The CSI Math Simons Undergraduate Lecture Series

## Prof. Gilbert Strang of MIT

## Talk Title

## Four Subspaces, Five Factorizations

## Abstract:

Every m by n matrix A leads to two orthogonal subspaces of n-dimensional space (the row space and the nullspace of A) and two orthogonal subspaces of mdimensional space (the row space and the nullspace of  $A^T$ ). Then the five great factorizations of A create better and better bases for these four subspaces. This is pure linear algebra but it has very valuable applications. The winners are orthonormal bases of v's and u's such that each  $Av_i = s_i u_i$ .



Venue: Center for the Arts Building 1P - 119

Date: February 27, 2024 (Tue)

> Time: 2:45 -3:45 pm