Instructor: Siva Athreya **Office:** A 12.

Class Hours: Tuesday and Thursday: 11:10am-1:10pm

Teaching Assistant: Sarvesh Ravichandran Iyer

Texts:

- 1. Mathematical Statistics and Data Analysis by John A. Rice
- 2. Stat Labs: Mathematical Statistics Through Applications by Deborah Nolan and Terry P. Speed
- 3. Statistics: The Art and Science of Learning from Data by by Alan Agresti, Christine A. Franklin, Bernhard Klingenberg
- 4. Using R for Introductory Statistics by John Verzani
- 5. simpleR Using R for Introductory Statistics by John Verzani. Available online at: https://cran.r-project.org/doc/contrib/Verzani-SimpleR.pdf

E-Mail: My e-mail address is **athreya@isibang.ac.in**. Please send me an email¹, from an account that you use regularly, so that I can put you on the class list.

WWW-page: I shall maintain a course home-page, at the following address: http://www.isibang.ac.in/~athreya/Teaching/wom19. The page should serve as an archive of handouts at the very least.

Syllabus: Introduction to Statistics with examples of its use; Descriptive statistics; Graphical representation of data: Histogram, Stem-leaf diagram, Box-plot; Exploratory statistical analysis with a statistical package; Basic distributions, properties; Model fitting and model checking: Basics of estimation, method of moments, Basics of testing, interval estimation; Distribution theory for transformations of random vectors; Sampling distributions based on normal populations: t, χ^2 and F distributions. Bivariate data, covariance, correlation and least squares.

Classes: Our class will be held either in the Computer Classroom I or in the G-26. We shall decide the venue each week. Many of the classes will be worksheet based and you will need to complete the same within class hours. The course will require familiarity with the package R on Ubuntu-machines and also using Dropbox.

Scoring: Final Exam 50%, Midterm 20%, Quizzes 15%, In-class Worksheets10%, and Homework 5%.

Office hours: Office hours are the times during the week when I will be (solely) available for the purpose of answering student difficulties and helping everybody get unstuck from there problems. These are the office hours that I will have (in my office) during the week are:-

 $\mathbf{Monday:} \ 9:00\text{-}10:00 \mathrm{am}, \ \mathbf{Tuesday} \ \mathbf{and} \ \mathbf{Thursday:} \ 8:00\text{-}9:00 \mathrm{am}, \ \mathbf{Tuesday:} \ 10:00\text{-}11:00 \mathrm{am}$

Feedback: Please feel free to drop by my office, to clear up difficulties or to just discuss mathematics. I would appreciate feedback from you as the course progresses. If there are suggestions/clarifications that you have then feel free to ask me.

¹*Free Chocolates*: You shall get one free chocolate, if you set-up an email account (which you will access once every 24 hours) and send me email by Friday evening.