

# COLLOQUIUM

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## **Testing Equality of Means for Paired Data When the Labels are Unknown**

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A405 Wells Hall

10:20 a.m. - 11:10 a.m.

Refreshments: 10:00 a.m.

### **Abstract**

Suppose  $(X_i, Y_i)$ ,  $i = 1, \dots, n$  represent a random sample size  $n$  from a bivariate normal distribution with means  $\mu_x, \mu_y$ , variances  $\sigma_x^2, \sigma_y^2$  and correlation coefficient  $\rho$ . For testing the equality of means the paired-t test is known to be optimum. In this talk we will consider the same testing problem when the labels of the observations are unknown. Such data may arise especially in twin studies. In particular we will address the following questions: what is the impact of missing labels on the performance of the tests that are available in literature and can we improve its performance by incorporating further information available in data?

**A joint work with Gaurangadeb Chattopadhyay and Kaustav Banerjee, University of Calcutta, India.**

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