



J. JAMES WOODS LECTURES

presents

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TUESDAY, OCTOBER 28, 2003
BUTLER UNIVERSITY, INDIANAPOLIS, INDIANA
4:30 p.m., Gallahue Hall, Room 108

Gerschgorin and His Circles I

Everyone knows Gerschgorin's Circle Theorem, for estimating the eigenvalues of a given n -by- n complex matrix by means of n disks in the complex plane. Fewer know the similar and sharper results involving ovals of Cassini. These topics are covered in this lecture. Then, sharpness results are given, and important connections with M -matrix theory and the Perron-Frobenius theory of nonnegative matrices are given and stressed.

THURSDAY, OCTOBER 30, 2003
BUTLER UNIVERSITY, INDIANAPOLIS, INDIANA
4:30 p.m., Gallahue Hall, Room 108

Gerschgorin and His Circles II

Here, we focus on extensions of Gerschgorin's original work to G -functions of Hoffman and Nowosad. Then, newer results on eigenvalue inclusion results for partitioned matrices, which are related to earlier work of Householder and F.Robert and more recent work of Salas, are given.

These talks are sponsored by the J. James Woods Lecture Series and coordinated by Butler University's Mathematics and Actuarial Science Department. For more information, contact Amos Carpenter at 317-940-9436.



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