

國立中山大學應用數學系

學術演講

講者：卓建宏教授

國立中正大學數學系

講題：Remarks on the numerical solutions of
blow-up problems

時間：2019/02/21（星期四）16:10 ~ 17:00

地點：理學院四樓理 SC 4009-1 室

茶會：15:30 於理 SC 4010 室（系辦公室）

摘要

We consider two algorithms for the computation of blow-up problems. One is to define the temporal increment adaptively while another uses a monitor function and computes with uniform time meshes. For the first method, it was proved that the numerical solution and the numerical blow-up time converge to the exact ones, however, the asymptotic behaviors, such as the blow-up set and the blow-up rate, cannot be faithfully reproduced by such schemes. For the second one, although a wide class of functions can be used for the computation of the blow-up time, it is remarkable that the convergence order of the numerical blow-up time and the behaviors for the numerical solution vary with the choices of the monitor functions. There should be an optimal one. In this talk, we would like to explore the above problems in more detail. Besides, we would also like to investigate a problem as to whether a higher order scheme gives a better approximation for blow-up solutions. Several examples for these problems will be reported.

中山大學應用數學系

敬請公告！歡迎參加！

應用數學系：<http://math.nsysu.edu.tw>

校園地圖：http://math.nsysu.edu.tw/var/file/183/1183/img/779/nsysu_math_map.jpg

交通資訊：<https://www.nsysu.edu.tw/p/412-1000-4132.php?Lang=zh-tw>



應用數學系



校園地圖



交通資訊