

# Computation with Absolutely No Space Overhead

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# Outline

- 1 The Model of Overhead-Free Computation
  - The Standard Model of Linear Space
  - Our Model of Absolutely No Space Overhead
- 2 The Power of Overhead-Free Computation
  - Palindromes
  - Linear Languages
  - Context-Free Languages with a Forbidden Subword
  - Languages Complete for Polynomial Space
- 3 Limitations of Overhead-Free Computation
  - Linear Space is Strictly More Powerful



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## For Further Reading



A. Salomaa.

*Formal Languages.*

Academic Press, 1973.



E. Dijkstra.

Smoothsort, an alternative for sorting in situ.

*Science of Computer Programming*, 1(3):223–233, 1982.



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A class of universal linear bounded automata.

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P. Jančar, F. Mráz, M. Plátek, and J. Vogel.

Restarting automata.

*FCT Conference 1995*, LNCS 985, pages 282–292. 1995.



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# Appendix Outline

## 4 Appendix

