# ⅁⌐⌐Ⅎ SOPHISTICATION CONFERENCE #2

## IN »LIEU« OF STATEMENTS, »ARTICULATION«

How can we find a novel understanding of human intellectuality in co-existence with artificial intelligence? The *Sophistication Conferences* are dedicated to a basic kind of literacy in how to think about coding in the terms of a geometry of spectra and communication. At the core of such a literacy is a different relationality of time, nature, subject, and object. Our interest is in a philosophy of the transcendental objective, at whose core resides the question of »how to embrace what presents itself as an obstacle« rather than how to make it »go away«. We see in such a »digital gnomonics« a powerful framework for addressing computational modeling, machine learning and algorithmic reasoning in a manner that does not stage an antagonistic competition between human and artificial intelligence.

       The *Sophistication Conferences* are organized once a year at the Technical University Vienna, as a cooperation between the Department for Architecture Theory and Philosophy of Technics ATTP and the laboratory for applied virtuality at the chair for CAAD ETH Zurich, where we invite distinguished as well as young scholars from different fields to think about how such »architectonic intellectuality« affects our relations to the world at large – our institutions, as well as our ordinary daily lives.

# 08.11.

**19.00–22.30, PRECHTLSAAL, TU VIENNA** KARLSPLATZ 13, 1040

DRINKS AND FINGER FOOD WILL BE SERVED.

*THE APERO IS CO-SPONSORED BY THE SOCIETY FOR THE STUDY OF BIOPOLITICAL FUTURES, CNY HUMANITIES CORRIDOR, NEW YORK.*

**19.00–19.30**
**IN »LIEU« OF STATEMENTS, Vera Bühlmann, TU Vienna**

**19.30–20.00**
**MOBILE YET IMMOBILE, Georg Fassl, TU Vienna**

## EUROPE

**20.00–22.30   MODERATION: RICCARDO VILLA,**
**PHD CANDIDATE AT ATTP, TU VIENNA**

**20.15–21.15**
**OF A GHOST AND ITS RESURRECTION:**
**MARIA ZAMBRANO ON THE AGONY OF EUROPE,**
**Rodolphe Gasché, SUNY Buffalo, NY (US)**

**21.30–22.30**
**SAVING LE DIFFÉREND**
**(AT LEAST TO PRESERVE THE HONOR OF THINKING),**
**Gregg Lambert, Syracuse University, NY (US)**

## 09.11.

**09.00–18.15, PRECHTLSAAL, TU VIENNA** KARLSPLATZ 13, 1040

EACH SESSION 15 MIN INTRO BY MODERATOR,
EACH LECTURE 30 MIN + 15 MIN DISCUSSION + 15 MIN FOR COFFEE

### 09.00 COFFEE

## MNEMOTECHNICS

**09.30–15.15 MODERATION: EMMANUELLE CHIAPPONE-PIRIOU,
PHD CANDIDATE AT ATTP, TU VIENNA**

**09.45–10.30
ARCHITECTURE OF THE DIAPHANOUS,
Riccardo Matteo Villa, TU Vienna**

**10.45–11.30
A MIND OUTSIDE OURSELVES,
Roberto Bottazzi, The Bartlett School of Architecture London (UK)**

**11.45–12.30
ON STATUES, NOMADS, AND OTHER MODES OF
SUBJECTIVATION,
Joanna Hodge, Manchester Metropolitan University (UK)**

**12.30–14.30 LUNCH BREAK**

**14.30–15.15
ANAXIMANDER IN FUKUSHIMA,
GENEALOGIES OF TECHNIQUE,
Zissis Kotionis, University of Thessaly (GR)**

## GNOMONICS

**15.15–18.15 MODERATION: MARTIN RITZINGER,
PHD CANDIDATE AT ATTP, TU VIENNA**

**15.30–16.15
ARCHITECTURE, AN ARTIFICIAL INTELLIGENCE,
Kristian Faschingeder, TU Vienna**

**16.30–17.15
ARCHITECTURE AND DIGITAL LITERACY,
Ludger Hovestadt, ETH Zurich (CH)**

**17.30–18.15
COMPUTATIONAL MODELING ACROSS DISCIPLINES,
Vahid Moosavi, ETH Zurich (CH)**

**10.11.**

EACH SESSION 15 MIN INTRO BY MODERATOR,
EACH LECTURE 30 MIN + 15 MIN DISCUSSION + 15 MIN FOR COFFEE

**09.00 COFFEE**

## METHODICS

**09.30–12.30 MODERATION: MICHAEL R. DOYLE, TU VIENNA**

**09.45–10.30**
**CRYSTALGEBRA:**
**ARCHITECTONIC ARTICULATIONS IN CRYSTAL SPACE,**
**Poltak Pandjaitan, ETH Zurich (CH)**

**10.45–11.30**
**SOPHISTICATION: GOOD SENSE AND COMMON SENSE,**
**Sjoerd van Tuinen, Rotterdam University (NL)**

**11.45–12.30**
**ON HYPEROBJECTS:**
**DIGITAL MIRRORS AND THE REALITY PRINCIPLE,**
**Georgios Tsagdis, University of Westminster (UK)**

