

AI 846 Computational Creativity (3, 0)

Pre-requisite: None

Recommended Books:

Computational Creativity: The Philosophy and Engineering of Autonomously Creative Systems(2019), by Tony Veale, F. Amílcar Cardoso, Springer, 1st Edition, Kindle Edition

Computational Creativity Research: Towards Creative Machines (2015), by Tarek R. Besold, Marco Schorlemmer, Alan Smaill, Atlantis Press, 2015 Edition.

Creative Environments: Issues of Creativity Support for the Knowledge Civilization Age, by Andrzej P. Wierzbicki, Yoshiteru Nakamori, Springer, 2007th Edition

Credit Hours: 3 (3, 0)

Course Objectives:

On completion of the course, the student should be able to:

- become familiar with the literature on Computational Creativity.
- become familiar with the state of the art in Computational Creativity.
- acquire experience in designing an Interactive/Autonomous Creative technique or tool.
- construct a program or computer capable of human-level creativity.
- better understand human creativity and to formulate an algorithmic perspective on creative behavior in humans.
- design programs that can enhance human creativity without necessarily being creative themselves.

Topics / Contents	Allocated Periods
Computational creativity is a multidisciplinary field that lies at the intersection of artificial intelligence, cognitive psychology, philosophy, and the arts. The field is concerned with the theoretical and practical issues in the study of creativity. This course is about Computational Creativity with a focus on modeling/discovery & design/invention. Contents of the course include, human creativity, information processing theories of human creativity, interactive tools for augmenting and amplifying human creativity, design of autonomous creative systems for creative tasks.	45