

# **STATISTICAL TECHNIQUES FOR SCIENCE AND TECHNOLOGY**

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Prof. Domenico Marinucci

- 1) background in probability: continuous and discrete distributions, inequalities, limit theorems, law of large numbers and central limit theorems
- 2) foundations of statistical inference: sampling, asymptotic properties of estimators, maximum likelihood, testing, linear models
- 3) basic time series and stochastic processes: stationarity, autocovariances, ARMA processes, spectral representation, periodogram, spectral estimation and whittle estimates