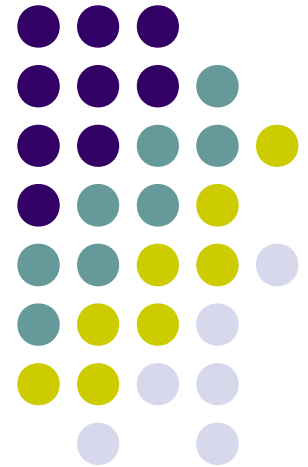


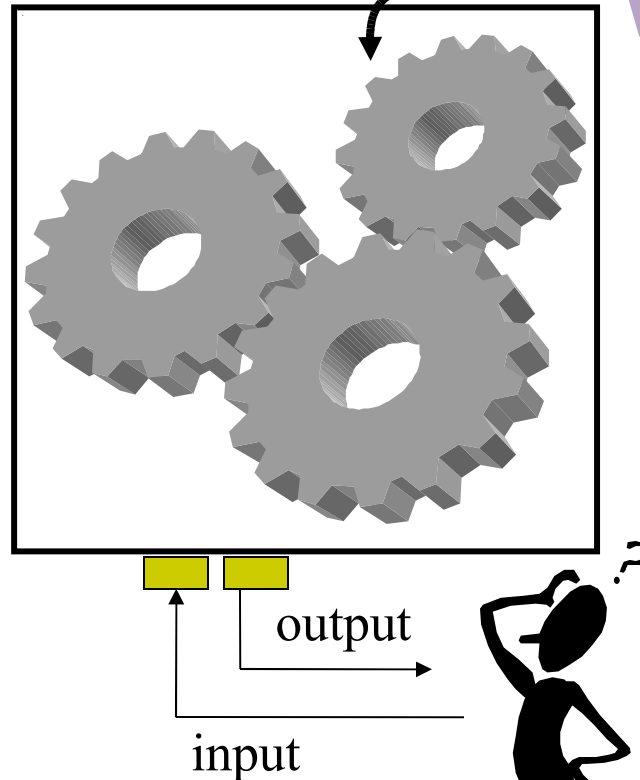
# Test de Systèmes Informatiques

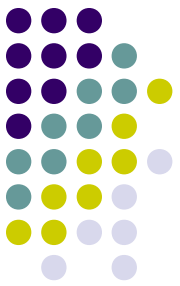
**Systèmes Informatiques et  
Infrastructures  
Algorithmique et  
Programmation**



# What is Testing of IT Systems about?

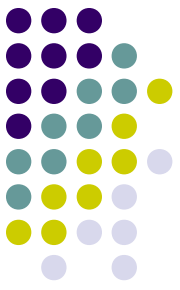
- A system is a dynamic entity, embedded in the physical world
- It is observable via some limited interface/procedure
- It is not always controllable
- Quite different from a piece of text (formula, program) or a diagram





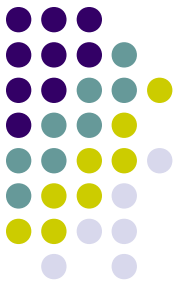
# Theories and Tools

- Mise à niveau ( $\pm$  cours de GL de L3, + Logique)
- Test Methods
  - Model-based Tests based on Data
  - Model-based Tests based on Behaviour
  - Structural Tests based on Programs
  - (Statistical Tests)
- Test Theory
  - Exhaustive Testing / Modeling / Conformance
  - Selection of Test Hypothesis
- Tools along these methods, based on these theories:
  - **Most Exercises can be done with HOL-TestGen**
  - Pathfinder, Pex, Torx, SpecExplorer, ...



# Conditions Formelles

- Webpage:  
<http://www.lri.fr/~wolff/teach-material/2009-10/M2R-TSI/>  
(see also for download of HOL-TestGen)
- M2R:  
Exam + Controle Continue  
(Rapport sur un des Papiers de la Page Web; sync!)
- Doctorat:  
Controle Continue  
(Rapport sur un des Papiers de la Page Web; sync!)
- Exercises (mostly with HOL-TestGen):  
See Webpage. Advisable, but not corrected.  
Mostly based on HOL-TestGen.



# Contributors

- Burkhart Wolff, LRI,
  - *modeling languages, data-type based tests*
  - *program-based tests*
  
- Frédéric Voisin, LRI
  - Introduction at the Primer