

# Chapter V The Polynomial Hierarchy and Alternation

1. The class  $\Sigma_2^P$
2. The polynomial hierarchy
3. Alternating Turing machines

See

 [Sanjeev Arora, Boaz Barak:](#)  
*Computational Complexity — A Modern Approach*,  
p. 91–96, Cambridge University Press: Cambridge-New York-Melbourne, 2009