What is genomics?

Steven Salzberg



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what is the biochemical sequence of the genome and what are its physical properties?

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what does all the DNA do?



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how do sequences change over evolutionary time?

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where are the genes and other interesting bits?

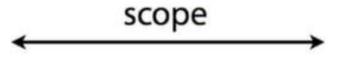
Collins English Dictionary:

"The branch of molecular genetics concerned with the study of genomes, specifically the identification and sequencing of their constituent genes and application of this knowledge in medicine, pharmacy, agriculture etc."

Biology & Genetics



Targeted studies of one or a few genes



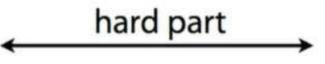
Studies considering all genes in a genome

Targeted, low-throughput experiments



Global, high-throughput experiments

Clever experimental design, painstaking experimentation



Tons of data, uncertainty, computation