ACSA 101st Annual Meeting March 21-24, 2013, San Francisco  
Host School: California College of the Arts  
Co-chairs: Ila Berman, California College of the Arts; Ed Mitchell, Yale University

**TIMELINE**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 2</td>
<td>Paper submission site opens</td>
</tr>
<tr>
<td>September 19</td>
<td>Paper submission deadline</td>
</tr>
<tr>
<td>October</td>
<td>Accept/reject notifications sent to authors with comments. Accepted authors revise/prepare papers for publication</td>
</tr>
<tr>
<td>November 14</td>
<td>Final revised papers and copyright forms due</td>
</tr>
<tr>
<td>December 12</td>
<td>Paper presenter registration deadline</td>
</tr>
</tbody>
</table>

**THEME OVERVIEW**

Architecture’s educational structures and professional regulatory frameworks are changing more slowly than the world around us. In 2010, approximately 27,000 species became extinct, 11.2 billion tons of waste were produced, the population increased by 134 million people (half as net growth), and 200,000 inventions were patented—all in less time than it takes an architecture school to revise its curriculum. The global rate, scale, and scope of environmental, cultural, technological, and demographic change and its impact on the built and natural world seemingly far exceed our current capacity for adaptation and retooling. If academic institutions are to be at the forefront of generating architectural knowledge and developing methods for its integration and application, we need to become far more dynamic, adaptable, responsive, and engaged to ensure that we are not facilitating our own irrelevance or extinction. Design has never been more pervasive and powerful, and yet so vulnerable to the global forces influencing its potential and capacity.

With the 101st Annual Meeting, ACSA wants to reset the agenda for architectural education. As a counterpoint to the 100th anniversary meeting hosted by MIT, the first American school of architecture, ACSA 101 will move to the San Francisco Bay area and be hosted by CCA, one of the younger architecture schools. The intention of this shift is to restitute the issues facing architecture within the Bay area’s complex context: a global urban mega-region known for its technological innovation, ecological attitude, and social diversity, with cultural and economic influences coming from its position at the edge of the continent and its strong ties to the Pacific Rim.
### 101_1 Waste(lands) + Material Economies

Waste management and ecological issues have been absorbed into recent architectural pedagogy but are only yet being interrogated for the conceptual demand placed on the discipline. How might one transfer material research beyond the technology sequence? How do we understand waste, excess and progress as a biological and cultural imperative that might need reconsideration and reinvention within the contemporary architectural design paradigm?

### MATTER: EXCESS vS. OPTIMIZATION

Jason Payne, University of California, Los Angeles

Matter, as a foundational subject, is a relatively recent addition to architectural curricula. Typically, matter has either been a subject of practice-oriented courses on material science and construction, or as the province of philosophers and scientists. Architecture only occasionally accesses thought on this most fundamental subject. Matter increasingly stands as a subject itself.

There appears to be a recurring tendency toward optimization in all aspects of architectural production, from parametricism to sustainability. How might we encourage a more optimistic, even libertine approach to the subject of matter and its consolidation into material formations in design practice, one where more efflorescent and excessive expenditures of material support behavior and logic championed by scientists and theorists of complexity? Conceptual principles and polemical directions not immediately tethered to the practice of building come to the fore: behavior and performance, composition and organization, and economies of expenditure are issues fundamental to matter that have gained increasing traction in the academy.

How, then, might the architectural academy properly incorporate previous scholarship and contemporary speculation on matter into its own pedagogy? Beginning with the proposition that matter comprises the foundation of any architectural object, this session calls for rigorous exercises in course construction on the subject of matter in architecture. In keeping with the projective objectives of the conference, this session asks for presentations in the form of course syllabi and the ensuing conversation will center on strong, discrete examples of ideas for new core pedagogy.

### PRACTICING INDUSTRY

Hugh Hynes, California College of the Arts

“Research is badly needed into the anonymous history of our period, tracing our mode of life as affected by mechanization... Research is needed into the links existing between industrial methods and methods used outside industry—in art, in visualization... Nothing of the kind is earnestly provided for in curricula of present-day universities.”
- Siegfried Giedion, 1947

Since Giedion’s call for action the mechanisms of industrial production and their turbulent, often deleterious effects have become integral with practices producing architecture. The discrete architectural objects is subject to en masse architectural systems that proliferate, expand, deploy, and infiltrate territorial conditions (brownfields, manufactured landscapes), resources (smart materials, resilient composites), and production techniques (mass customization, component assembly). Distinguishing between architectural and industrial production is difficult if not impossible.

Not surprisingly, this amplified scale of production precipitates many of the same dilemmas encountered by industry over two centuries: technical breakdowns, waste byproducts, labor & efficiency issues, bloated control protocols, etc. Both the scope of the problems that we take on, and the current techniques that we employ, continually cast us in the role of agents of mass production, and our discipline as a new form of industry. Architects become directly embedded in the industrial practices of procurement, process management, implementation and logistics as we choreograph dynamic materials, tools, resources, assembly lines and schedules. Effectiveness relies on the ability to orchestrate the fluctuating sequence of events that govern organization, control and delivery. But the amplified scale of architectural production precipitates the dilemmas of industry: technical breakdowns, waste byproducts, labor & efficiency, and bloated control protocols.

