



UNIVERSITÀ DELLA CALABRIA

DIPARTIMENTO DI
MATEMATICA
E INFORMATICA

Dipartimento di Matematica e Informatica

Avviso di Seminario

Giovedì 11 gennaio 2018 – ore 16:00
Aula A – Laboratorio Analisi Numerica – piano terra

Tomas Sauer

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terrà un seminario dal titolo:

PCA, cat videos, Batman and how to read old manuscripts

Abstract.

The Principal Component Analysis (PCA) is a very classic tool in many engineering applications and even plays an important role in unsupervised learning for the clustering of objects with unknown structure.

Mathematically, the PCA is based on the so-called Singular Value Decomposition (SVD) of a matrix, a well-investigated concept in Numerical Linear Algebra.

The talk is concerned with the question of how to efficiently compute the SVD when a matrix whose SVD is already known is augmented, i.e., if one or several columns are appended to this matrix. Based on such an algorithm we show how this can be used in various applications of Image Processing, like real-time foreground-background separation in videos or uncovering hidden information in almost unreadable historical manuscripts.

Il Direttore del Dipartimento
prof. Nicola LEONE