



Centro de Matemática  
Universidade do Porto

# Seminar on Semigroups, Automata and Languages

## Recognisable languages over monads

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**Abstract:** In this talk, I will discuss extensions of semigroups, which are defined using Eilenberg-Moore algebras over monads. The methodology is that one designs a monad around a chosen kind of object, e.g. words, trees or graphs. Once the monad has been defined, abstract nonsense is employed to automatically get notions such as “semigroup/algebra”, “term”, “equation”, “pseudovariety”, “profinite”, etc. Some of the more generic theorems also get automatically proved, e.g. the Eilenberg Pseudovariety Theorem, or the Reiterman Theorem.

This talk is based on the draft monograph

<https://arxiv.org/pdf/2008.11635.pdf>

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**Place:** Online Zoom meeting



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