**12.30–14.30 LUNCH BREAK**

**14.30–15.00**
**THE CITIES IN THE PLANETARY GARDEN. A FILM FEATURE**
**WITH THE CITY MAYOR OF PALERMO, SICILY,**
**Martin Burr, Fachwerk für Bau, Bühne, Bild und Biennale, Allschwil**
**(CH)**

## CANONICS

**15.00–18.00 MODERATION: OLIVER SCHÜRER, TU VIENNA**

**15.15–16.00**
**THE PYTHAGOREAN LEGACY OF CANONICS,**
**Elias Zafiris, University of Athens (GR)**

**16.15–17.00**
**SPECTRAL ARCHITECTONICS, Nikola Marinčić, ETH Zurich (CH)**

**17.15–18.00**
**IS COMPUTING AN INFERIOR WAY OF THINKING?**
**(ON CHURCH-TURING THESIS),**
**Gilles Dowek, École normale supérieure Paris-Saclay (FR)**

**20.00 CONFERENCE DINNER**

## IN »LIEU« OF STATEMENTS,
## Vera Bühlmann, TU Vienna

Why make "Sophistication" the title of a series of symposia on architecture, technics, and thinking? Because we live in a time of a proclaimed condition of "Post-Truth" or "Post-Facticity", where arguments are neither heard nor appreciated. This is scary. But the time of the Sophists was not only one of sophistry, abuse, and manipulation. It was one of intellectual modesty as much as one of intellectual challenge and competition. It marked the introduction of humanist values, and triggered a veritable explosion in the spreading of knowledge, in artistic articulation, and subtle forms of sophistication. Without the sophists, no philosophers!

Different than statements, articulations have no immediate claim to truth. There is an interesting and strange kind of autonomy to articulations. They manifest what in German we call "ein Können", an abledness, a distinctiveness, and articulacy. By being somewhat disrespectful toward contexts-of-common sense, crafted articulations are in their own peculiar way always genuinely situation-relative. And they are firmly rooted in "sense" that is "common". My talk will introduce what I call a "domestic architectonics". If we are interested in a coding literacy, it is not distinct statements themselves, and what they claim to represent, that ought to preoccupy us today – much more interesting is the abstract and yet domestic domain from where-within statements and arguments are being crafted. I will suggest to regard concepts within such a domestic architectonics as Capital concepts - concepts that do not delineate but that are conductive, concepts that establish what is "frequent" and "current", concepts that do not contain meaning but offer spaces to accommodate it. Perhaps this can open up a novel relation between classic and modern as one of *being-with*, rather than one of *being after*.

BIO     Vera Bühlmann is Professor for Architecture Theory at Vienna University of Technology, and director of the ATTP Department since 2016. She originally studied English Literature and Language, Philosophy, and Media Studies at Zurich University, and earned a PHD in Media Philosophy/Philosophy of Technics from Basel University in 2009. Together with Ludger Hovestadt, she is co-founder of the applied virtuality lab in 2010, at the Chair for Computer Aided Architectural Design at ETH Zurich, where she had been teaching since 2008. She is Co-editor of the Applied Virtuality Book Series (Birkhäuser, since 2012). Her newest monograph is under contract with Bloomsbury Press, London, and will be entitled *Mathematics and Information in the Philosophy of Michel Serres* (2018, forthcoming).

## MOBILE YET IMMOBILE,
## Georg Fassl, TU Vienna

What counts as philosophy's *Being* and *Becoming* or physic's *Movement* and *Rest*, might be compared with architecture's *Mobile* and *Immobile*. They are two of its most inner conceptions forming one of its major devices. Taking a daedalic perspective – 'Daedalus', the mythical first architect – this cloudy notice will revolve around both of them and put them into play within our todays cosmos – as a pair of opposites, a bi-functional entity producing energy and negotiating between its poles. Reporting from the Daedalus Observatory, I will observe and speculate on a present Mobile Yet Immobile character to articulate a possibilitating understanding, a formation, of contemporary architectonic objects charged with both of them, each in its very own way.

BIO        Georg Fassl is an architect and scientific-assistant at the Department for Architecture Theory And Philosophy of Technics ATTP at the TU Vienna. He attended the Ortwein-School of Arts and Design in the field of Interior and Furniture Design, received his Master's of Science degree in Architecture from the Graz University of Technology with distinction and concluded postgraduate studies, focusing on Spatial Design, at the Zurich University of the Arts.
        During and after his studies he was involved in the Institute of Architecture and Media in Graz and developed projects on a variety of scales in architectural practices in Berlin and Vienna. He is founder of the Daedalus Observatory. (www.daedalusobservatory.net)

## OF A GHOST AND ITS RESURRECTION:
## MARIA ZAMBRANO ON THE AGONY OF EUROPE,
Rodolphe Gasché, SUNY Buffalo, NY (US)

In La Agonia de Europa, Maria Zambrano writes: "Europe is not dead, Europe cannot die completely; it agonizes. For Europe is perhaps the only thing – in history – that cannot die; it is the only thing capable of resurrection." How to understand this provocative statement? What must Europe be for it not being able to completely die, but only to agonize? How to understand the mode of being Europe as one of continuous  agonization? What kind of resurrection does European life refer to, and what is its significance in the context of Zambrano's heretical Christianity? These are among the questions raised in the paper.

