



**Nell'ambito del programma di dottorato del
DMI**

L'Ing. Marco Ortu

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terrà un corso breve dal titolo:

**Leggi di potenza, con applicazioni
nell'ingegneria del software**

**16 Gennaio 2020, ore 9:00 - 14:00 (Aula C - Dip. di
Matematica e Informatica, via Ospedale 72)**

Abstract

Complex systems, both natural and artificial, grow and evolve in the form of intricately networked organizations. A recent finding is that, despite the very different realms where complex networks can be found—from proteins and genes interrelationships, to nervous system organization, Internet links between Web pages, and even Hollywood actor collaboration graph—the distribution of edges connected to vertexes follows a power-law.

A power-law distribution, also called Pareto distribution, Zipf's law or

scaling law, implies that, while small values are far more common than large values, the probability to find a large value is not negligible.

The same behavior can be found in the graphs associated to large software systems. Moreover, the entities involved in software development (classes, interfaces, methods, etc.) are also characterized by features whose distributions can be studied looking for scale-free behavior (LOCs., CK metrics, etc).

In the seminar we will describe the properties of power-laws, some of their generative mechanisms and their application to real-world large object-oriented software systems.

Marco Ortu è Professore a contratto presso l'Università di Cagliari, autore di più di 50 pubblicazioni scientifiche fra articoli su rivista, convegni internazionali e capitoli di libri. I suoi principali campi di ricerca sono ingegneria del software applicata, tecniche di text mining e opinion mining applicato ai repositories del software.