**Boris Stilman**

University of Colorado Denver, USA

&

STILMAN Advanced Strategies, USA

**Tutorial (3h)**

**Discovering the Discovery of Intelligent Strategies**

We assumed that there exists a universal Algorithm of Discovery (AD), the ultimate tool utilized by our brain for discovering new algorithms and perfecting the existing ones. The AD should be based directly on the Primary Language of the human brain (as suggested by J. von Neumann). One of the goals of our research is to understand the AD to the level, which will permit producing discoveries on demand. In this tutorial, I will demonstrate application of the simulated AD for obtaining two results in Linguistic Geometry (LG), a type of game theory that permits constructing intelligent strategies for opposing games. The first result is related to discovering a formal grammar for generating trajectories, i.e., strings of symbols that represent planning paths of mobile entities over an operational district. The second result is related to discovering an algorithm for constructing (not searching) intelligent strategies for a class of games that involve mobile opposing entities and, simultaneously, prove optimality of those strategies.