

## Chapter 7

# Asynchronous Automata

Wiesław Zielonka

Université Bordeaux I, LaBRI, URA CNRS 1304  
351, cours de la Libération, 33405 Talence Cedex, France  
zielonka@geocub.greco-prog.fr

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### 7.1 Introduction

The problem of inventing a suitable machine-like model for traces was implicitly present since the advent of trace theory. Such devices should exhibit two properties

- they should have an adequate computational power, i.e. they should accept exactly recognizable<sup>2</sup> sets of traces and
- the independency of actions should be reflected by the “true” concurrency of their executions and not just by the interleaving.

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<sup>2</sup>“Recognizable” means here recognizable in the abstract way — by means of morphisms from the free partially commutative monoids into finite monoids