

2013 Robotics Seminar (3) / IFToMM Japan Council

Time: Friday June 28th, 13:30-15:00

Place: University of Tokyo, Hongo Campus

Engineering Building 2, Room 31A (3F)

Host: Yoshihiko Nakamura

(nakamura@ynl.t.u-tokyo.ac.jp)

Simplexity:

a set of simplifying principles for Brain and Robots?

Alain Berthoz

Professor Emeritus, the College de France

Member, French Academy of Sciences and Academy of Technologies

Member, American Academy of arts and Sciences

ABSTRACT

Professor A. Berthoz will describe a number of simplifying principles which have been developed for human and animals during evolution. These principles are simplex because they are clever solutions which allow living organisms to solve complex problems of action and perception rapidly and efficiently. I will review some principles concerning hand and locomotor trajectory formation, motor coordination and equilibrium, anticipation. I will also allude to the problem which is the next problem in humanoid control: the navigation in large space. I will suggest that it may be useful to 1) distinguish between several spaces and 2) use non Euclidian geometries.

Reference: A. Berthoz. *Simplexity*, Yale Univesrity Press (2011)