This session invites papers to assess architecture’s current industrial status, and to critically evaluate the ability of our practices to perform effectively. What new forms of industry are emerging in practice and what new protocols can support industrial-scaled modes of production? Do evolving logistical and management tasks require new skills to improve effectiveness and is the architectural academy positioned to develop those capabilities? What new dilemmas are created by en masse production, by our predilections for deploying vast quantities of matter and resource? What lessons can be learned from industrial practices that address the speed, effectiveness, and resilience of architectural skillsets? What opportunities do methods like operations research, and supply chain management offer for architectural practice?
When innovation is driven by necessity, design can move building technology beyond conventional resource and economic patterns. In one view, architectural modernism’s aesthetic expression evolved from both a reduction and efficient management of resources. Today economy of means continues to be an important demand on architecture. Climate change, economic uncertainty, and finite natural resources will likely inform almost every aspect of the built environment. It has become common practice for architects and engineers to accept the challenges of working with less, creating efficient environments including prefabricated buildings, high performance facades, lightweight structural systems, net-zero housing and post-carbon cities.

What influence do scarcity and constraint have on design? Rather than viewing scarcity as something negative, something to be overcome, could it instead be viewed as a catalyst in the design process that carries with it creative potential and prospective innovation? The origin of the word ‘scarcity’ is derived from the Anglo-Norman escars, meaning “plucked out, or selected.” Selection brings ideas into focus. Anything that is scarce can become the subject of intense scrutiny and study, giving way to innovation.

This session invites submissions that explore a productive dialogue between scarcity, creativity, efficiency, and innovation. This can be examined in form of theoretical discussions, rigorous case studies, innovative studio projects, and speculative design or built projects. As resources are becoming increasingly limited globally, the intention of this session is to highlight creative approaches to efficient design, whether in respect to material expenditure, energy use, space consumption, or architectural expression.

The panel addresses the geographic scale where the mass waste disposal intersects with law, politics, ecologies and global economy. By spatially grounding the question of waste, we seek to identify trash’s materialist, political, and representational geographies. Proposals should address waste from a range of different streams: municipal (sewage system, slaughterhouse, incinerator, construction material), industrial (manufacturing, fossil fuel infrastructure), agricultural (poultry farming and food processing plants), military/energetic (decommissioned base, nuclear storage and testing site). The panel will engage contributions on technologies of recycling, re-use and reduction; consider waste as a resource (from the production of energy to its value in market creation); and approaches that explore waste not as an endpoint disposal question, but as a fundamental part of all economic activity. What are the design conditions of the mass burning, burial, abandonment, or exile of economic excess and what new contexts and rituals might designers project?

**LESS IS MORE: CREATIVITY THROUGH SCARCITY**
Elizabeth Golden, University of Washington
Gundula Proksch, University of Washington

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**DROSSCAPE**
Alan Berger, Massachusetts Institute of Technology

“Drosscape” describes the full body of residues from economic production left-over in urban areas. Worldwide millions of vacant, abandoned and contaminated former industrial sites exist within the cores of urban territories. The reconceptualization of Drosscape is an epochal moment in urban history now that cities have accumulated more surface residue than at any time in the past century. Drosscape follows the laws of the natural world, most notably the second law of thermodynamics—which work under the rubric that there is no growth without waste. Progress in both nature and civilization produces waste. Waste is necessary. Subsequently, designers shouldn’t chase the illusion of a wasteless world but should promote innovative solutions, at all scales, for inevitable waste to come. To expect a planned city to function without permanent waste (such as in a cradle to cradle approach), which represents the in situ or exported excess not only of its growth but of its maintenance, is as naïve as expecting an animal to thrive in a sensory deprivation tank.

Papers submitted to this subgroup should consider the following issues: How can urban areas, regions, landscapes, infrastructures, be designed to simultaneously use Drosscape as it accumulates? What are innovative approaches to landscape growth and feedback systems in urban evolution. How can cities be explored as active arenas marked by continuous energy flows and transformations of which landscapes and physical buildings and other parts are not permanent but transitional structures? What are Drosscape reprogramming and remediation/containment/cleansing opportunities that include creative planning and design?

**BURN IT. BURY IT. OR SEND IT ON A CARIBBEAN CRUISE**
El Hadi Jazairy, University of Michigan
Rania Ghosn, University of Michigan

These are the four things Ed Koch, former mayor of New York City, said could be done with garbage in the wake of the roaming Gar-barge episode. In 1987, the Mobro4000 infamously hauled 3000 tons of trash from New York to Belize and back until it was finally incinerated in Brooklyn and the ash buried where it originated. The mediagenic incident was emblematic of the crisis in solid-waste management globally, the intention of this session is to highlight creative approaches to alternative disposal strategies.
The question of ‘environment’ has never been so prevalent within architectural discourse, asking us to interrogate the many assumptions that have governed our approach to energy and ecology within contemporary practice. Energy Circuits focuses, not only on the exchanges and economies of energy, but also on its material flows and atmospheric effects, reconsidered as primary constituents of the built environment; Synthetic Ecologies examines architecture’s direct engagement with the organic, investigating the effects of new architectural bio-technologies and the conceptual, technological and aesthetic issues surrounding the proliferating living landscapes embedded within the surfaces and spaces of our emerging agropolis; Architecture’s Next Companion Species asks us to reconsider a truly post-humanist environment in the service of, or in concert with, species and ecologies other than our own; and Eco-logics reconstitutes architecture as an environment or eco-system to be created and assessed, not in terms of its objecthood, but rather in relation to the multiple valences of its performance.

