



PhD Course on “Informational Genomics: information content of genomes and its divergence from randomness”

Vincenzo Bonnici

Syllabus:

- Introduction to the course. Basic notions. Genomes as DNA strings. (1 hour)
- Distributions. Statistical indexes and Chebyshev inequality. Distribution distances. (2 hours)
- Information and information sources. From physical to informational Entropy. (2 hours)
- Entropy and mutual entropy. Entropy Circular Principle. Entropic divergence. (2 hours)
- Genomes as information sources. Genomic distributions. (2 hours)
- Informational genomic indexes. Relations among informational indexes. (2 hours)
- Random genomes. Random log normality principle. Logarithmic bounds of randomness (2 hours)
- Scientific ground and argumentation

CLASS MEETING

- 8 marzo 2020 - 10:00-13:00
- 9 marzo 2020 - 10:00-13:00
- 15 marzo 2020 - 10:00-13:00
- 16 marzo 2020 - 15:00-19:00

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