BIO      Rodolphe Gasche ist SUNY Distinguished Professor und Eugenio Donato Professor of Comparative Literature an der State University of New York in Buffalo. Er studierte in München, Berlin und Paris, und promovierte 1976 an der Freien Universität Berlin. Ehe Gasché an die SUNY in Buffalo berufen wurde, unterrichtete er an der FU Berlin und der Johns Hopkins University in Baltimore. Er ist der Übersetzer von Derrida und Lacan ins Deutsche. Arbeitsschwerpunkte: Deutscher Idealismus und Frühromantik, Phänomenologie, Aesthetik, Dekonstruktion und Postmoderne. Seine Buchveröffentlichungen sind: Die hybride Wissenschaft, Stuttgart 1973; System und Metaphorik in der Philosophie von Georges Bataille, Bern 1978; The Tain of the Mirror: Derrida and the Philosophy of Reflection, Cambridge, Mass. 1986; Inventions of Difference: On Jacques Derrida, Cambridge, Mass. 1994; The Wild Card of Reading: On Paul de Man, Cambridge, Mass. 1998; Of Minimal Things. Studies on the Notion of Relation, Stanford 1999; The Idea of Form: Rethinking Kant's Aesthetics, Stanford, 2003; Views and Interviews. On "Deconstruction" in America, Aurora, Colorado 2006; The Honor of Thinking: Critique, Theory, Philosophy, Stanford 2007; Europe, or The Infinite Task.  A Study of a Philosophical Concept, Stanford 2009; Un arte muy fragile. Sobre la retorica de Aristoteles, Santiago, Chile, 2010; The Stelliferous Fold. Towards Virtual Law of Literature's Self-Formation, Bronx, NY, 2011; Georges Bataille: Phenomenology and Phantasmatology (Stanford, 2012); Geophilosophy: On Gilles Deleuze and Félix Guattari's *What is Philosophy?* (Northwestern University Press, 2014); Deconstruction, Its Force its Violence (SUNY Press, 2016); Persuasion, Reflection, Judgment. Ancillae Vitae (Indiana University Press, 2017). Ein neues Werk, Storytelling: The Destruction of the Inalienable in the Age of the Holocaust, ist eben bei der SUNY Press erschienen.

# SAVING LE DIFFÉREND
# (AT LEAST TO PRESERVE THE HONOR OF THINKING),
## Gregg Lambert, Syracuse University, NY (US)

The concept of le differend was invented to respond to the following situation: let us imagine that the universe of damages is infinitely larger, quantitatively speaking, than a finite number of wrongs (torts). At what point, one might reasonably ask, when does a damage rise to the level of being recognized as a wrong, and how is this a concern of political philosophy? In the opening of the short essay on the Kantian critique of History, published in 1986 but first delivered the same year as *Le Differend* appeared, Lyotard calls philosophy the "tribunal of critique, the "judge who examines the validity of the claims of various phrase families" (xvii). Lyotard's objective is to discover those damages that, as of yet, have not been able to be phrased according to any precedent or protocol, that is, those differend that exist without phrases, and thus cannot establish the reality of the their damage. In any case, "the differend is not a matter for litigation" (10). As Lyotard writes, "it is in the nature of a victim not to be able to prove that one has been done a wrong. A plaintiff is someone who has incurred damages and who disposed of the means to prove it. One only becomes a victim if one loses these means" (8). Here, we can hypothesize that the wrong comes from damages not being expressed in the language common to the tribunal and the other party, and that this gives birth to the differend. But how can you judge that there is a differend when, according to the situation, the referent of the victim is not the object of a phrase, nor an object of cognition properly speaking? In an effort to save the concept of the differend from the silence that has obscured its relevance today—covered over by all the talk concerning the postmodern—I will show precisely how the situation of the differend, as the instance belonging to common law and to jurisprudence in those situations where there is no rule and the judge must defer either to precedent of past judgements (prior phrases) or in the case of differend that appear distinct from all previous disputes, can risk inventing a new rule (a new phrase) in the form of "a matter of first impression."  Nevertheless, this phrase is not a legitimate rule (i.e., it has no "performative power" to use another term that Lyotard employs elsewhere to describe the same situation), since it will in turn depend on future cases and future judges to confirm that the phrase is "just," that is to say, that it is right given the evidence and thus may be employed as a precedent determine future cases that resemble the one decided by opinion.

BIO        Gregg Lambert is Dean's Professor of Humanities at Syracuse University, New York, where he currently teaches in the Department of Philosophy. He is the author of numerous works in contemporary philosophy and critical theory. In the 1990's he studied with Lyotard at the University of California, Irvine, and later co-edited (with Victor E. Taylor) a three volume collection on Lyotard's philosophy published by Routledge Press (U.K.) in 2005.

## ARCHITECTURE OF THE DIAPHANOUS,
## Riccardo Matteo Villa, TU Vienna

Both the architecture and the philosophy developed in the Middle-Ages share a peculiar approach to the question of transparency. As the Abbot of St. Denis reforms his church by emplacing never-seen-before glass windows, philosopher Averroes compares the functioning of the human intellect to the translucency of a diaphanous crystal. By looking both at the architecture and at the architectonics of transparency as a "third space", it is possible to provide a novel reading to a set of modern concepts such as the one of subject, of rationality and of tradition. This "device of transparency", forged way before the time of Renaissance and Enlightenment, is then perhaps an interesting key through which it is then possible to better understand the Modern Era, and by extension the contemporary (or "post-modern") condition.