ENERGY CIRCUITS
Sean Lally, University of Illinois at Chicago

The environmental context we design in and the energies that course through it have for too long been placed in an unimaginative dichotomy. Our actions are seen as either leading to environmental ruin or working towards its preservation. Energy has become synonymous with one of two things: either a resource to be conserved through new technological widgets, or as something released into a constructed interior as an approximation of an idealized climate. Innovation as it pertains to these energies and the environmental contexts they belong to will only come about when they are given the same architectural responsibility as the building blocks of our physical surroundings.

Energy Circuits is a call for projects and papers that see these energies and the environments they move through as an opportunity to create an architecture defined by these materialities; one in which the physical elements available to architects for constructing boundaries, surfaces and spaces include not only concrete, steel and glass but the properties of electro magnetic, chemical, thermal and sound waves that define these energies. This is a search for projections that seek innovation and the spatial and organizational implications that result from such an architecture.

SYNTHETIC ECOLOGIES
Marcelyn Gow, Southern California Institute of Architecture

This session explores the complex and sometimes radical performances of synthetic ecologies within architecture and considers how the relationship between abiotic and biotic materials and systems may fluctuate and perform on a variety of scales. Against the backdrop of the proliferation of green roofs and living walls within contemporary practice, papers are sought that focus on architecture’s capacity for bio-technological integration while also questioning the potentials of an entropic architecture. This would be broadly defined as a conscious embrace of corrupting influences through direct engagement with organic substances and living matter, challenging conventional notions of environmental performance, material solidity, and structural stasis within the context of building.

As a process, this might involve a shift within architecture from the precisely figured toward the abject, described by Julia Kristeva as a loss of distinction between self and other. The precisely figured melts into “the fragile border where identities do not exist or only barely so—double, fuzzy, heterogeneous, animal, metamorphosed, altered, abject.” In some instances this incongruous state is engendered through contamination, whereby synthetic architectural systems become informed by the integration of organic substances. In others, new environments emerge as material is either endowed with sensing and actuating potentials or physically programmed to engage with biotic matter. This new strain of synthetic ecologies disrupts the discrete identities of what is considered natural and artificial, while exceeding the geometric precision and material stability through which architecture has traditionally been defined.

This panel asks: how might the design of architectural envelopes, spaces or urban surfaces encompass composite behaviors that expand their environmental performance while embracing the fluxion of biotic matters? What are the theoretical implications and greater effects of these new synthetic ecologies, and how will the propagation of enviro-responsive building skins and infrastructures transform future architectural practices?

ARCHITECTURE’S NEXT COMPANION SPECIES
Mason White, University of Toronto
Lola Sheppard, University of Waterloo

Donna Haraway’s shift from cyborg theory (1985) to a primary theory of companion species (2003) is a shift that ultimately questions the primacy of the human
in our perception of the world. Cary Wolfe argues that we are in a post-humanist moment “in which the decentering of the human by its imbrications in technical, medical, informatic, and economic networks is increasingly impossible to ignore, a historical development that points to the necessity of a new theoretical paradigm.” This session debates the position of a new breed of architecture which is entirely entangled with ecology. As the counter-point to architecture advanced as an autonomous, visually-driven model is the premise of architecture as a symbiotic process-based agent.

This session panel asks what might an architecture in service of not simply humans, but species, ecologies, and environments resemble? Through projects or texts, this session seeks new thinking on architecture’s engagement with the environment. The questions are no longer what it does or even how it does it, but perhaps more importantly, for whom, and with what agency? If architecture spent the twentieth century trying to move, it is possible that architecture will spend the twenty first century trying to be alive. This is not necessarily a move towards robotics, nor biomimetics, but rather, a recognition that our environments are, on the one hand, increasingly merging artificial efficiency and natural logic to produce environments that are monitored and controlled, ecologies that are amplified or manufactured and interior landscapes that are conditioned. On the other hand, the recognition that architecture might engage other species—whether plant or animal—urges it to expand its performance, be programmatically and temporally adaptable and able to negotiate contingencies. What are architecture’s next companion species, and what new forms of architecture will emerge to sustain them?

ECO-LOGICS
Helene Furjan, University of Pennsylvania

One could argue that much of architecture’s disciplinary activities today are concerned with the term “ecology,” in all of its wide-ranging definitions. Yet the question we might ask is not only how architecture is directly engaging ecological issues at multiple scales, from environmentally responsive building skins to ecocities, but also how the concept of “ecology” itself is redefining the ways in which we think about architecture. How might we re-imagine architecture if buildings and cities were reconceived as ecosystems themselves—built organizations that would operate at the level of dynamic, complex and intelligent living systems.

Much work done in architecture today still remains within “black-box” systems that achieve internal complication without external feedbacks. These are defined as “hard systems” often focused on closed autonomous technological loops that are unable to take into account environmental conditions or other critical but unquantifiable variables within culture, politics, or society. By contrast, “soft systems,” such as living biological systems, are those that are in continuous exchange with their surroundings, able to learn, adapt, evolve, and change in response to feedback from other systems and their external environments. This session asks: how might architecture be thought and reconstituted as a “soft,” rather than a “hard” system, and how might we draw from theoretical models in the biological or natural sciences to inform our thinking about architecture as an ecosystem that both mediates and generates environments?

