



Invitation to MTech Thesis Defense of **Ayushi Gupta** July 19, 2018 (Thursday): 02.00-03.PM

In Partial Fulfillment of the Requirements for the Degree of
M.Tech CB

Ayushi Gupta (MT16123)

Will defend her thesis

Title: "Tracking Aging-Related Changes in Blood at Single Cell Resolution"

IIIT-D Faculty and Students are invited

Date: July 19th 2018 (Thursday)

Time: 02.00-03.00 IST

Place: Meeting Room, 3rd Floor(NAB)

Examiner:	Internal:	Vibhor Kumar
	External/Internal:	Debasis Dash (IGIB)
	Advisor:	Debarka Sengupta, Shyam Prabhakar

Abstract

Understanding how gene expression changes with aging is of fundamental interest. It also provides valuable insights into the development of certain geriatric conditions such as myeloid malignancies. With the increase in awareness about aging as a biological phenomenon, studies have been performed to quantify transcriptomic changes in various tissue types including blood. Most of these studies have used cell population for expression profiling. We for the first time, trace gene expression changes at single cell resolution. The current thesis presents the bioinformatic analysis of single-cell RNA-seq data derived from the sorted populations of myeloid cells, lymphocytes, and rare cells, collected from multiple young and elderly donors. As one of the key outcomes, this study unravels the molecular basis of cell type specificity of aging-related transcriptomic changes.