



National Centre for Mathematics

www.ncmath.org

(A joint centre of TIFR and IIT Bombay)

Advanced Training in Mathematics Schools

www.atmschools.org

(Supported by National Board for Higher Mathematics)



Online Instructional School for Teachers (IST) on “Linear Algebra”

by National Institute of Technology Arunachal Pradesh

(20th February 2021 to 28th March, 2021)

In this school, we will learn the basic tools of linear algebra and use them to study Matrices, Gaussian Elimination, Vector Spaces, Orthogonality, Determinants, Eigenvalues and Eigenvectors, Positive Definite Matrices and Computations with Matrices. Learning these topics are the first steps to pursue research in the Linear algebra. Through these topics we will discuss some questions of current interests to get a flavor of ongoing research in these areas. We will also learn to use software like Sage for computations.

ORGANIZERS:



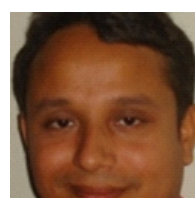
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Speaker: R. Alam, IIT Guwahati

Positive semidefinite matrices,
Singular values, matrix computations.



Speaker: Ritumoni Sarma, IIT Delhi

Inner product spaces,
Gram- Schmidt process,
projections and least squares,
Fast Fourier Transform



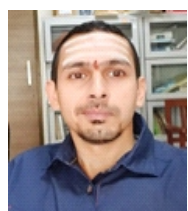
Speaker: S. Pati IIT Guwahati

Spectral Theorem and applications,
Nonnegative matrices.



Speaker: Murali Srinivasan, IIT Bombay

Duality for network flows,
linear programming and
semidefinite programming.



Speaker: S Krishnan, IIT Mumbai

Determinants and their properties,
applications, Eigenvalues and
Eigenvectors, Diagonalization.



Speaker: R. K. Sharma, IIT Delhi

matrices, Gauss elimination,
Vector spaces, dimension,
linear maps, rank nullity theorem

Contact Details:

The web page of this program will be: <https://www.atmschools.org/2021>

Application form and other information about the programme are available on the above website.

Email address to which applications can be sent: murali.k.srinivasan@gmail.com