Within architecture, references to living systems should not be limited to fluid forms or form-generating code, as is evident in many architectures that have drawn from biological models to inform the development of evolutionary design processes, but rather should question how architecture performs, how metabolic processes and responsive feedback loops are integrated into its systems, and what are the atmospheres and environments it produces. If the concept of architecture-as-object is displaced by architecture-as-environment, what might the different valences of environmental performance be within architecture, and how might they work together to create an “eco-logics”—a responsive, evolving, and resilient field of environmental, aesthetic and atmospheric effects? Within the context of the many debates surrounding the topic of environmental performance within the built world, this panel invites papers and projects at multiple scales that embrace an “eco-logical” redefinition of architecture.
Digital technologies have evolved from being simply representational tools invested in the depiction of existing models of architectural space to becoming significant performative machines that have transformed the ways in which we conceive and configure form, space and material. These technologies have enabled the emergence of a new parametric practices emulating genetic and iterative dynamic evolutionary processes that function at multiple scales and in different domains. These tools are radically changing the ways in which we integrate disparate types of material information into the design process, while altering methodologies directly influencing both design and manufacture. That our current models of space are far more continuous, variant and complex is specifically a result of the tools we are using to produce them, an inevitable byproduct of the ever-expanding capacities of digital computation and related fabrication technologies. These sessions focus on current negotiations and mediation strategies emerging within the digital realm between differing scales of operation that extend from building component to urban environment, between internal codes and external forces that reflect the nature/nurture dichotomy within design, between digital processes and physical behaviors, and between computational design strategies and the technologies governing fabrication and production.

The introduction of programmatic code into architecture has radically transformed design processes enabling us to imagine architecture to emerge as a genetically-driven organism, where novel spatial typologies are produced that simulate generative patterns of form growth and development in nature. Yet, while code or DNA may dictate specific formal expressions in biological systems, environment trumps code in the development of microbiological organisms, lending a powerful ecological model for architects to consider within the realm of parametric design. New geometries emerge alongside pressures and inflections elicited by external constraints.

This session topic will focus on the relationship between architecture, computation and material systems—the ways in which digital technology is being used to visualize and model different types of datasets extracted from a range of material systems, and the specific methods being used within generative architectural design practices to transcode these datasets through geometry and new material organizations. Relationships between code and pattern, material and geometry, fabrication and assembly are revealed as a reciprocal and interconnected loop. How may architects learn from this reciprocity and further, how might the relationship between code and environment, matter and behavior, influence the development of future strategies for design and fabrication?

**FIGURING DIFFERENTIATION**

Chris Hight, Rice University

If the part-to-whole relationship within architecture has been governed by references to the anatomical and biological body as a model for order, this session seeks to explore the potentials and limitations of ecology as an alternative model or reference. A key issue in such a proposition is the continuity or disruption of scalar relationships being generated between discrete elements or components within architecture, their assemblage into larger, coherent yet modulated organizations, and the effects that parametric design practices have had on the development of these relationships. Of special interest are projects that operate beyond the individual building and at the urban scale to offer alternatives beyond figure-ground gestalts and conventional hierarchies of the four scales of ornament/detail, envelope, building and urban configuration. Are there alternative configurations of urban space that reshuffle or hybridize these conventions and if so, what are their scales of differentiation and how are the interrelationships of parts and wholes redefined? This session is open to both historical and theoretical examinations as well as the presentation and analysis of design projects that advance, engage and also critique generative design discourses and their proclivity toward specific forms of continuous modulation, variation and performance.
DIGITAL CRAFT: MATERIAL, TECHNOLOGY AND PERFORMANCE
Heather Roberge, University of California, Los Angeles

Digital craft is a contemporary technique by which matter, force and geometry are organized. Digital craft orchestrates a robust exchange between digital processes and physical behaviors. New design and manufacturing tools are redirecting the relationship between form, material, technology and performance within architecture by altering design processes. These tools open up a new role for craft at two distinct scales during design. The first is at the scale of the architectural model where form is conceived as the expression and potential of geometric systems. Digital craft at this scale relies on a range of tools from generative modeling to environmental and structural simulation to surface modeling in anticipation of digital fabrication. The second scale at which digital craft is used is the scale of building assemblies where the impact of material, building technologies and performance become inseparable from form. Digital fabrication, interactive sensing technologies and robotic assembly manage vast and variable data sets to produce specialized building components, novel part to whole relationships, responsive building skins, etc. This panel seeks papers that discuss the role of digital craft in the conception and translation of design work at these two scales or across scales. The presentation and analysis of design research, applied research or case studies are welcome. Of particular interest are the various ways in which digital craft addresses longstanding disciplinary concerns and opens up territory for new questions.

MASS CUSTOMIZATION + NON-STANDARD MODES OF (RE)PRODUCTION
Branko Kolaveric, University of Calgary

Thanks to parametric design and digital fabrication technologies it is now possible to mass-produce non-standard, highly differentiated building components with the same facility as standardized ones. Digital technologies have not only transformed the ways in which buildings and building components are conceived, designed, and represented, but also the ways in which they are manufactured, assembled and produced. Digitally-controlled machinery can fabricate uniquely shaped parts at a cost that is no longer prohibitively expensive: it is just as easy and cost-effective for a CNC milling machine to produce 1,000 unique objects as to produce 1,000 identical ones. Variety, in other words, no longer compromises the efficiency and economy of production.

Non-standard modes of (re)production allow the creation and manufacturing of unique buildings, and building components, in series, differentiated through digitally-controlled variation. A parametrically-defined, digitally-fabricated “custom” house could thus become available to a broad segment of society. In buildings, individual components could be mass-customized to allow for optimal variance in response to differing local conditions in buildings, such as uniquely shaped and sized structural components that address different structural loads in the most optimal way, variable window shapes and sizes that correspond to differences in orientation and available views, etc.

