Advanced Algorithmic Techniques (COMP523)

Introduction to the module

Information

- **Textbooks:**
  - ***Algorithm Design*** by J. Kleinberg and E. Tardos.
  - ***Introduction to Algorithms*** by T. Cormen, C. E. Leiserson R. Rivest and C. Stein.

- **Office hours:**
  - Thursday 11.15-12.15.
  - by e-mail appointment.

	Day	Time	Room
Lecture	Wednesday	9:00-10:00	126MP-110
	Thursday	10:00-11:00	ELEC-201[E1]
	Friday	12:00-13:00	ELEC-201[E1]
Tutorial	Friday	14:00-15:00	ELEC-201[E1]

- **Module Website:** www.arisfilosratsikas.com/teaching/COMP523.html
- **Contact:** Aris.Filos-Ratsikas@liverpool.ac.uk

Assessment

- **Assessment:**
  - Exam: 75%.
  - Coursework: 25% (two assignments, 12.5% each).
- **Exam and resit exam.**
  - January and August.
- **Coursework**
  - Presentation and discussion of the solutions after the assignment deadline.
  - Individual feedback.
  - *Resit coursework* is possible.

Learning Outcomes

- **After you have completed this module you should be able to:**
    - Describe different techniques for designing algorithms for different problems.
    - Given a problem, identify which of these techniques can be used to solve it *accurately* and *efficiently.*
    - Design algorithms using these principles, for given problems.
    - Formally prove the *correctness* of the algorithms, and analyse their *running time* and *memory requirements*, as well as *other measures of efficiency.*
    - Formally prove the limitations of algorithms for solving several problems.