



# Systems and Control Group Seminar

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Mathematics Department, University of Aveiro

Room 11.2.23

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## On Minimal Input-State-Output Representation of Convolutional Codes

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### Abstract

Convolutional codes can be viewed as linear systems over a finite field, and therefore can be described by state representations. In this talk we focus on the so called input-state-output representations. Although many fundamental properties have been thoroughly studied within this framework in the last two decades, the crucial notion of minimality has been less investigated. In this talk, we present a novel and relatively simple constructive algorithm to obtain a minimal input-state-output representation for a convolutional code from any of its encoders.

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