslavia, Cuba, and Angola".

Olga Konovalova is a Ukrainian architect and doctoral researcher. She graduated from Kyiv National University of Construction and Architecture in 2012 and earned a Master's degree from Politecnico di Milano with professors Alessandro De Magistris and Alessandro Rocca in 2016. After graduation, she joined the architectural office EM2N, working first in Berlin (2017-2023) and then in Zurich (2024-present). In 2024, she began her doctoral research at ETH Zurich on Robert Maillart's office activity in Ukraine (1915–1918), under the supervision of Prof. Laurent Stalder, Prof. em. Kees Christiaanse and Dr. Giulia Boller.

Ksenia Litvinenko is a postdoctoral researcher at the Leibniz Institute for Research on Society and Space in Erkner, Germany. Her most recent paper, "Acclimatizing Extractivism," appeared in *e-flux Architecture*'s "After Comfort" series. Her current book project centers on the history of portable architecture and fly-in, fly-out urbanism, examining their role in hydrocarbon extraction in Western Siberia during the last decades of the Cold War.

Alexandra Masgras is a postdoctoral researcher in the "Art, Environment, Ecology" Research Group at the Zentralinstitut für Kunstgeschichte, Munich. Masgras holds a PhD in Art History from Duke University, North Carolina (2025), and is currently working on publishing her dissertation, which proposes a materialist analysis of the intersections between right-wing politics, eugenics, and the built environment in Romania between the end of the First and the Second World Wars. Masgras' research interests lie at the nexus between biopolitics, geopolitics, and material infrastructures, with a focus on the deployment of technoscientific discourses as a continuation, rather than a denial or resolution, of political struggles.

Monika Motylińska is an architectural and urban historian interested in global cycles of architectural production in the long twentieth century. She is the head of an interdisciplinary research group, "Histories of the Built Environment" at the Leibniz Institute for Research on Society and Space, IRS Erkner and the PI of the projects "Conquering (with) Concrete" (Freigeist-Fellowship, VolkswagenStiftung, 2020-2029) and "Constructing transport architecture in West Africa (CTRAAF)" (WEAVE, DFG/FWO; co-PI Johan Lagae, 2023-2027). Between 2019 and 2022, she was a fellow at the "Centering Africa" research program (Andrew W. Mellon Foundation/Canadian Centre for Architecture). In 2016, she defended her PhD

thesis at the TU Berlin on the handling of post-war heritage in Germany. Since 2020, she has taught at the Institute for European Urban Studies at Bauhaus-Universität in Weimar. Her work has been published in peer-reviewed journals (i.a. *Technology & Culture*, *Architecture Beyond Europe*, *Architectural Histories*) and in edited volumes.

Kristóf Nagy is a Fung Global Fellow at Princeton University, working on his first monograph, titled *Waging Art: Artists and the Far-Right in the Global Culture Wars*. He holds a PhD in Sociology and Social Anthropology from the Central European University (2025) and an MA in Art History from the Courtauld Institute of Art (2014). His research approaches contemporary far-right cultural politics by situating them within a longer history of the (post-)socialist and the capitalist globalization of art markets since the 1970s. For seven years he served as the editor of the Hungarian left social theory journal *Fordulat*, and he is a member of the Helyzet Working Group for Public Sociology, a Budapest-based collective working towards a social history of Eastern Europe located in the dynamics of global capitalism. His current project examines the return of traditional architectural forms—built on concrete structures—as a key aesthetic language of contemporary far-right politics.

Adam Przywara is an architectural historian and curator, currently a postdoctoral researcher at the Institute for European Global Studies at the University of Basel, Switzerland. He holds an MA in Architectural History and Theory from The Bartlett, UCL, and a PhD in Architecture from the University of Manchester. His doctoral thesis received two of the field's most prestigious awards: the Theodor Fischer Award (2024) and the SAH David B. Brownlee Dissertation Award (2025). He has curated numerous architectural exhibitions, including the major historical show "Rising from Rubble: Warsaw 1945–1949", which won the Architectural Prize of the Mayor of Warsaw. He is currently completing his first monograph, *Circular Reconstruction: Rubble, Labor, and the Rebuilding of Warsaw after 1945*, while advancing a second book-length project on the global history of industrial by-products in twentieth-century construction.

Ecem Saricayir is currently a postdoctoral researcher at the Institute for Mediterranean Studies and a Visiting Faculty at the California College of the Arts. She holds a PhD in the History of Architecture and Urban Development from Cornell University. Her research focuses on the intertwined architectural histories of the Ottoman and Russian Empires and Turkey and the Soviet Union, with a particular focus on questions of land, ownership, and identity in West Asia from the late nineteenth to the late twentieth century.

Lilija Wedel studied History and Political Science at the Gottfried Wilhelm Leibniz University of Hanover. In 2013, she transferred to Göttingen and obtained her doctorate in East European History (2017). Since 2018, she has been working as a Lecturer at the University of Göttingen. Starting in 2020, she has worked on the project "Deutsche Werbung im industriellen Zarenreich...1870–1914" at the University of Bielefeld. Since the summer semester of 2023, she has been working as a Lecturer in the history of the Soviet Union and the post-Soviet area at the University of Bielefeld. During the winter semester of 2024, she taught at the University of Luneburg on the history of Soviet und post-Soviet Central Asia. She is currently developing a research project titled "South Caucasus and Central Asia in the Late Russian Empire. Imperial Integration, Economic Regimes, and Regional Transformations (ca. 1880–1914)".

Jan Zofka is a historian of Eastern Europe and works as a senior researcher at the Leibniz-Institute for the History and Culture of Eastern Europe (GWZO) Leipzig. He specializes in the global history of state socialism, the transnational history of socialist industrialization,

commodity history, and post-Soviet separatisms. He currently leads a project on cotton in the Soviet bloc (funded by the Leibniz Association), and a DFG-financed project on the Bulgarian and East German cases of machine-building enterprises after World War II during the transition to state socialism. He has published articles and special issues on these and similar topics in *Journal of Global History*, *European Review of History*, *Cold War History*, *Jahrbücher für Wirtschaftsgeschichte*, and *Geschichte und Gesellschaft*. Previously he wrote a monograph on post-Soviet separatist movements in Transnistria and Crimea between 1989 and 1995 (in German).

Katherine Zubovich is an Associate Professor in the Department of History at the University at Buffalo, State University of New York. She is a historian of the Soviet Union and author of *Moscow Monumental: Soviet Skyscrapers and Urban Life in Stalin's Capital* (Princeton University Press, 2020) and *Making Cities Socialist* (Cambridge Elements series in Global Urban History, 2024). Her work explores the history of Soviet cities and the spaces and places that built them.