



UNIVERSITÀ
di VERONA

Scuola di Dottorato
di SCIENZE NATURALI ED INGEGNERISTICHE

Corso di Dottorato in Informatica

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)

CLASS MEETING

- 11 marzo 2020 - 10:00-13:00
- 12 marzo 2020 - 10:00-13:00
- 17 marzo 2020 - 10:00-13:00
- 19 marzo 2020 - 15:00-19:00