

Collaborative and interactive activities with the students, focusing on modelling systems and inhabiting. This part is preparatory to the final presentation required to students challenged to present cases.

11. COLLABORATIVE ACTIVITIES

March 2nd, 08.30 – 13.30
Aula Consiglio (Building 14 – 1° floor)

Distinction between computing and learning and it is mentioned some approaches used to model complex systems based, for instance, on Fractals, Cellular Automata, Networks, and Usage of constraints.

9. GROWTH AND DEVELOPMENT 10. APPROACHES TO MODEL SYSTEMS

February 28th, 09.00 – 13.00
Aula Consiglio
(Building 14 – 1° floor)

7. APPLICATIONS 8. SELF-ARCHITECTURE

February 23rd, 09.00 – 13.00
Aula Didattica (Building 14 - ground floor)

February 14th, 09.00 – 13.00
Aula Consiglio (Building 14 – 1° floor)

1. THE CONCEPT OF SYSTEM 2. COMPLEXITY

The first part introduces the concept of system and related introductory formalisations. Will be considered complex systems, coherence and collective phenomena. Then it is introduced the concepts of self-organisation and emergence.

SYSTEMICS, COMPLEXITY AND DECISION MAKING MODELS

Politecnico di Milano - Department ABC
PhD program
Architecture, Built Environment and Engineering Constructions

Prof. Gianfranco MINATI
Italian Systems Society

Issues related to process of Emergence between Architecture and social systems, social fields and continuity with their representative Architecture. Will be mentioned some concepts related to Architecture as the design of suitable boundary or environmental conditions for emergence of social systems. At this regards it is introduced the concept of self-architecture and the systemic difference between process of growth and development.

Focus on the concept of logical openness, contrasted with classic thermodynamic openness. Will be mentioned uncertainty principles in physics, constructivism in science when building models and the logical inference of abduction.

3. SYSTEMIC OPENNESS 4. DEALING WITH MULTIPLICITY

February 16th, 09.00 – 13.00
Aula Consiglio (Building 14 – 1° floor)

February 21st, 09.00 – 13.00
Aula Consiglio (Building 14 – 1° floor)

5. COMPLEXITY AND MULTIPLICITY 6. THE DYNAMIC USAGE OF MODELS (DYSAM)

The concepts introduce incompleteness, undecidable problems and the Dynamical Usage of Models to be used when, as in the case of complex systems, one single model is not sufficient and more nonequivalent models are necessary to be used in coherent way.