

# Mathematics: Relevance for Computer Science

The goal of the Mathematics case session this week is to show you the relevance of Mathematics for TCS. This assignment has to be signed-off for the first-year TCS students, i.e., participation is mandatory for first-year TCS students. Premasters, minor, resit and double-degree students are exempted.

During the first half of the session there will be “speed dates” with several researchers who are from different departments of Computer Science. You will be divided in groups consisting of several project groups. These groups will be discussing with the participating researchers to find out how they use mathematics for research. The exact schedule will appear on Canvas. The purpose of the discussion is that you find out the following:

- What mathematics does the researcher use?
- How does the researcher apply this mathematics?
- Can you find applications of this mathematics in every day life?
- What are the computer science applications of this mathematics?
- Is the mathematics mainly applied, or is new theory being developed?
- What mathematical knowledge are you still missing related to this research?

M-1.1 After the speed dates, you have 45 minutes to reflect on the conversations. Concretely, you are asked to do the following: summarise what you have learnt so you can convey this information in ~3-4-minutes per interviewee in a discussion. The reason for this is that there are many more researchers that you haven’t spoken with, and you will hold a discussion with other groups to learn about the researchers you’ve not interviewed.

For inspiration, you could answer the following questions during your discussion:

- Of which mathematical applications were you aware already before the speed dates?
- Of which mathematical applications did you learn today?
- Which applications did you appreciate most, and why?
- How does this affect your view on the mathematics of this module?

Feel free to add other points that you feel should be addressed. There is no need to prepare any slides. We expect all group members to contribute to the discussion. After the reflection time, the project groups are combined into new discussion groups to collect and exchange all the newly gained information. See Canvas for the exact schedule and discussion groups.