



**University of Stuttgart**  
Institute of Applied Mechanics



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Data Processing for Engineers and Scientists

## **(Fast) Fourier Transform**

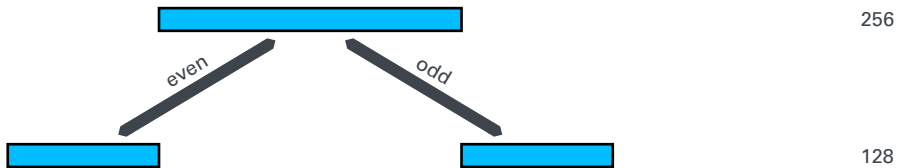
## What makes FFT so F



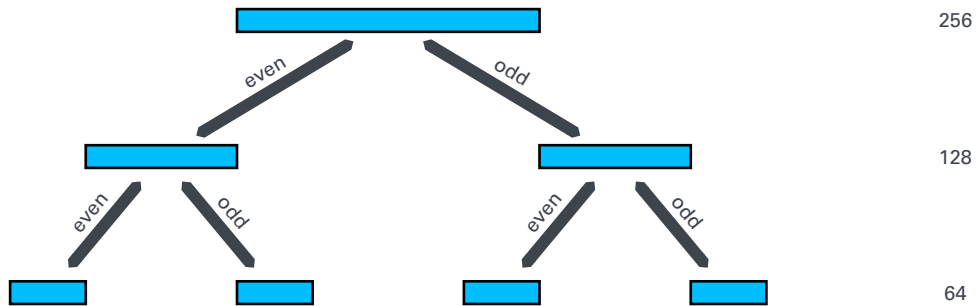
256

$$X_n = \sum_{k=0}^N x_k \exp \left( -2j\pi k \frac{n}{N} \right) \rightarrow \mathcal{O}(N^2)$$

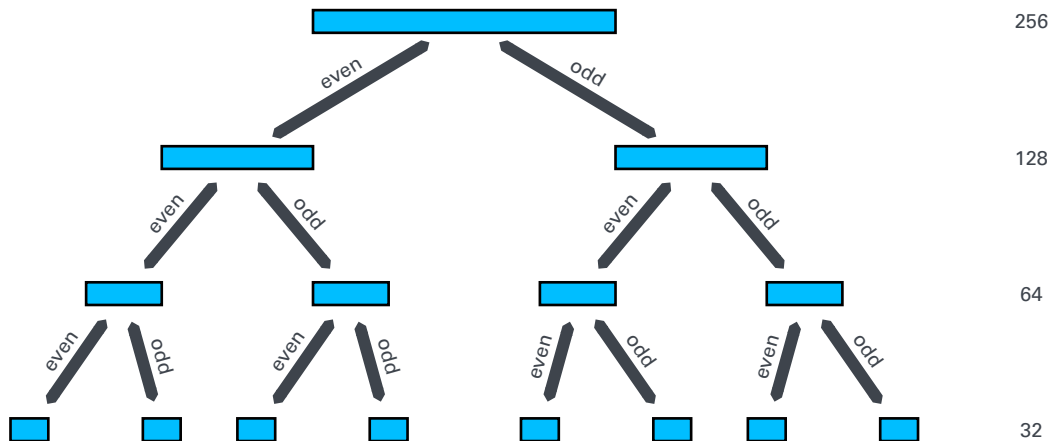
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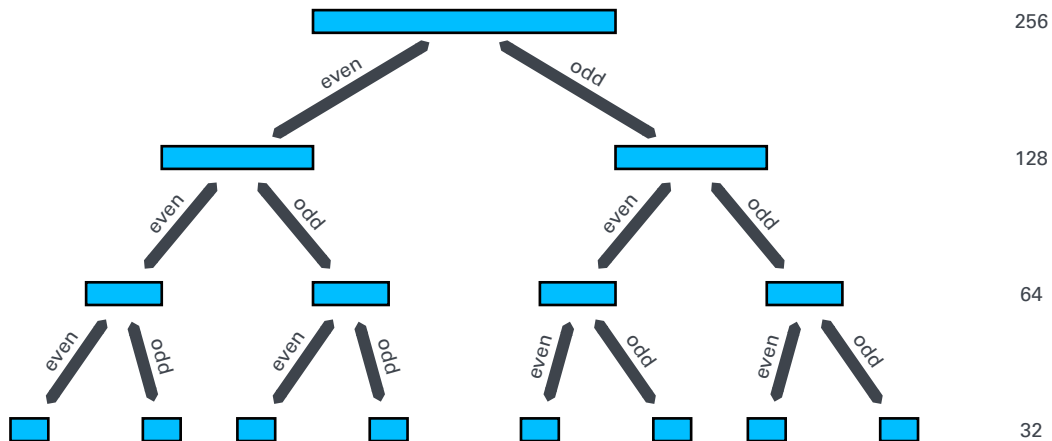
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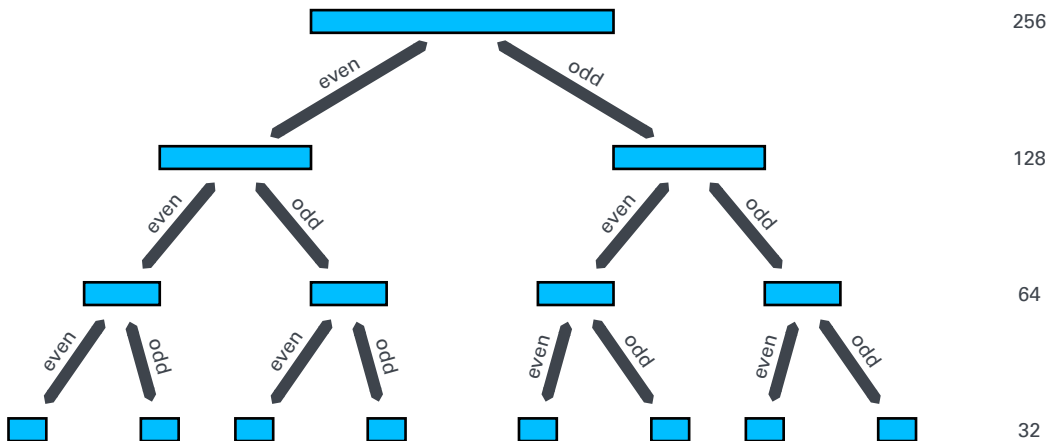
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