

RICE-LIKE THEOREMS FOR AUTOMATA NETWORKS

GUILHEM GAMARD

Abstract: In this talk, we'll show that testing properties on the transition graph of an automata network, given the network itself as input, is algorithmically hard as soon as the considered property is nontrivial. This echoes the Rice theorem: any property of the function computed by a Turing machine, given the machine itself machine as input, is algorithmically undecidable as soon as the considered property is nontrivial. Of course, a metric ton of fine print is missing here: I haven't said what is a "property", what is "algorithmically hard", and what is "nontrivial". Come to the talk, and you'll know.