



Sokendai Lectures
Tokyo, Japan

物理情報システムのための形式手法



Timed model checking – Part 0

Course outline

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Outline

1 Objectives

2 Organization

Keywords and objectives

Concepts:

- Timed systems
- Timed automata
- Timed temporal logics
- Timed model checking

Objectives:

- Being able to **model** a timed system
- Being able to write formal properties
- Being able to understand and execute simple algorithms
- Being able to use **practical software** for timed model checking

Outline

1 Objectives

2 Organization

Organization of the first part of this module

Schedule

Courses $4 \times 1.5\text{h}$

Schedule (tentative):

- 1 15th April 2019
- 2 22nd April 2019
- 3 20th May 2019
- 4 27th May 2019

Evaluation

- Projects

Practical organization

- Course material: slides
- All materials accessible **online in an electronic form**
- **All electronic devices allowed** during class

Address for material:

<https://www.lipn.fr/~andre/teaching/timed-model-checking/>

General references

- **The Inverse Method** (Étienne André and Romain Soulat), ISTE and Wiley & Sons, 2013
- **Systems and Software Verification** (Béatrice Bérard, Michel Bidoit, Alain Finkel, François Laroussinie, Antoine Petit, Laure Petrucci, Philippe Schnoebelen), Springer, 2001
- **Principles of Model Checking** (Christel Baier and Joost-Pieter Katoen), MIT Press, 2008
- **Tutorial on parametric verification** (Étienne André, Michał Knapik, Didier Lime, Wojciech Penczek, Laure Petrucci), YouTube, 2016
<https://www.youtube.com/playlist?list=PL9SOLKoGjbepA118RnD16FfYngJtN22DY>

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Source of the graphics used



Title: Clock 256

Author: Everaldo Coelho

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