

Formal Methods for Critical Systems (MFS)

2021/22, M.EIC

Formal Software Development Methods

- How do we specify safety requirements?
- How do we design software that satisfies requirements?
- How do we implement programs that conform to the design?

Formal methods support developers in these tasks.

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- Program
 - Introduction to the development of critical software systems
 - Introduction to formal software development methods
 - Formal methods for software design
 - Practice with Alloy Analyzer (MIT)
 - Formal methods for software verification
 - Practice Dafny (Microsoft)

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- Logistics
 - Microsoft Teams
 - Laptop for practical exercises
- Evaluation
 - 2 mini-tests (60%), after each module
 - Appeal exam (*recurso*)
 - Practical project, two phases (40%, with final presentation)
 - Dates TBA
- Staff
 - Nuno Macedo (nmacedo@fe.up.pt)
 - Office hours: friday, 14h00-16h00 (with appointment)