

About us

SISSA

Postgraduate training and leading-edge research in various areas of Physics, Mathematics, and Neurosciences are the objectives of SISSA, the International School for Advanced Studies of Trieste. SISSA was the first Italian university to offer the PhD degree, and has continued to do so with notable success. Since its founding in 1978, SISSA has prepared more than 500 young people for careers in research and teaching: today SISSA represents one of the leading scientific institutions in Italy and a noted center on the international stage.

www.sissa.it

Parmenides Foundation

The Parmenides Foundation was established in 2000 as a non-profit organization dedicated to fostering multi-disciplinary research on thinking. The foundation is based in Germany and Italy. Its main activity is to run the Parmenides Center for the Study of Thinking, a research organization that was set up in cooperation with the Human Science Center of the Ludwig Maximilian University Munich. The foundation also aims to translate research findings into insights that could serve as building blocks for new educational programs and software-based methodologies to support and enhance reasoning and decision-making.

www.parmenides-foundation.org

Magister Cogitationis Artium

At a glance

The MCA gives participants an outstanding post-grad qualification in the science, art and craft of complex thinking. The curriculum is structured in a way that allows combining participation in the MCA program with on-going work on a PhD thesis or on-going job duties.

Participants: PhD students and mid-career professionals from a variety of countries and backgrounds.

Degree awarded: After passing the final exams, delegates will be awarded a Masters degree (Magister Cogitationis Artium: MCA) issued by SISSA in co-operation with the universities of Trieste and Udine.

Format: The program consists of ten 3-day lecture series and three 5-day lecture series.

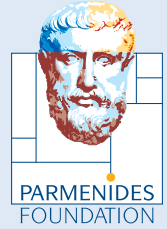
Duration: 12 months—first intake November 2010

Locations: the lectures will take place at SISSA in Trieste, Italy and at the Parmenides Foundation in Munich, Germany.