BIO        Riccardo M. Villa is Assistant Researcher for the Department for Architecture Theory and Philosophy of Technics since September 2017. He holds a Master's degree in Architecture from the Polytechnic University of Milan, and he is currently pursuing a PhD at the department. His recent interests revolve around architecture in its production, under a spectrum of investigation that spans from aesthetics and semiotics to biopolitics.

## A MIND OUTSIDE OURSELVES,
## Roberto Bottazzi, The Bartlett School of Architecture London (UK)

The emergence of fully-automated, data-driven architectures such as contemporary factories and distribution centres has radically superseded established mnemonic techniques to navigate space based on human perception which arched back to the long-standing tradition of the memory palaces. Though distribution centres may not operate like any traditional building type, discussing the history of spatial mnemotechnics still holds a relevant position even in the contest of automated space: this is not only because of their close connection to architecture and the city, but also because of the particular way in which constrains and generative techniques are treated.

Particularly, the paper will concentrate on specific moments in history in which the possibilities unleashed by the 'automatic' were first conceptualised and, to a lesser extent, spatialised. Key figures such as Pico della Mirandola, Giulio Camillo will form the background against which more contemporary examples will be discussed.

BIO     Roberto Bottazzi is an architect, researcher, and educator based in London.
        He has studies in Italy and Canada before moving to London. He is Director of the Master in Urban Design at the Bartlett, UCL. His research analyses the impact of digital technologies on architecture and urbanism. He is the author of *Digital Architecture beyond Computers: Fragments of a Cultural History of Computational Design* (Bloomsbury, 2018) and editor of *Walking Cities: London* (Camberwell Press, 2017). He has lectured and exhibited internationally.

## ON STATUES, NOMADS, AND OTHER MODES OF SUBJECTIVATION,

**Joanna Hodge, Manchester Metropolitan University (UK)**

The Serresian preoccupation with statues arrives in focus in the title of his study *Statues: The Second Book of Foundations*, the title in English of the recently translated text by Michel Serres, from 1987. This second book follows on, in some sense to be determined, from *Rome: The First Book of Foundations* (1983), in which Serres had provided a detailed commentary on Livy's study of the founding of Rome, *ab urbe condita*. It precedes, at least in terms of publication dates, The *origins of geometry: the third book of foundations* (1995) which, in its very title, intimates a challenge both to Husserl's famous paper 'The Origin of geometry', from the 1930s, translated into French and commented on extensively by Jacques Derrida; and to any notion of a single origin, or single book of foundations, or indeed of unitary foundation.

Foundation then is one possible third term alongside statues and nomads for attention here, although my approach to any discussion of foundations will be oblique, since I am here the more concerned with the manner in which Serres' thinking arrives to inflect that of Gilles Deleuze, away from the proper names in the series: Nietzsche, Bergson, Spinoza, and from a conjuncture of notions of multiplicity and nomadology, in the joint work with Felix Guattari, towards the more flexible and plastic notion of the fold, which arrives for attention in the title of Deleuze's 1988 study: *The fold: Leibniz and the Baroque*. There, Deleuze acknowledges with enthusiasm the work of Serres on Leibniz, in his study *Le systeme de Leibniz: ses modeles mathematique*s (1968, 1982). Deleuze attributes to Serres a distinction between an inorganic and an organic fold:

Thus the inorganic fold happens to be simple and direct, while the organic fold is always composite alternating, indirect (mediated by an interior site). (Conley trans. p. 9)

In that study Deleuze conceives of subjectivity not as position but as trajectory, responding to what he calls the objectile, a newly minted conception of objects, no longer conceived as stationary, but as in motion, along lines of curvature, for which differential calculus is the mode of registration.

'Monads' would be another possible third term in the incipient series Statues, Nomads: modes of Subjectivation, or, indeed, 'points', for points function for Deleuze, and Leibniz as folds in the water of the fishpond. Deleuze writes in his second chapter:

Thus the soul is not in a body in a point, but is itself a higher point and of another nature, which corresponds with the point of view. The point of inflection, the point of position, and the point of inclusion will thus be distinguished. (Conley trans. p. 23).

The series should then perhaps start with the term: Soul (anima), and then continue: Foundations, Statues, Nomads, Monads, Points.

In the introduction to the Second Book of Foundations, Serres refers back to his own earlier study, *Genesis* (1982) in which he opens up a discussion of turbulence, intermittence and multiplicity as three basic determinants of the flux, which is time and history. This book, *Genesis,* with its declaration of seeking a new object for philosophy may also be thought of as starting a series of three

texts, and indeed they were so translated, in the USA in the nineties, as *The Natural Contract* (1990), on the need to rethink the nature of ecological system, as opposed to a taken for ranted basis, or excluded third, for political order, and The *Troubadour of Knowledge* (*Le Tiers Instruit,* 1991), in the translation of which the image of the harlequin becomes salient, for his mixed coloration and constitution goes all the way down. These then are studies of foundations for which notions of origin, beginning and inception are distinct, and to be distinguished; and for which the vicissitudes of translation are not just noise but on occasion a powerful prompt to reconsider what is supposed to be well known.

