L(A) = L(B)? Decidability Results from Complete Formal Systems

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(Laudatio)

In his paper (Theoretical Computer Science, Vol 251 (2001), pages 1–166), the author gives a positive solution to the decidability of the equivalence problem for deterministic pushdown automata: Given two languages L_1 and L_2 accepted by deterministic pushdown automata decide whether L_1=L_2. The problem was posed by S. Ginsburg and S. Greibach in 1966 and various subcases were shown to be decidable over years. However, the full question remained elusive until it was finally settled by the awarded. He showed the problem to be decidable. The paper not only settles the equivalence problem for deterministic context-free languages, but also develops an entire machinery of new techniques which are likely to be useful in other contexts. They have already found useful in semantics of programming languages.

P. Widmayer et al. (Eds.): ICALP 2002, LNCS 2380, p. 37, 2002.