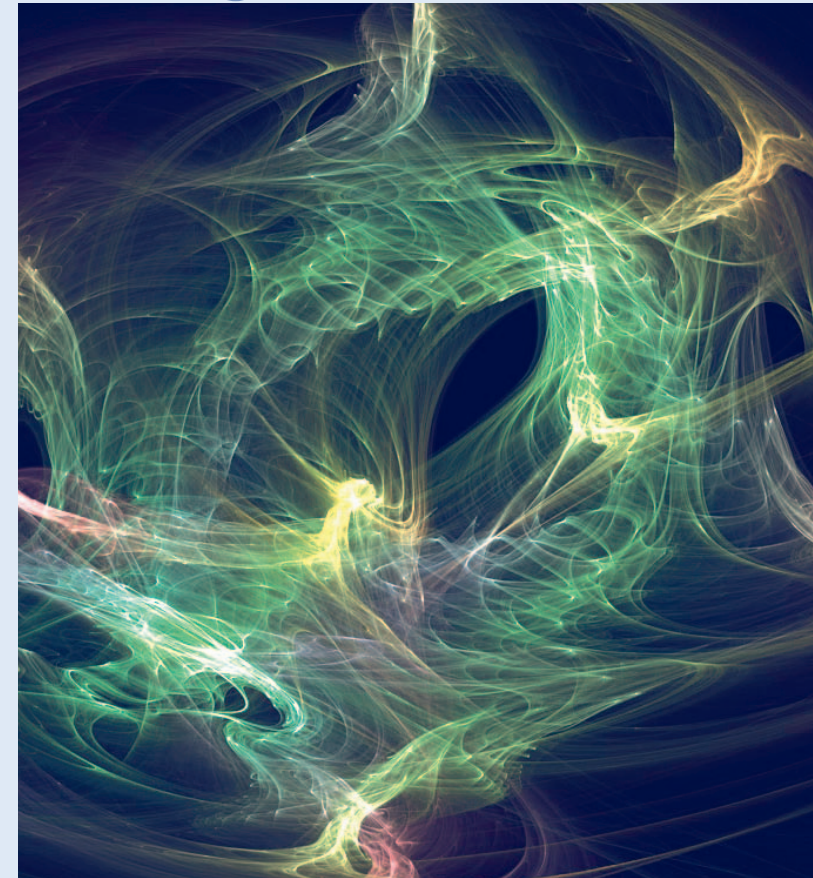
Contact us

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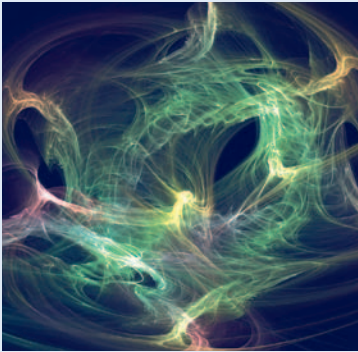
Magister Cogitationis Artium



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Program background

Times of rapid structural change and unprecedented challenges require the capacity to think autonomously and authentically in order to develop genuinely novel solutions. Excellence in authentic thinking will become the crucial qualification in an increasingly complex and rapidly transforming world, as well as in an increasingly knowledge-based economy.



The **Magister Cogitationis Artium (MCA)** is a new type of post-doc and executive education program that offers an alternative to traditional MBA programs. It has been developed over the last three years by a group of European universities and research institutions. In the MCA, emphasis is put on teaching authentic thinking skills—in addition to the usual management methodologies and heuristics.

Key benefits: The MCA program will provide three substantial and lasting advantages for the participants:

- a) an outstanding ability to understand and shape complex structures and dynamics.
- b) a specific ability to generate novel insights and new knowledge.
- c) an irreversible fostering of their quality of life and their personality by giving a richer, more insightful access to reality.

Foundations

MCA is the first program that aims to teach the art of thinking by distilling relevant thought patterns from key disciplines that are crucial to meet the challenges of our times, yet lacking an adequate representation in conventional education.

Cognitive sciences: human cognition is one of the most complex phenomena we know, both in terms of structure and dynamics; its study allows to gain insights into the strengths and constraints of human thinking and to learn powerful heuristics regarding complex problem architectures and dynamics.

Complexity: the study of complex systems has made great progress over the last decades; extracting the most important insights and lessons learned about the functioning and vulnerability of complex systems will provide the students with a wide range of thought patterns and skills of cross-disciplinary relevance.

Evolution: evolutionary innovation and selection mechanisms turn out to be of crucial relevance for most complex adaptive systems; getting acquainted with state of the art knowledge in this field will provide the student not only with further valuable thought patterns and heuristics but also with a coherent conceptual framework allowing to interpret a vast spectrum of phenomena—from cosmology to social systems and technological innovation.

Example modules

Crucial insights from cognitive neurosciences

Thinking involves coordinated activities. Exploring the processes and interactions that constitute thinking helps to improve the quality of our reasoning skills. The layered architecture of the human brain reflects the major steps in its evolution. Individual experiences and learning have an impact on all these layers.

Thought-patterns of cross disciplinary relevance

Cognitive neurosciences has taught us that the ability to generate new insights is closely correlated with the richness of the available thesaurus of thought patterns and heuristics, as well as with the ability to recombine and modify them effortlessly.

Visualization of complex reasoning

Human thinking is characterized by two major constraints. The first is our limited capability to process large amounts of quantitative data. The second is the limits of working memory, which can only hold a small number of items simultaneously. Models and visualization tools are powerful means to help overcome these limitations, but can also be very misleading

Strategic thinking

Strategy is the application of thinking to complex circumstances, to secure competitive advantage. In applying our minds to plan and monitor strategy, we are empowered and constrained by the strengths and limitations of our brains. The human brain employs a limited number of cognitive operations to address complex issues. This module examines strategic processes in the context of brain functions, complexity and change, and introduces tools to improve the quality and efficiency of human outputs.