If the homogeneity and repetitive seriality of our buildings and cities are direct reflections of the most common manifestation of industrial mass production, does this new model of mass customization mean that repetition is no longer necessary? What are the theoretical implications and practical opportunities offered to an architecture that can easily integrate uniqueness, iterative complexity, and endless variation? And finally, as the gap between design and manufacture is narrowed, what are the issues surrounding the potential reindustrialization of design practices?
These sessions will explore the intersection between interactive technologies and architectural space at a number of scales and interfaces. Sensing the City is geared primarily to one to one scale interactions that extend the sensible environment of the body through architectural interfaces, Media-scapes looks at the history and evolution of media and civic space and the recent impact of the social network on civic space, Living-Bits and Bricks investigates the technological interface between digital information and the scale and operation of the city, and Negotiated Territory solicits proposals which where resistance and negotiation are seen as constitutive rather than restrictive of the design process itself.

SENSING THE CITY
Jason Johnson, California College of the Arts

For Marshall McLuhan the human sensorium was fundamentally conditioned by technology: “All media are extensions of some human faculty ... the wheel is an extension of the foot; the book is an extension of the eye; clothing, an extension of the skin; electric circuitry, an extension of the central nervous system.” But Kevin Kelly indicates that emerging interfaces imply a “wildness and some of the surprises that the wild entails. This, then, is the dilemma that all gods must accept: that they can no longer be completely sovereign over their finest creations.” For Sanford Kwinter a “world emerges whose material, technical, and architectural manifestations— no longer simply objects, structures or “buildings” but indeed electro-material environments at all scales—manifest themselves in a soft, perhaps insidiously holographic, manner, a world where everything flows together in real time.” This session investigates these extended, amplified and enhanced nervous systems, responsive skins, and exchange terminals situated at the intersection of architecture, technology, public space, robotics, and digital fabrication at the immediate architectural scale.

The panel asks: how can invisible urban flows and processes become meaningful and tangible? How can a sensible material component or assembly weave into the infrastructure of buildings, streets or cities? When a building or environment evolves based on feedback, what are the implications, potentials or risks for architecture? What are the social, cultural, political, or ecological implications of these new soft, wild and responsive technologies?

MEDIA-SCAPES
Andrzej Zarzycki, New Jersey Institute of Technology

Mobile technology increasingly, and more and more seamlessly, bridges the physical landscape with virtual environments to form visually rich and emotionally engaging narratives. Wireless communications, ubiquitous online connectivity, and a multiplicity of electronic devices irreversibly augment our daily lives. Video game environments involving massive multiplayer online collaborations affect our outlook on and expectations of our everyday activities and social fabric.

Similarly, the integration of LED and projection technologies into architectural façades transform previously static buildings into dynamic media objects. Interactions and experiences that in the past were predominantly confined to art-gallery installations or online chat rooms are becoming Main Street events with broader participation and authorship. While perceived by some as invasive and overreaching, or as a symptom of an increasingly privatized and circumscribed social milieu, media participatory landscapes could also help us to reclaim the public realm and democratize its content.

This session topic invites papers to critically evaluate current and historic media + landscapes and their impact on both the social and built fabric, and to speculate on future frameworks that interconnect media-enhanced spaces with intelligent (smart) and adaptable designs.

A number of questions emerge for designers. How can the integration of new technologies with landscape create spaces that evoke new experiences? How can media-rich environments provide new answers for the needs of a mobile and globally connected society? What are the differences, connections and tensions between virtual and physical social spaces? What challenges does such work offer to urban political critique and theory? What is the challenge to design agency and control?

LIVING BITS + BRICKS
Carlo Ratti, Massachusetts Institute of Technology
Nashid Nabian, Massachusetts Institute of Technology

At the beginning of 20th century architecture was radically redefined through new techniques exploring steel, glass and reinforced-concrete. in the 90s, many scholars speculated about the ongoing digital revolution's impact on the built environment, and the possibility of replacing physical space with virtual space, or atoms with bits. Contrary to this atoms are becoming augmented by bits of information. As pervasive computing, ubiquitous handheld electronics, ad-hoc sen-
sor networks, locative media and many other technologies are rapidly becoming mainstream and omnipresent, the boundaries of architecture are being redefined to include what we here characterize as Living Architectures.

Near-future architecture hybridizes hardware and software, generating a completely different genealogy of built space designed for feedback and performance, behaving more like an organism or network. Tomorrow's building will have a sentient, cybernetic, context-aware artificial intelligence of its own. Architectural projects that fall under this category, must not only be designed in terms of their intellectual and conceptual bearing, built form, structural innovation, tectonics, choice of materials and rigorous design details; but their design must also address the embedded electronic circuits and their uploaded software that define their performative characteristics. These environments are increasingly adaptive and responsive, and enable rich customization and personalization, identifying and satisfying the divergent individual needs of a pantheon of users.

This proposed session/topic aims at providing a historical overview and a conceptual framework for envisioning digital and physical interactions at the scale of the city and or the interaction of multiple bodies and collectives as agents within a technologically enhanced sentient, responsive, and intelligent Living Architecture.