My paper will provide a brief introduction to these notions of statues, nomads and folds, triads, noise and translation, as prompts to reconfiguring the status of classical notions of subjectivity and objectivity, to indicate how they are not competing notions, but rather overlapping, if discontinuous, attempts to provide access to what remains to be made thinkable in the flows of multiplicity, intermittence, and turbulence in which information streams currently clamour for our attention.

BIO        Joanna Hodge completed her D. Phil. at the University of Oxford, in 1983 with a dissertation called 'Martin Heidegger's account of truth: a study of *Sein und Zeit'*, having studied philosophy at Oxford (PPE), in Hamburg, Heidelberg and at the Free University, Berlin, courtesy of the *Stiftung Freiherr vom Stein.*
        Temporary part time appointments in Oxford did not convert into a full time permanent position, and she arrived at the Manchester Metropolitan University by way of Oxford Brookes, then Oxford Polytechnic, lecturing on feminist and political theory, the University of York, and Manchester Polytechnic. She became a reader in 1995 and Professor in 2000. She served on the Philosophy Panel for the UK: HEFCE: Research Assessment Exercise cycles in 2001, and in 2008. She is currently located in the Department of History, Politics and Philosophy in the Faculty of Arts and Humanities.
        Two monographs *Heidegger and Ethics* (Routledge: Taylor and Francis 1995) and *Derrida on Time* (Routledge: Taylor and Francis 2007) are to be followed by a third, *The Return of the Thing: reading Jean Luc Nancy.* She is currently moonlighting, working on studies of the writings of Michel Serres.

## ANAXIMANDER IN FUKUSHIMA,
## GENEALOGIES OF TECHNIQUE,
## Zissis Kotionis, University of Thessaly (GR)

"Anaximander in Fukushima, Genealogies of Technique" is an artistic project shaped in the form of an installation (Benaki Museum, Athens, 2014) and a theoretical hypothesis, researched in a book under the same title.

An imaginary space-time travel from the ancient coasts of the Aegean Sea to the coasts of Japan, utilize the cosmological conceptions of Anaximander to understand the destruction of the Nuclear Power Station and its surroundings in Fukushima. By conceiving cosmos as a technical apparatus, Anaximander invents the anthropocene, long before its "official" birth in the industrial era. On April 2011 a nature/culture conspiracy, an earthquake, a tsunami, a nuclear destruction brought out a teleological prospect to the genealogy of technique. The project is a documentation of traces, a *dérive* among fragments of the technical era in post-industrial territories. Walking, collecting ruined technical apparatuses, laying down, soliloquizing the fragmentary texts of presocratic philosophers are some of the *dérive* practices.

To depart from the archaic world of Anaximander and look forward to reach the technical world in its actual traumatic situation, is a mnemonic procedure. It is also a reflection on how today we experience our being-in-the-technical-world as if the long past has already structured the shape of our future.

BIO        Zissis Kotionis (www. kotionis.com) is a Ph.D architect, writer and artist. He is a Professor in the Department of Architecture, University of Thessaly. He has published ten books on architectural theory, urban culture and narrative poetry. His architectural and art projects have been internationally published and exhibited. His work includes artistic performances, installations and public art practices. In 2010 he was co-Commissioner of Greece in the 12th Biennale of Architecture, Venice (*The Ark*). In 2014 his project "Anaximander in Fukushima", was exhibited in Benaki Museum, Athens.

## ARCHITECTURE, AN ARTIFICIAL INTELLIGENCE,
### Kristian Faschingeder, TU Vienna

In his book Geometry, Michel Serres presents two different political orders by which the historian Jean-Pierre Vernant traces the revolutionary transformations of Greek culture. The forerunner is the vertical hierarchy of the archaic world, pyramid-shaped, with the ruler at the top. Innovative the Greeks, who organize themselves in the plane: They line up in a circle, and those who speak to the group walk into the middle, surrounded by their listeners. The hierarchy flattens, by which the Greeks establish their famous isonomy. But it's not as simple as that, Serres retorts. The big transformation, he claims, between the archaic and the Greek system relates to the change of position of the observer: there is a difference whether one sees something in profile or in plan view. Both views are representations of the same object, but no one sees, according to Serres, neither the world nor society as if they were looking at it from above. This position is "above the king, that of the mind." This is not just a superior point of view, but "a proof of the existence of another world." Thus, Serres explains, the Greeks invented theory; a stage of vision — theoros meaning spectator. "The Greeks' production is projection. And the optimization of a projecting site: the fly-over from on high or from outside the world."

It was only much later that architecture began to use the "turn" invented by the Greeks. Historically, there exists a clear conceptual separation between floor plan and elevation. The representative character of the architecture is situated in the elevation, the organizational character in the floor plan. While an architect such as Étienne-Louis Boullée shows the sublime of his architecture des ombres and architecture ensevelie through his watercolored elevations, architecture's emphasis will later move to the ground plan. The projection, the view from above, is what leads Le Corbusier to remark that architecture begins in the ground plan: "le plan est le générateur", he says in 1923 in Vers une Architecture. The comprehensible, visible and symbolic power of the façade then moves into the sober, rational plan, quasi naturalized and imperceptible. And though the difference between archaic and Greek worldviews is based on a simple quarter turn, from a profile to a plan view — both representing the same object — it appears that architecture merged these two views into one coherent system in the 15th century only.

