

Prof. Jozef Gruska, DrSc

2023, Fall semester, Wednesday at 10.00-11.40, B410
Lecture in English, detailed materials for lectures available
Ending of the course: an essay or an exam/"zapocet"

This lecture will be about Future, its driving forces and current megachallenges. Each of us needs to get a good understanding of the Future because each of us will spend the rest of life in the Future and Future nowadays keeps coming and changing very, very fast and actually exponentially fast. Because of that we need a broad and deep enough understanding what are driving forces of the Future in order to prepare oneself for Future in which we can nowadays expect that what seems to happen often in 50 (100) years will often happen already in 20 (40) years or even sooner. Moreover it is becoming quite clear that Future may bring enormous benefits for mankind, but can also result in incredible dangers, even being apocalyptic and resulting into a new epoch of evolution.

Of a special importance in that context is that Informatics, much more broadly and deeply understood, is expected to play by that enormously important role - to be actually the main force behind. In connection with revolutions in genetics, nanotechnologies, artificial intelligence, robotics, total digitalization, and globalization and so on. It has potential to beat human intelligence and natural death and to create merging of biological and non-biological intelligence.

The goal of the course is therefore to provide a visionary and thoughts provoking, but well grounded analysis of developments concerning Future, that can be reasonably expected.

BRIEF CONTENT

- Main epochs of universe and humanity.
- Exponential developments of main information processing tools.
- Brains and other information handling biological tools.
- Two main megachallenges of mankind.
- Informatics as main queen and main servant of all developments.
- GNAR revolutions - developments and expectations.
- Genetics - history, developments, expectations and
- Nanotechnology - history, developments and ...
- Robotics - developments and limitations - if any
- Artificial intelligence - history, aibeings, limits (?), item Ways to beat natural death and much prolong happy long life.
- Singularity. Why mankind should try to influence future and why this may be a too difficult task - if possible at all.

Nothing gets nowadays old as fast as Future.