NEGOTIATED TERRITORY
John McMorrough, University of Michigan

Every instance of design entails negotiation. Whether by deformation of a structural span, the limits of a construction budget, or the changing opinions of a building committee, design must accommodate material, economic, and cultural forces. Rather than understanding such negotiations as the source of half measures and mediated expressions that only partially reflect the absolutes of negotiation's component elements, this panel will explore the idea that design itself only exists in a state of mediation and transference; design exists as a negotiated territory. There is no origin of design, nor a definitive conclusion, it is not a place or a thing, but only a cascade of relations.

In the expanded terrain of negotiation, this panel seeks to understand the political motivations of design not only to include overt manifestation (like the recent squatter urbanism of the "occupy" movements), but as the framework for each and every circumstance, from cities and landscapes, to buildings and objects. Of particular interest are cases in which the accommodation of resistant circumstances and constituencies illustrates potentials through which modalities of both design and political thinking can be derived and theorized. What is reality if not the ultimate negotiated territory?
101_5 Enclaves / Territories + Expanding Megalopolises

Urban environments and their surrounding territories are rapidly evolving in response to threats, pressures and opportunities that extend far beyond the boundaries of the traditional city. Environmental and social volatility, the migrations of populations, infrastructural demands and shifting economies operating at the regional and global mega-scale are accelerating the rate at which cities are transforming, rendering obsolete traditional planning techniques while demanding new methods of urban de-coding, new design strategies for prototyping growth, and a new toolbox of spatial and infrastructural concepts with which to re-imagine and re-define the 21st century city.

SECURING THE PERIMETER
Elijah Huge, Wesleyan University

In his critical examination of the rise of mechanical systems in “The Architecture of the Well-Tempered Environment,” Reyner Banham argues that “working conditions of men in industrialized societies gave rise to environmental problems of the utmost urgency and baffling novelty. The sheer size and human density of settlements posed problems of waste disposal, and threat of epidemic (a threat tragically often fulfilled) that called for powerful legal action.” Implicit in Banham’s indictment of architecture’s inadequacy for managing the complexities of industrial urbanization is a recognition of the need to protect architecture, and its expanding purview, from itself.

Just as industrialization introduced new threats to the city (electricity, speed, explosives) while also dramatically increasing the scale of historical perils (flood, fire, theft), the magnified scale of contemporary urbanism has in turn enhanced the role that architecture is expected to fulfill in sustaining the security of the city. Set against this historical narrative of escalation between expanding urbanism on the one hand and increased risks for catastrophe on the other, this panel seeks to explore both the legacy of architecture’s response to emergency and insecurity and its potential for agency in the uncertain conditions of the global city.

From emergency infrastructure to doomsday decoration (see, for example, SAFE: Design Takes On Risk, MoMA 2005-6), what are the ways in which the built environment responds to environmental, political, economic, or social volatility? How has the relationship between architecture and security adapted to changes in media and technology? Are there possibilities for architecture to develop an anticipatory (rather than reactionary) relationship with emergency? Securing the Perimeter invites histories and speculations that explore the evolving entanglements between architecture, urbanism, and security.

RAPID CITIES: PROTOTYPING URBAN GROWTH
Mona El Khafif, California College of the Arts

In the next 40 years the US population alone is expected to grow by 130 million people, and it is anticipated that more than a billion people will be migrating into China’s cities. This growth will exacerbate many of our current challenges: climate change, water shortages, aging infrastructure and economic and social instability. Although many consider these issues ‘controllable’ within the context of western industrialized countries, the rapid growth within economically underdeveloped countries threatens to further intensify these challenges. The world’s urbanization is inevitable, with 70% of current forms of urbanization occurring through informal settlements. This rapid growth will increase land consumption at a scale never seen before in human history while traditional urban planning strategies and the codes that support them, where they do exist, will likely collapse and fail.

During the next decades the global design community has the opportunity and responsibility to create forward thinking design strategies that will respond to ecological, infrastructural, and social issues while holistically integrating these new projective systems across multiple scales and within highly varied cultural and economic environments. This session on rapid cities will address the current high speed of mass urbanization, and will seek paper presentations that radially re-think the making of cities through parameters and performance rather than traditional planning strategies. Work presented can include specific design projects addressing rapid growth and urban prototyping or might introduce the development of analytical tools that de-code current patterns of urbanization and generate new strategies for future design applications.

STRATEGIES BEYOND THE COMPACT CITY
Felipe Correa, Harvard University

As emergent models of urban development in the North American urbanized geographies continue to depart from the more time-honored envelope of the traditional compact city, the design toolbox and canvas of action for designers necessarily expands and diversifies. The customary twentieth century divide between the cultivated city and its peripheries has, in the past decades, been partially supplanted by newer morphologies fueled by urbanization pressures at the scale of the mega-
region. Fast paced forms of metropolitan development, paired with new “geo-political annexation” procedures and greater exchanges between hinterland and city have transformed the urban/suburban dyad into a much more complex system of loosely associated spreads and densities, fundamentally altering the original components of the post World War II suburb, and its social, economic, and spatial dynamics. This new dispersed urban model, regional in scale, is primarily driven by off-center multi-nodal economic engines, large-scale resource extraction/distribution, and heavyweight regional mobility networks, that in many ways rely less and less on the financial and functional support of the compact city.

