國立中山大學應用數學系
學術演講

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講　題：Integer matrix factorization and its applications
時　間：2017/09/28（星期四）14:10 ~ 15:00
地　點：理學院四樓理 SC 4009-1 室
茶　會：15:00 於理 SC 4010 室 (系辦公室)

摘 要

Integer matrix factorization has received attention recently due to its capacity of naturally representing parts of integer data sets. Different from the general low-rank factorization, the integer factorization is naturally discrete, therefore, the conventional techniques for matrix factorization, such as SVD and non-negative matrix factorization, are inappropriate and unable to solve this problem. To the best of our knowledge, a numerical method to solve integer matrix factorization has not been proposed in the literature earlier.

In this talk, we want to propose a block coordinate descent method to obtain the integer matrix factorization. This method consists of recursively finding integer solutions of integer least square problems. Applications on the real world problems such as the market basket transactions, association rule mining, cluster analysis, and pattern extraction will be given. Numerically, we show that our method can find a more accurate solution than any other existing methods designed for continuous data sets.

敬 請 公 告！ 歡 迎 參 加！

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