國立交通大學應用數學系
學術演講公告

主講人：洪芷漪　教授 (國立中山大學應用數學系)

講題：An application of the coalescence theory to branching random walks

時間：105 年 3 月 1 日 (星期二) 下午 2:00-3:00

地點：(光復校區) 科學一館 223 室

茶會：當天下午 1:30 (科學一館 205 室)

摘要：

　　When a population grows old, it is always interesting to know what happened to it in the past. The coalescence problem provides a way to understand the ancestry of the individuals in the population.

　　We consider a rapidly-growing Galton-Watson branching process and pick two individuals in the current generation by simple random sampling without replacement and trace their lines of descent backward in time till they meet for the first time. We call the common ancestor of these chosen individuals at the coalescent time their most recent common ancestor. The coalescence problem is to investigate the limit behaviors of some characteristics of this most recent common ancestor such as its death time and its generation number.

　　Moreover, in this talk, we will introduce branching random walks by imposing movement structures to the above processes and we will see what happens to the limit distribution of the positions of the particles in the branching random walks by means of the coalescence theory.

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