

ARK-E2520 Design of Structures Theory**Introduction****Toni Kotnik**

Professor of Design of Structures

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ARK-E2520 Design of Structures Theory**Introduction**

The course *Design of Structures Theory* explores the theoretical grounding of the digital and the notion of structure as an organizational principle in architecture. Based on weekly readings and discussions the digital approach to design thinking and its impact on our understanding of architecture will be investigated. Various topics will be explored in more depth through a number of short weekly writings.

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Reading A

25.10.2022 Introduction

Reading I / Reflection I

1.11.2022 Group Discussion

Digital Design Thinking I: 1990s

Reading II / Reflection II

8.11.2022 Group Discussion

Digital Design Thinking II: 1960s

Reading III / Reflection III

15.11.2022 Group Discussion

Topology

Reading IV / Reflection IV

22.11.2022 Group Discussion

Pattern

Reading V / Reflection V

29.11.2022 Group Discussion

Material Computation

Submission of Reflection: Tuesday 9:00

Some reading on architecture theory

Nesbitt, Kate

Theorizing a new agenda for architecture theory
1965-1995

Princeton University Press, 1996

Mallgrave, Harry F. & Goodman, David

An Introduction to Architecture Theory

Wiley, 2011

Hale, Jonathan A.

Building Ideas

Wiley, 2000

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Reflection

Reflections are a weekly writing exercise related to the required reading. This exercise should be answered by close reading of the text that is by use of **quotes** and identification of the **line of argumentation**.

The exercise is not about interpretation of the text or synthesis! Rather it is about extraction and communication of information and opinions given within texts.

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Exercise_Reflection

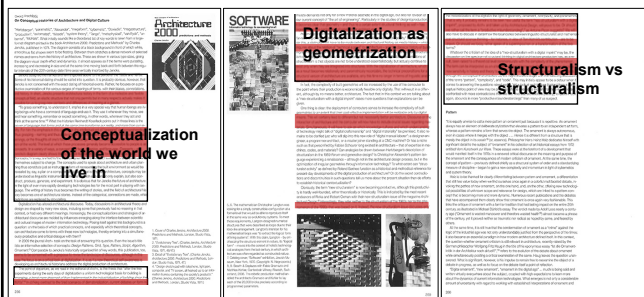
Extract the line of argumentation in the introduction to *On Conceptual Histories of Architecture and Digital Cultures* by Georg Vrachliotis (Reading_A) and summarize it in a short paragraph.



1. Read (mark statements)
2. Evaluate & highlight statements
3. Group statements
4. Give headline to each group
5. Summarize each group using highlighted statements; quote and paraphrase

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Concepts are the main form of grasping the world in which we live. They are linguistic instruments “tied to the various dynamics of the world, have temporality, and thus are themselves subject to change”. The ongoing digitalization of all levels of life is a process that increasingly is altering the established concepts of architectural discourse. The process is driven by geometry that has become a central field of research for architecture and provides a precondition for a structuralistic perspective onto the discipline that differs from the linguistic structuralism of the 1960s.



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Reading A

25.10.2022 Introduction

Reading I / Reflection I

1.11.2022 Group Discussion

Digital Design Thinking I: 1990s

Reading_I

- Allen, Stan: *Field Condition*, AD. Vol 127. 1997, 24-31

In his essay *From Object to Field* Stan Allen explores a number of projects like the Alhambra or the proposal for the Venice Hospital by Le Corbusier as well as the grid in the American City. Based on these examples he defines the so-called **field condition** as a compositional approach that tries to overcome the idea of an object.

Exercise: Extract the definition of field condition from the text and use the examples of the boids from Graig Reynolds for illustration.

Submission of Reflection: Tuesday 9:00