Testing Techniques

- Lectures: Friday   10:30 - 12:15 HG00.086
              Friday   13:30 - 15:15 HG00.310
              (*probably not every week two lectures*)

- Lecturers:
  - Jan Tretmans   **(** Mercator 1 **)**
  - Lars van Arragon   **(** Mercator 1 **)**
  - Frits Vaandrager   **(** Mercator 1 **)**
  - Loes Kruger, Dennis Hendriks, Gijs van Cuyck, Harco Kuppens, Guest Lecturers

- Topics: three parts:

    - Basic testing techniques   ISTQB   state-of-practice   (25%)
    - Model-based testing   uioco theory   state-of-the-art   (50%)
                                               MBT tools: Axini, TorXakis, ?
    - Automata learning   L*, L#   research   (25%)

- Material

    - *On Brightspace*

    - Slides

    - (Links to) books, papers, web sites, videos, ...

    - Your own notes during HC and WC

    - Own search for additional papers, tools (assignment)

- **Examination**
  - Test *Nov 1 – Digital, multiple choice,* Basic testing techniques
  - Exam *Jan 10 – open questions*, MBT, Model Learning
  - Project assignments about a testing case
    - in groups of three (four) students
    - 4 assignments, presentation, usage of tools, literature study

  - Re-examination
    test, written or oral examination, or extra assignment

  - Final grade
    - test (15%)
    - exam (45%)
    - project assignments (40%)
    - each of the individual grades at least 5.0

- Project assignments about a testing case
  - group of three (four) students
  - choose a system and test that system
    - manual
    - automated
    - model-based
    - *model learning*
  - written reports, presentation, related literature
  - supervision, feedback
- System Under Test
  - some synchronization / communication / protocol system

make groups a.s.a.p. and send me an email

include in that email your preferred SUTs (3)

- Systems Under Test
  - Matrix   (www.matrix.org)
  - Dropbox
  - iceoryx   (iceoryx.io; C++)
  - *Your own system* – to be discussed