BIO        Kristian Faschingeder teaches at the Department of Architecture Theory and Philosophy of Technics (Technical University Vienna), the New Design University St. Pölten, and the FH-Campus Vienna. In 2008-2010 he was a research assistant to the Chair of Design, Theory and History of Modern Architecture at the Bauhaus University Weimar, where he also received his PhD in 2011. In 2011-2013 he curated the permanent science centre exhibition Sonnenwelt in Großschönau in Lower Austria. Numerous publications in architectural and theory journals. He has practiced in Austrian and International Architecture Offices.

## ARCHITECTURE AND DIGITAL LITERACY,
Ludger Hovestadt, ETH Zurich (CH)

Computers are not machines. They are not tools. They are any tool. Anything goes, nothing makes sense. Computers are quantum machines. Any point is everything not. It is connected to everything. A panorama, a cypher of the world. Rich in knowing the old world. Which is dead. As a person I talk throughout this panorama to the new, strange world. Filled with aliens. They are beautiful, repugnant, demanding, dangerous and fascinating. Nothing else out there. All my senses cheated, but my intellect. Who can distinguish, whatever comes. Thinking, I can join these elements to sentences, to laws, to formations, to buildings.

BIO      Since 2000 Ludger Hovestadt is Professor for Computer Aided Architectural Design at the ETH Zürich, Switzerland, and is directing a permanent research group of 16 PhD students. His interest is in artificial intelligence and not in computer graphics. He founded several companies in the fields of smart geometry, building intelligence, building information models and the internet of things. Since 2008 his focus shifted from applications to the principles of computing in architecture. In 2010 he cofounded the Laboratory for Applied Virtuality with Vera Bühlmann, which edits the applied virtuality book series (Birkhäuser, since 2010). He has published several books on architecture, computing, philosophy, and mathematics.

## COMPUTATIONAL MODELING ACROSS DISCIPLINES,
Vahid Moosavi, ETH Zurich (CH)

Orthogonal to the direction of disciplinary research, General Systems Theory (GST) with the vision of "finding abstract similarities in different things" was introduced in early 20th century. However, soon it ended up to generic system models and in my opinion failed in 1980s. Nevertheless, the original vision of systemic approach remains fascinating.

Around the same time, machine learning as a radically different approach to the representational modeling and classical coding, started to emerge. Today, machine learning and Big Data together offer a universal way of looking at the world phenomena, which is aligned with the original vision of GST and is strongly influencing the classically expert based and disciplinary application domains.

In this presentation, after a short analysis of the history of systemic modeling, I try to describe the main elements of machine learning techniques and why they are successful in domain free manner. Finally, I will show several data driven applications in the context of architecture and urban design.

BIO        Previously trained and practiced as a systems engineer, over the last 8 years I have been focused on machine learning techniques and their applications in the context of urban and spatial modeling.
        From 2011 to 2015 I did my PhD research under the supervision of Ludger Hovestadt at the chair for Computer Aided Architectural Design (CAAD) at ETH Zurich.
        At the same time, from November 2011 till end of April 2015 I was involved at Future Cities Laboratory of Singapore-ETH Centre in Singapore as a researcher in simulation platform. From May 2015 I am a Post-doc researcher, based in Zurich.
        Parallel to research and teaching "Data Driven Modeling" to graduate architectural design students at ETH, I have been conducting several applied machine-learning projects such as structural design and form finding, planetary analysis of urban form and density, urban traffic dynamics, air pollution modeling, real estate market and urban flood risk estimations using deep learning as surrogate to computational fluid dynamics. In addition to academic projects, I have been pushing some of my data driven projects to the industry in the formats of startups or project based consulting.

## CRYSTALGEBRA:
## ARCHITECTONIC ARTICULATIONS IN CRYSTAL SPACE,
### Poltak Pandjaitan, ETH Zurich (CH)

The research project addresses the question of how to implement and translate spatial concepts in crystal topologies. Based on interdisciplinary explorations of crystal structures and their specific characteristics, spatial paradigms are examined and implemented in the algebraic framework of crystals.

The crystal space provides the setup for the architectonic articulations. Articulated thoughts and concepts epitomize different stages for elements of spatialities to join concepts of space with the notion of topological crystals. It opens up a space of mediation and discourse. Only by setting distinct elements absolutely can communication emerge between them. These mutual discussions are to be treated like crystallized sculptures. It is not just the form that gives the expression, but the process of crystallization and development within the structure that has a narrative potential.

Crystals are characteristic elements of space, and they constitute spatialities. It is the demystification of crystals as taxonomies of architectonics. The code of crystals is the articulation of space. It represents an idea or process as much as an actual building or design. It is the principle of the code that already represents a structure, which provides a stage for spatial ideas in order to facilitate new architectonic articulations.

The project is to provide an overview of how the topic of crystals can be embedded in architecture. The goal is not to resemble and mimic these emergent crystal arrangements. Neither it is intended to show how to translate such abstract ideas into geometry or to invent new shapes. However, through the purposive abstraction and translation of spatialities combined with the notion of crystals as an algebraic code like structure, it is possible to scrutinize the meaning of space.

