- **Instructor:** Taps Maiti
- **Office:** C424, Wells Hall
- **Tel:** 517-355-9677
- **E.mail:** maiti@msu.edu
- **Time:** 12:40-2:00 PM, Monday and Wednesday, C405, Wells Hall.
- **Office Hours:** Monday and Wednesday 2:10-3:00PM or by appointment.
- **Teaching Assistant:** Xin Qi, E.mail qixin@stt.msu.edu
• **Text:** *Linear Model Methodology* by André I. Khuri, CRC Press.

• **References:** (i) *Linear Models* by Searle (Wiley Classics Library), (ii) *An Introduction to Categorical Data Analysis* by Alan Agresti and (iii) *Linear Models in Statistics* by Rencher Schaalje.

• **Course Description:** Properties of multivariate normal distribution, Cochran's theorem, Simple and multiple linear regression models, Gauss-Markov Theorem, Theoretical properties, BLUP, one-way and two-way ANOVA models, SSs, diagnostics and model selection, contingency tables and multinomial models, generalized linear models, logistics regression.

• **Pre-requisites:** STT 861-862, STT863-864.
- **Course expectation**: Regression technique is one of the most widely useful statistical tool for almost all area of statistical applications. A successful application of regression analysis requires good understanding of both theory and practical problems that arise with real world data. In the end of this course, the students are expected to learn appreciation of regression techniques and the underlying statistical theory blended with elegant mathematics.

- **Course Content**: Will cover many advanced topics beyond the text book. Class notes and references will be provided time to time.
Grading:

- Midterm 1 15%
- Midterm 2 15%
- Homework 15%
- Project 15%
- Concept paper 15%
- Final 25%

Exam dates will be announced one week in advance.

Final Exam: Monday, Dec 9, 12:45-2:45 PM.
• Attendance is important for success. Learn materials well in order to get good grades. See the Policy detail https://www.msu.edu/unit/ombud/attendance.html

• No Make-up Exam, except emergency.

• No Late Homework.

• Students with Disability: Please contact the resource center, http://www.rcpd.msu.edu
- Instructor has the right to change or modify the syllabus, if needed.
- Communication: Email is preferred. Subject STT867
- Check ANGEL frequently.
- You must know at least one computing language, such as R, MATHLAB, SAS