# Formal methods 2019-2020

Lab sessions info

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## Who am I

- Enrico Magnago.
- Second year PhD student at the Embedded Systems unit in FBK.
- PhD topic: model checking of infinite state, timed and hybrid systems (e.g. software, real-time systems, controllers).
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## Objectives and topics

## **Objectives**

- Write formal models in SMV language for finite, infinite and timed systems.
- Inspect possible executions of a model.
- Write and verify invariant and temporal properties.

### Model checkers

- 1. NuSMV
- 2. NUXMV

This year no SPIN.

## **General information**

### Resources

- Slides, examples and solutions: enricomagnago.com
- Previous years (including exams): Patrick Trentin website

#### Schedule

• Friday 9:30-11 am, A202 (or remotely).

## Lab exam

## Exam will ask you to:

- write 2 formal models in SMV language;
- simulate these models;
- write and verify some properties.

User manual of  $\mathrm{NUXMV}$  available during the exam. Remember: previous years exams are available.