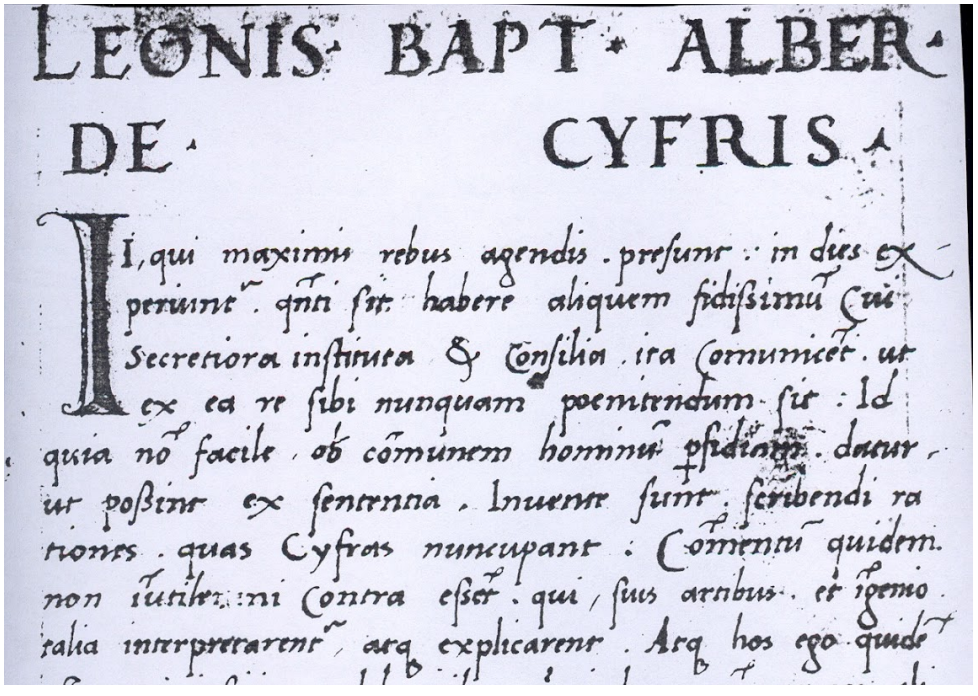
LEONIS BAPT. ALBER-
DE CYFRIS

II, qui maximis rebus agendis . presunt : in dies ex-
periunt . quã sit habere aliquem fidissimũ cui
Secretiora instituta & Consilia ita communicet . ut
ex ea re sibi nunquam poeniteudum sit : Id
quia nõ facile ob cõmunem hominũ pfidiam . datur
ut possint ex sententia . Inuenta sunt scribendi ra
tiones . quas Cyfras nuncupant : Comentu quidem
non iutilem Contra esset . qui , suis armis . et igemo
talia interpretarent , arq explicarent . Arq hos ego quide

De Cifris Athesis

UNIVERSITÀ DEGLI STUDI DI TRENTO
Dipartimento di Matematica

FONDAZIONE BRUNO KESSLER
ICT CENTER FOR INFORMATION AND COMMUNICATION TECHNOLOGY

Tuesday 9th november 2021 – at 3:00 p.m.

Online Seminar via Zoom

Valentina De Cian

TriNANDable

introduced by

Alessia Marelli

ECC/crypto advisor

LDPC codes for storage applications

Abstract: Low-density parity-check (LDPC) codes are a class of linear block codes that in recent years has turned out to be very useful for many applications, especially in the storage field. As the name suggests, these codes are fully characterized by their parity-check matrix, whose specific properties give rise to many strengths, but also to some weaknesses. From a practical point of view, the sparsity of the matrix allows to save a lot of space, but at the same time it increases the probability of falling into the so-called trapping sets, which are among the main responsible for a bad performance of the code. An interesting fact is that the parity-check matrix of an LDPC code can be represented by a bipartite graph, thus linking coding theory and graph theory. In this talk we will discuss the main features of LDPC codes, focusing on their application to storage. We will describe their structure, their most famous decoding algorithm, their main strengths and limits.

Registration for the online event to *be made by 8th November* via the following link:

click here

Subscribers will receive the Zoom ID one hour before the start of the event

Contact person: Massimiliano Sala

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