BIO       Poltak Pandjaitan finished his Ph.D. in September 2019 at the Chair of Computer Aided Architectural Design (Prof. Ludger Hovestadt) at the ETH ITA Zurich. In 2016 he worked as a project architect for Christian Kerez, for the Incidental Space installation in the Swiss Pavilion at the 15th La Biennale di Architettura Venezia 2016. He worked as an architect at Gramazio Kohler Architects in 2014 and received the "TISCHE" scholarship from the Federal Chancellery of the Republic of Austria for Arts and Culture in the same year. From 2012 to 2013 he worked as a project architect in Vienna. He studied Architecture at the University of Technology Vienna, where he graduated his Architectural Studies with honors with the diploma thesis "Das verborgene System" in 2011.

## SOPHISTICATION: GOOD SENSE AND COMMON SENSE,
Sjoerd van Tuinen, Rotterdam University (NL)

Of old, it has been good sense to oppose reason to common sense. The more sophisticated its mode of articulation, the greater its distance to doxa, folklore, common belief. Sophistication in good sense is thus associated less with sophistry than with the exclusivity and refinement of truth. But what if the new function of reason is no longer to criticize an already established common sense, but to care for the possible sense of the common that is everywhere lacking? Could 'true' sophistication, i.e. its higher power, lie in the inclusivity rather than exclusivity of reason? Does inclusive reason not necessarily combine refinement with sophistry in the constant enrichment of the common? Along these lines, my presentation proposes the outline of a new genealogy of reason, starting from Leibniz's mannerist logic of versions and passing from Schelling to Whitehead and Serres.

BIO        Sjoerd van Tuinen is Associate Professor of Philosophy at Erasmus University Rotterdam. He is editor of many books, including *Deleuze and The Fold. A Critical Reader* (Palgrave Macmillan, 2010), *Speculative Art Histories* (Edinburgh Universitry Press, 2017) and *Art History after Deleuze and Guattari* (Leuven UP, 2017), and is currently finalizing his monographs called *Matter, Manner, Idea. Deleuze and Mannerism and Ressentiment. Pedagogy of a Concept.* van Tuinen is a co-founder of the Erasmus Institute for Public Knowledge, where he coordinates a project on austerity politics.

# ON HYPEROBJECTS:
# DIGITAL MIRRORS AND THE REALITY PRINCIPLE,
## Georgios Tsagdis, University of Westminster (UK)

A barely dreamt dream: to upload consciousness, to upload memory, to upload the weave of life, without life itself, a digital life more living than that of the flesh: *vita realissima*. No sooner dreamt than turned into nightmare: the glory of the truest life runs up against the reality principle. From *Brave New World to the Matrix*, dystopia amounts to nothing other than the abandonment, exile or exclusion from the *topos* of reality. The human is *principally* attached to the real. Pain and suffering are preferable to its loss; no afterlife is welcome unless it first outbid reality in its own currency. Beaudrillard undoes the primacy of the reality principle, through an investigation of its historical contingency and obsolesce. The dream and the nightmare have already coincided, leaving behind only the nostalgia of their distinction. Yet, something is still to take place. The Beaudrillard of *Simulacra,* had barely witnessed the digital. His diagnose is a prophecy yet to be surprised. This paper aims to suffuse the desert of the real with the Freudian reality principle, in order to re-thematise the relation of life and death and thus explore the part of the real irrevocably lost, the part that weighs the future down and the part that might never be forsaken.

BIO      Georgios Tsagdis is Fellow at the Westminster Law & Theory Lab and teaches at the University of Greenwich and the Architectural Association. His work operates across theoretical and disciplinary intersections drawing on 20th Century, Contemporary and Ancient Greek Philosophy. His *Archeology of Nothing* is revised for publication, while his current project examines the function of the negative in the ontology of matter from Plato to New Materialisms. In other recent research, he explores various themes in the historic encounters of philosophy and nature, from the figure of the animal in the Platonic corpus to post-humanism and parasitism. He has written on the question of love with reference to theological, political and feminist discourses. His essays have been published in various book collections and international journals, among which *Parallax and Philosophy Today*. Since 2014 he has been organizing the *Seminar of Neoplatonic Studies*, a London intercollegiate study and research group, hosted at the Warburg Institute. He is editor and contributor of the *Plotinus Archive*, a virtual polyphonic commentary on the *Enneads*.

# THE CITIES IN THE PLANETARY GARDEN. A FILM FEATURE
# WITH THE CITY MAYOR OF PALERMO, SICILY,
## Martin Burr, Fachwerk für Bau, Bühne, Bild und Biennale, Allschwil (CH)

A world moved by invisible networks, transnational private interests, algorithmic intelligence and ever-increasing inequalities through the unique lens of Palermo – a crossroads of three continents in the heart of the Mediterranean.

Throughout history, the City of Palermo has been a laboratory for diversity and cross-pollination, shaped by continuous migration. In the 1875 painting by Francesco Lojacono, «View of Palermo», nothing was indigenous. Olive trees came from Asia, aspen from the Middle East and eucalyptus from Australia. Citrus trees – the symbol of Sicily – were introduced under Arab sovereignty. The botanical garden of Palermo was founded in 1789 as a laboratory to nurture, test, mix and gather diverse species. The idea of the «garden», exploring its capacity to aggregate difference and to compose life out of movement and migration. Gardens allow for cross-pollination based on encounter. In 1997, French Botanist Gilles Clément described the world as a «planetary garden» with humanity in charge of being its gardener. Twenty years later, the metaphor of the «garden» is not as a space for humans to take control, but rather a site where «gardeners» recognice their dependency on other species, and respond to climate, time, or an array of social factors, in a shared responsibility.