While the “traditional” city at the turn of the twenty first century has witnessed a period of re-invention, coalescing a plethora of strategies and scales to restructure its long-established quarters, the vast majority of the urbanized terrain continues to operate under the influence of watered down post-war functionalist schemas. Given this framework, the moment is ripe to redefine the role of the urban project. How are we to approach this task? What should guide the architect conceiving new relationships among existing urban parts? How can the architect act as a critical agent, in regard to the spatial particularities of the urban parts themselves and within the larger expanded urban field? This specific panel will speculate upon new organizational strategies that provide alternative formal and experiential identities for urban scenarios outside of the traditional compact city.

INFRASTRUCTURAL AND ECOLOGICAL URBANISMS

Julia Czerniak, Syracuse University

The evolution of American cities is intrinsically linked to the progressive development of infrastructure, and the role it has played in supporting the territorial colonization of the expanding metropolis. From the Haussmannization of Paris to the New Deal and WPA in America, the ambitions of modernism could not have taken hold without the enormous ideological and economic investment in engineered public works projects and the belief that the technological restructuring of the city and instrumentalization of the landscape would inevitably lead to the modernization of the metropolis.

Within the contemporary context, however, the extreme deterioration of the mechanistic life-support systems upon which our cities depend, the chaotic suburban sprawl and decreased urban densities that they have enabled, and the environmental problems resulting from the infrastructural transformation of large-scale landscapes, have questioned the role, scale and design of infrastructure in the making of the city and the capacity of architecture and urban design to contribute to its redevelopment. In addition, the predominant role that landscape plays within this largely infrastructural milieu through the pervasiveness of horizontal urbanization in America, the evolution of the megaform as a hybrid of architecture and landscape, and the rise in import of ecology in dealing with infrastructural recycling through the bio-remediation of vast post-industrial sites and previously acculturated geographies, has brought focused attention to landscape urbanism as both a discipline and practice. Unlike architecture, landscape has historically been uniquely positioned to understand both the scale and continuity of vast terrains and the temporal nature of living systems and has made great strides in contributing to our understanding of cities as urban biospheres, rather than as a collection of static and discrete cultural artifacts.

This session invites design proposals and papers that bring a critical context to these issues and that, building on the advances of landscape and ecological urbanism, might re-envision the roles of infrastructure and landscape across scales in the remaking of the contemporary megalopolis.
101.6 Populations / Networks / Datascapes: From Cloud Culture to Informal Communities

Populations and audiences are evolving through digital interfaces, new discursive networks, ground-up community-based practices, new constituencies and communities previously under-represented or invisible to conventional notions of the public, identity groups, and organizations. These panels examine architecture’s emerging discourses and publics as well as the ways in which data proliferation, geospatial information and the cartographies of new media are shaping our understanding of these cultural communities.

GUERILLA ECOLOGIES
Ulrike Heine, Dan Harding, Bernhard Sill & Aaron Bowman, Clemson University

Technological innovation and obsolescence, a population of over 7 billion people, a weakened global economy and political instability have created a culture of semi-permanence. Development and resource consumption occurs faster than our communities can adapt. Time Magazine’s person of the year is The Protestor.

Many architects and designers are proactively collaborating to rapidly reinvent, redefine, and redesign both practice and community. From political propaganda to informal settlements these efforts are producing new proactive and experimental “Guerilla Ecologies” focused on social, economic, and environmental issues. By working “bottom-up” in a collaborative process, architects and designers are leveraging existing assets to serve as catalysts for social change, challenging the notion that design is a luxury for the wealthy. Re-imagining the call to “Think Globally, Act Locally,” Guerilla Ecologies work small and think big, acting tactically to addresses broader social issues through targeted interventions.

This session invites papers that examine the potential of design within the framework of Guerilla Ecology. Favoring strategic discourse and realized demonstrations, this peer review team will identify and organize a session that demonstrates economic, environmental, sustainable, and culturally significant design-centric research. Are the mechanisms within guerilla activism sustainable or disruptive? How can collective energy constitute new publics? What has been done with community investment of existing building inventory? How can architectural teaching and practice embrace guerilla activism? Are we teaching to follow or create a program? Which are appropriate responses: democratic grass root activism to rejuvenate and sustain existing communities or open-source, cloud strategies for new audiences?

DISCURSIVE NETWORKS
Ana Miljaki, Massachusetts Institute of Technology
Amanda Reeser Lawrence, Northeastern University

Architectural appropriation is so deeply enmeshed with the colloquial definitions of postmodernism that it has become nearly impossible to theorize its discursive function without conjuring up images of pastiche, both well and badly executed. And yet, if we look beyond this recent chapter in architectural history an engagement with the past has long been understood as a legitimate and indeed requisite aspect of the creative act at the very core of architecture’s disciplinarity. An architect’s engagement with the past is both a means of legitimating her architectural investigation, and of claiming originality against the codified material of preexisting architectural discourse.

This session invites papers that investigate the means by which architects have entered into conversation with a body of work (or a single architectural example) external to their own. We are especially interested in analyses of discursive networks within which architectural ideas resurface and are adapted. We also welcome studies that consider different narratives of architectural reference, ranging from mechanically and digitally-enabled copying to the more elusive notion of influence. While the dominant narratives about postmodernism’s forms of reference rely on direct (parodic) and more ambient (pastiche) adaptations of historical sources, we are interested in papers that revisit, problematize and expand this particular codification of appropriation as postmodern, as well as papers that conceptualize reference and appropriation across both historical and geographical space.

