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# L'accessibilité dans les réseaux de Petri est non élémentaire

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## Résumé

The Reachability Problem for Petri Nets is Not Elementary

Petri nets, also known as vector addition systems, are a long established and widely used model of concurrent processes. The complexity of their reachability problem is one of the most prominent open questions in the theory of verification. That the reachability problem is decidable was established by Mayr in his seminal STOC 1981 work, and the currently best upper bound is non-primitive recursive cubic-Ackermannian of Leroux and Schmitz from LICS 2015. We show that the reachability problem is not elementary. Until this work, the best lower bound has been exponential space, due to Lipton in 1976.

Joint work with Wojciech Czerwinski, Slawomir Lasota, Ranko Lazic, Filip Mazowiecki.

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