# Formal Methods 2018/19

Instructor: Prof. Giuseppe De Giacomo

## Website

https://sites.google.com/a/diag.uniroma1.it/formal-methods-2018-19/

#### Very active! It includes:

- Course Material: slides, notes, references, etc.
- Lecture log
- Forum
- Polls
- Other stuff



## Forum

 The course has a forum for students and teacher to exchange information, problems, solution, etc.

https://groups.google.com/a/diag.uniroma1.it/forum/#!forum/formal-methods-201819

Register to the course forum now!!!



## **Polls**

- From time to time we are going to use polls in classes.
- Our first poll is on our information as students



#### Register to Formal Methods 2018/19 This form allows you to register to Formal Methods 2018/19. (Please remember also to register to the forum at https://groups.google.com/a/diag.uniroma1.it/forum/#!forum/formal-methods-2018 First name \* Short answer text Last name \* Short answer text Email (please use only your Sapienza account) \* Short answer text Program \* M.Sc. in Engineering in Computer Science M.Sc. in Engineering in Artificial Intelligence and Robotics Other... Curriculum \* Big Data Cyber Security Computing Infrastucture Knowledge and Semantic Technologies Software and Services Artificial Intelligence Other... Year \* first second

Other.

#### **Contents**

- 1. First order logic evaluation and logical implication
- 2. Containment of conjunctive queries
- 3. Incomplete information
- 4. UML class Diagrams as logical theories
- 5. Query Answering through UML Diagrams
- 6. Semantics of programs (abstract operational semantics)
- 7. Hoare Logic
- 8. Fixpoint theory
- 9. Transition Systems
- 10. Bisimulation
- 11. mu-Calculus, CTL and LTL
- 12. Model Checking

All lectures on the lecture log on the course web site