

Modern approaches and IT technologies in teaching and learning at University of Ostrava

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January 16, 2019, Niš

- The IRAFM scientific team teaches its students from different kind of education, e.g. mathematics, informatics and biology, as follow:

- Bachelor's degree;
- Master's degree; and
- Ph. D.'s degree.

- The IRAFM scientific team teach, for example, the following lectures:

- Fuzzy modeling
- Linearly ordered algebraic structure
- Fuzzy logic
- Neural networks
- Image processing
- Modern methods in biology

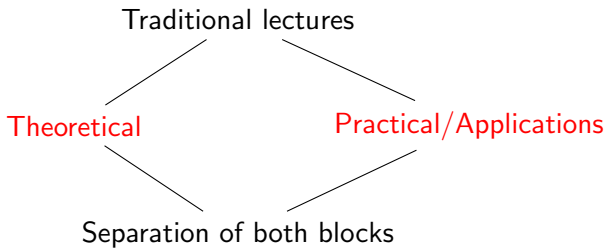
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The traditional model of education



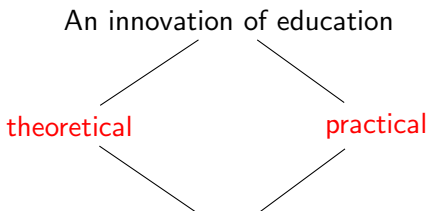
- **Theoretical**: tutor makes lectures, students are passive.
- **Practical**: students try to implement theories from the theoretical part.

Areas which need to be changed

Lecturer and students

- The lectures are same or similar for years.
- Students are not motivated.
- Students are passive.
- The current modern trends are not followed.
- The modern technologies and approaches are not applied.

How do we innovate the education?



One block, which mixes together the theoretical and the practical parts

Modernization of lectures

- Students solve **one big project** through the whole semester
 - Mentors **help** students and transfer his knowledge through coaching.
 - Students have feeling they do something with potential.
 - Students learn to cooperate in a team.
 - Students have responsibility for the project.
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- High requirements for tutors: lectures has to be innovated each year

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Cooperation with the commercial sphere

- Connection with the commercial sphere
 - students work on a **real project**
 - students have to possibility solve their **thesis/diploma with a specific specialist.**
 - Education in English.
- Students (Ph.D.) can be rewarded by money.
- Students can meet they possible employer.
- Actual trends are followed.
- Students may participate through internship.

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Modern technologies which motivate students

- Interactive presentations **E-forum** for questions.
- **Video/Tele conferences** with different teams.
- Teaches abroad.
- **Mobile application** with access to IRAFM public materials
- Regularly update web pages.

Thank you for your attention.