We particularly encourage examination of the extent to which specific conceptions of intellectual ownership over architectural ideas might be gleaned from the very techniques of appropriation and attribution. What language have architects historically used to describe their adaptations of the past, and how does that language impact their specific design acts? Are there shared citational operations across historically distant periods, and if so how can we understand their similarities? And, more recently, as copyright laws and their opponents have been re-describing the sphere of cultural production in terms of new legislative territories, what place in architectural history will be reserved for the architectural dopple-gangers proliferating across the speedily constructed Chinese urban-scapes?

 Appropriation is thus both the endogenously architectural object of investigation of this panel and a means of framing historical narratives at the very moment when disciplinary concerns meet exogenous cultural, political and technological developments, such as copyright laws, international politics, and technologies of reproduction.
URBAN GEOGRAPHIES OF MULTICULTURALISM
Armando Montilla, Clemson University

The Contemporary City is increasingly multicultural. Cities, through migration and mobility, have historically been the primary site of ethnic and spatial harmony or tension. In most cases, imported models of living and working are incorporated into the urban kaleidoscope, and the so-called ‘ethnic enclave’ has had a more recent urban appeal to enhance tourism and to contribute to architectural and cultural metropolitanism. Sociology and Cultural Studies have advocated for the poly-ethnic, multicultural city as a viable and necessary condition, representative of social tolerance and indicative of progress.

What are architectural and urban ethnic enclaves? How do migrant communities impact the space of the city? How does the ethnic and multicultural component of urban multinational immigration affect the dynamics of urban public space? Can architecture distinguish the different levels of complexity of the multicultural space of urbanity? What are the levels of tolerance architectural space mediates in the midst of multicultural grounds? Is the multicultural model a more sustainable urban model of development, from the social and physical points of view? In a growing era of fear and environmental concerns, the issue of the urban space of ethnicity becomes an important element to consider in the analysis of the contemporary city and its ability to achieve more sustainable development. The papers on this session will attempt to answer these questions, in an effort to acknowledge the reflections of the discipline of architecture and urban theory in parallel to the development of new urban constellations and new urban ecologies.

URBAN CODE
Laura Kurgan, Columbia University
Nicholas de Monchaux, University of California, Berkeley

Fueled by the collision of military-industrial methods of enumerating and coordinating actions in space, and the expansion of internet-born standards of surveillance and enumeration into our physical lives, our built environment is defined, as never before, by data. From Google goggles to enterprise GIS, the phantom datascapes that defined our first encounters with the digital realm have given way to new media of geospatial information. Like the ghost-like glass which shaped a 20th-century avant-garde, this new medium has become omnipresent as it remains—supposedly—transparent.

The goal of the panel will be to highlight and examine the best encounters of architectural research with this strange new material; not matter or territory, but data about it. The expanse of modern methods of city planning, cold-war history—and even post-modernism and the post-cold war—gave rise to this torrent of place-based information. Against the background of today’s spatial disciplines, in which mapping and measuring techniques are being remixed and turned to—apparently—new purpose, we seek in particular to understand how the 21st century city is being created, already, though code as much as form.
All papers will undergo a blind peer review process. Session Topic Chairs will take into consideration each paper’s relevance to the topic and the evaluation furnished by the three peer reviewers.

Authors may submit only one paper per session topic. The same paper may not be submitted to multiple topics. An author can present no more than two papers at the Annual Meeting. All authors submitting papers must be faculty, or staff at ACSA member schools, faculty or staff at ACSA affiliate schools or become supporting ACSA members at the time of paper submission.

Papers submissions (1) must report on recently completed work, (2) cannot have been previously published or presented in public except to a regional audience, and (3) must be written in English. Submissions should be no longer than 4,000 words, excluding the abstract and endnotes.

SUBMISSION PROCESS
The deadline for submitting a paper to a session for the Annual Meeting is September 19, 2012. Authors will submit papers through the ACSA online interface. When submitting your paper, you will be guided with the Web interface, through the following steps.

1. Log in with your ACSA username and password.
2. Enter the title of your paper.
3. Select the Session Topic for your submission.
4. Add additional authors for your paper, if any.
5. Upload your paper in MS Word, RTF, or PDF formats. Format the paper according to these guidelines.
   * Omit all author names from the paper and any other identifying information to maintain an anonymous review process.
   * Do not include an abstract in the file.
   * Use endnotes or a reference list in the paper. Footnotes should NOT be included.
   * No more than five images may be used in the paper. Images (low resolution) and captions should be embedded in the paper.
6. Click Submit to finalize your submission. Note: Your paper is not submitted unless you click the Submit button and receive an automatic email confirmation.

PAPER PRESENTATION
All submissions will be reviewed carefully by at least three reviewers. Official acceptance is made by the session topic chairs. Selection is based on innovation, clarity, contribution to the discipline of architecture, and relevance to the session topic. All authors will be notified of the status of their paper and will receive comments from their reviewers.

Accepted authors will be required to complete a copyright transfer form and agree to present the paper at the Annual Meeting before it is published in the proceedings.

Each session will have a moderator, normally the topic chair. Session moderators will notify authors in advance of session guidelines as well as the general expectations for the session. Moderators reserve the right to withhold a paper from the program if the author has refused to comply with those guidelines. Failure to comply with the conference deadlines or with a moderator’s request for materials in advance may result in an author being dropped from the program, even though his or her name may appear in the program book.

In the event of insufficient participation regarding a particular session topic, the conference co-chairs reserve the right to revise the conference schedule accordingly. Authors whose papers have been accepted for presentation are required to register for the Annual Meeting.