Empirical Algorithmics

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Course overview

- Module 1: Introduction
- Module 2: Deterministic algorithms for decision problems
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- Module 2: Deterministic algorithms for decision problems
- Module 3: Randomised algorithms for decision problems
- Module 4: Algorithms with error for decision problems
- Module 5: Algorithms for optimisation problems
- Module 6: Advanced topics
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- Module 1: Introduction
- Module 2: Deterministic algorithms for decision problems
- Module 3: Randomised algorithms for decision problems
- Module 4: Algorithms with error for decision problems
- Module 5: Algorithms for optimisation problems
- Module 6: Advanced topics
Advanced topics may include the following:

- experimental design
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▶ algorithm portfolios
▶ self-tuning mechanisms, meta-parameters
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- experimental design
- algorithm portfolios
- self-tuning mechanisms, meta-parameters
- multi-objective optimisation algorithms
- real-time algorithms
- interaction with a non-deterministic environment (humans, internet, . . . )
Lecture schedule:

- Mon, 29 May, 9:00–11:00, Room 205, III Irst [Module 1]
- Tue, 30 May, 9:00–11:00, Room 207, III Irst [Module 2]
- Wed, 31 May, 13:30–15:30, Room 107, III Irst [Module 2/3]
- Thu, 1 June, 8:30–10:30, Room 201, III Irst [Module 3]
- Fri, 9 June, 9:00–13:00, Room 108, III Irst [Module 4]
- Mon, 12 June, 9:00–11:00, Room 108, III Irst [Module 5]
- Tue, 13 June, 9:00–11:00, Room 106, III Irst [Module 6]
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Mon, 12 June, 9:00–11:00, Room 108, III Irst [Module 5]
Tue, 13 June, 9:00–11:00, Room 106, III Irst [Module 6]
Thu, 15 June, 9:00–13:00, Room 106, III Irst [Module 6]
Student assessment:

- 2 assignments, consisting of literature study, knowledge testing questing, some programming / hands-on problems; probably to be released around 2/9 June, due 9/15 June at the beginning of class, marked ~12/20 June [~40%]
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- take-home exam: to be released 15 June, due 10 July, marked ~24 July [~40%]
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- take-home exam: to be released 15 June, due 10 July, marked \( \sim 24 \) July [\( \sim 40\% \)]
- in-class participation (possibly including short presentation) [\( \sim 20\% \)]
Finally . . .

- This is a brand-new course; parts will likely be a bit rough.
- Please tell me what you like / dislike.
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- Please ask questions, contribute your comments and ideas.