This film features Leoluca Orlando as gardener of Palermo. Being native to the universe, he connects mobility in thought and physics to digital competences. The film cites an index of Orlando beings, partly becoming alive in the publication «A QUANTUM CITY», which Martin Burr handed to the mayor of Palermo for this occasion. So the film features how to become a city and gardener in this and that universe.

BIO        Martin Burr (*1973 Basel), Réalisateur, is interested in virtual virtuosity. He studied at the academies for music, art, theater and dance in the Netherlands, founded work-spaces for the arts and sciences in Switzerland, and has recently adopted the role as care-taker for what he calls *Fachwerk für Bau, Bühne, Bild und Biennale* in Allschwil, Basel (Switzerland).

## THE PYTHAGOREAN LEGACY OF CANONICS,
## Elias Zafiris, University of Athens (GR)

A certain architectonics of relations, based on communication, is ultimately necessitated in all cases, where direct accessibility to sharply distinguishable domains of objects and their behavior is not feasible due to obstacles or obstructions of any particular type. In these domains, objects are intrinsically shaped according to cloudy patterns, and bear generically probabilistic attributes. In this respect, the ability to localize and embrace obstacles pertinent to some domain becomes the primordial task. The above always necessitates a process of metaphora around an obstacle, i.e. a directional flow around it, through another level of hypostasis. The metaphora is effective if the flow is communicative, i.e. if it establishes bidirectional bridges connecting these two levels. We examine the Pythagorean legacy of Canonics from this theoretical perspective, as a means of metaphora from the harmonic to the geometric domain, aiming to bridge communicatively together the acoustic to the visual.

BIO    Elias Zafiris holds an M.Sc. (Distinction) in "Quantum Fields and Fundamental Forces", and a Ph.D. in "Theoretical and Mathematical Physics", both from Imperial College at the University of London. He has published papers on category-theoretic methods in quantum physics and complex systems theories, modern differential geometry and topology, and many other topics in the foundations of physics and mathematics. He is also the author of two books on these subjects. He is a research professor in Theoretical and Mathematical Physics at the Institute of Mathematics at the University of Athens, and he is also currently a teaching professor on Mathematical Thinking at the TU Vienna, Institute of Architectural Sciences.

## SPECTRAL ARCHITECTONICS,
## Nikola Marinčić, ETH Zurich (CH)

In 1935, Alan Turing defined computable numbers as "real numbers whose expressions as a decimal are calculable by finite means." By expanding on this distinction, he drew a line within a much larger context of what is computable and what is not. Today, amid the hypes of machine intelligence, we are getting used to a somewhat paradoxical ability of using computers to operate on that which theoretically cannot be computed. The price of this is to give up on understanding of why this is even possible. The argument that machine learning simply works (and that it works incredibly well) tends to replace the already crumbling question *why*, but also the curiosity of *what* (it is) and how it can be domesticated within our legacies and integrated into our existing knowledge. The indisputable mastership of contemporary engineering radiates with confidence that learning—what is essentially the role of mathematics—could be replaced with engagement. This talk is about the art of learning, and how it can challenge today's attitude towards computation and machine intelligence. It investigates the question of computability through the notion of information while shifting from the traditional set-theoretic points of view towards the abstract mathematics of categories and models it makes possible.

BIO        Nikola Marinčić is an architect, computer programmer and a musician, working as a postdoctoral researcher at the chair for Computer-Aided Architectural Design at ETH Zurich. He earned a PhD with a medal of distinction from the ETH, with a thesis entitled "Towards communication in CAAD: Spectral Characterisation and Modelling with Conjugate Symbolic Domains" in 2017. In 2009 he graduated as an architect from the Faculty of Architecture in Belgrade, and in 2011 completed a Masters of Advanced Studies programme in Architecture and Information at ETH Zurich. In 2012-13 he was a guest researcher at the Future Cities Laboratory, interdisciplinary research program of the Singapore ETH Centre for Global Environmental Sustainability. In 2018, Birkhäuser will publish his PhD thesis as a part of their applied virtuality book series.

# IS COMPUTING AN INFERIOR WAY OF THINKING?
## ⟨ON CHURCH-TURING THESIS⟩,
## Gilles Dowek, École normale supérieure Paris-Saclay ⟨FR⟩

Computing is often viewed as a inferior way of thinking, unable to take context, reflexivity, emotions, ethic... into account. This view, however, raises philosophical and scientific issues, that will be discussed in this talk.

BIO        Gilles Dowek is a researcher at  Inria and at the École normale supérieure de Paris-Saclay. He is interested in the formalization of mathematics, in proof processing systems, in physics of computation, in the safety of aerospace systems, and in the epistemology and ethics of informatics. His book *Les métamorphoses du calcul* (Le Pommier, 2007) translated as *Computation, proof, machine* (Cambrigde University Press, 2015) has been awarded the Grand prix de philosophie of the Académie française, in 2007. He is a regular columnist for Pour la Science and Le Monde.