**15.04.2015 Keywords and survey articles or "how to approach a new topic?**

We will discuss the use of a structured list of keywords for you literature search and we will learn why survey and tutorial articles are of great help to learn about a new topic and the latest state of research.

Homework:

1. Read and analyze the composition and structure of one of the survey articles below. Explain how the authors approached the subject.

   Y.K.Hwang, N. Ahuja. *Gross Motion Planning*. ACM Computing Surveys, 24(1), pp. 220-291, 1992.

   Put the results of your research into a 6 – 7 pages/slides presentation and upload it to LEA until 21.04.2015 20:00.

2. Find out what the terms "glossary", "taxonomy", and "ontology" means? Put your favorite definition of these three terms on one power point slide and explain on a second slide what the difference is between them.

3. Using your Mindmap software, create a taxonomy for the keywords which you have extracted from the paper collection on "Robot Architecture".

4. Put the results of your research on item 2 and 3 in a power point presentation and upload it to LEA until 21.04.2015 20:00.

5. Choose one of the following topics for your further literature work/search

   ***Enabling Technologies for low-cost robotics***
   - *robust low-cost sensors and sensing, robust low-cost vision*
   - *low-cost position estimation*
   - *robust robot navigation*
   - *low-cost robot design*
   - *new materials and components for low-cost robotics*
   - *disposable robots*

   ***Ambient Assisted Living***
   - *Tele-presence*
   - *Mobility assistance systems*
   - *Human-robot shared task planning and execution*
   - *Ambient intelligence*
   - *Home automation*

   ***Data Mining in Technical Systems/Embedded Systems***
   - *fusion and interpretation of data streams in technical systems*
   - *monitoring technical systems (cars, robots, power plants)*
   - *fault detection, fault diagnosis, fault prediction*
   - *fault prevention, error recovery*
   - *error models*

   ***Robot Learning***
   - *qualitative physics, qualitative reasoning*
   - *embodied scientific discovery, learning by experimentation*
   - *hypothesis/theory formation*
   - *robot curiosity*
   - *knowledge representation paradigms*

   **and start collecting a minimum of 100 papers on the topic you have chosen and keep a record of the keywords which you used for your search**
   (due date for selection of topic: 29.04.2015)

6. Establish a BibTeX database for you paper collection. Use tools such as *JabRef* (Java) or *Bibdesk* (Macintosh).