

Assembly of long, error-prone reads using repeat graphs

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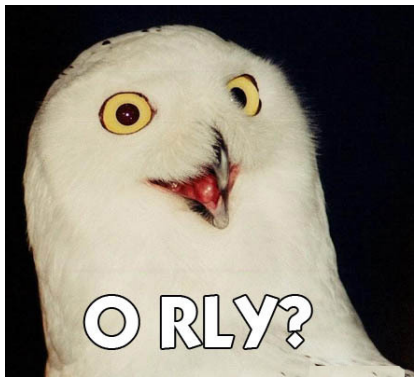
Long reads and de Bruijn graphs?

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- ▶ otherwise tangled graph

Long reads and de Bruijn graphs?



Repeat graphs

- ▶ generalization of de bruijn graphs

```
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>- means the repeat graph hasn't to be known
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Repeat graphs

- ▶ generalization of de bruijn graphs
- ▶ structure
- ▶ creation

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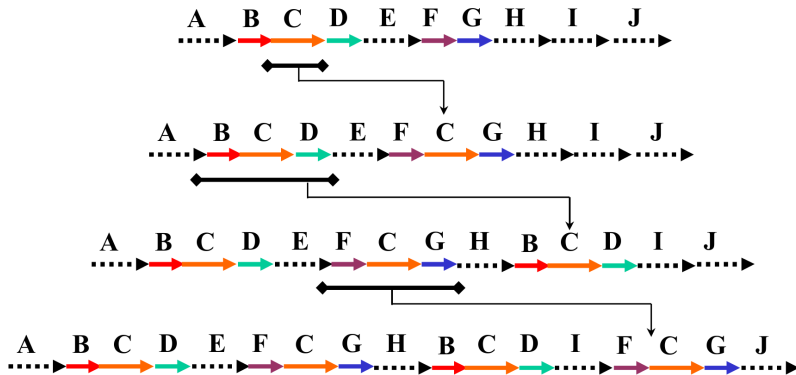
Difference repeat graph de Bruijn graph

Repeat resolution

Results

- ▶ human dataset

Segmental duplications



- ▶ Segmental duplications are duplicated blocks of genomic DNA typically ranging in size from 1-200 kb (IHGSC 2001)

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- ▶ They often contain sequence features such as high-copy repeats and gene sequences with intron-exon structure.