

CoE-MaSS weekly seminar series

THE DST-NRF CENTRE OF EXCELLENCE IN
MATHEMATICAL AND STATISTICAL SCIENCES (CoE-MaSS)
PRESENTS A SEMINAR BY

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“The ancestral matrix of a rooted tree”

Friday, 7 June 2019

10h30-11h30

CoE-MaSS Seminar Room, 1st floor, MSB, Wits.

Given a rooted tree T with leaves v_1, v_2, \dots, v_n , we define the ancestral matrix $C(T)$ of T to be the square matrix of order n for which the entry in the i -th row and j -th column is the level (distance from the root) of the first common ancestor of v_i and v_j . This talk will discuss properties of this matrix, present upper and lower bounds for the eigenvalues in terms of other tree parameters. Combinatorial interpretation for the coefficients of the characteristic polynomial of $C(T)$ will also be attempted.



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