## Multivariate and Regression Analysis

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## Multivariate analysis:

1. Introduction	9. Factor analysis B
2. Aspects of multivariate analysis	10. Clustering A
3. Matrix algebra and random vectors	11. Clustering B
4. Multivariate normal distribution	12. Discrimination and classification A
5. Inferences about a mean vector	12. Discrimination and classification if
6. Comparisons of several multivariate means	13. Discrimination and classification B
7. Principal components	14. Canonical correlation analysis A

15. Canonical correlation analysis B

## Regression analysis:

1. Introduction

8. Factor analysis A

- 2. A review of basic statistical concepts
- 3. Measures of association with emphasis on the difference of means
- 4. Basics of linear regression analysis
- 5. Correlation
- 6. Analysis of variance (ANOVA) table and prediction of y
- 7. Basics of multiple linear regression
- 8. Hypothesis testing in multiple regression
- 9. Polynomial terms and dummy variables
- 10. Interaction and confounding
- 11. Confounding and interaction in epidemiology
- 12. Regression diagnosis

- 13. Variable selection and model building
- 14. Relative risk, odds ratio and significance testing for  $2 \times 2$  tables
- 15. Introduction to logistic regression
- 16. Logistic regression for contingency tables
- 17. Goodness-of-t for logistic regression
- 18. Logistic regression for case-control data and conditional logistic regression
- 19. Analysis of polytomous data
- 20. Poisson regression and log-linear model
- 21. Generalized linear models
- 22. 同学报告:
  - (a) 01 (c) 03 (e) 05 (g) 07 (i) 09 (k) 11 (m) 13
  - (b) 02 (d) 04 (f) 06 (h) 08 (j) 10 (l) 12

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