



The International
Biometric Society
Italian Region



Dipartimento di Statistica
"G. Parenti"
Università degli Studi di
Firenze

Advanced course on ANALYSIS OF REPEATED CATEGORICAL MEASUREMENT DATA

LECTURER:	Professor Alan Agresti
PARTICIPANTS	Max 40 persons
DATE:	May 12-14, 2003
VENUE:	Dipartimento di Statistica "G. Parenti" viale Morgagni 59, 50134 Firenze
SPONSORSHIP:	Italian Region of the International Biometric Society
FACULTY:	Annibale Biggeri, Matilde Bini, Marco Marchi

This course surveys methods for correlated categorical data, which occur with repeated measurement and other forms of clustering.

After reviewing logistic regression and standard methods for matched pairs (e.g., McNemar's test), the main focus is on two types of models. One type models the marginal distributions, with parameter estimation often handled with generalized estimating equation (GEE) methodology. The other type uses random effects to describe subject-specific conditional distributions. For each type, emphasis is on logit models for binary responses but with some discussion of ordinal responses. Examples use SAS (primarily PROC GENMOD and PROC NL MIXED).

The presentation, which follows Chapters 10-13 of the text "Categorical Data Analysis" (2nd ed., Wiley, 2002), emphasizes concepts rather than technical details. However, attendees should have some background in logistic regression.

The instructor, **Alan Agresti**, is Distinguished Professor, Department of Statistics, University of Florida. He is the author of four books, including Categorical Data Analysis.

The official language of the lectures is English.

For further information, please contact:

Prof. Matilde BINI

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MODULO D'ISCRIZIONE

Da riconsegnare per fax: 055 422 35 60 entro il 5 maggio 2003

COGNOME, Nome:

Titolo di studio/Posizione:

Istituzione:

Indirizzo:

Tel: fax: e-mail:

parteciperà al suddetto corso, previo pagamento della quota d'iscrizione di € 90, comprensiva dell'iscrizione alla Società Italiana di Biometria / International Biometric Society e del materiale didattico.

Firma :



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PROGRAM

CONTENTS:

MONDAY 12 MAY:	<p>Review of logistic regression</p> <ul style="list-style-type: none">▪ Interpretation of model parameters▪ Maximum likelihood model fitting▪ Extensions for multinomial responses) <p>Models for Matched Pairs</p> <ul style="list-style-type: none">▪ Comparing dependent proportions: McNemar test et al.▪ Conditional vs. marginal models for binary matched pairs▪ Comparing margins of square contingency tables
TUESDAY 13 MAY:	<p>Marginal Models</p> <ul style="list-style-type: none">▪ Marginal logit models for repeated binary response▪ Maximum likelihood (ML) and weighted least squares (WLS)▪ Generalized estimating equations (GEE) approach▪ Cumulative logit modeling of repeated ordinal responses <p>Conditional Models</p> <ul style="list-style-type: none">▪ GLMs with Random Effects▪ Logistic regression of clustered binary data
WEDNESDAY 14 MAY:	<p>Conditional Models</p> <ul style="list-style-type: none">▪ Generalized linear mixed models (GLMMs): ML fitting and inference▪ Logistic GLMMs for clustered binary data <p>Additional Topics about Mixture Models</p> <ul style="list-style-type: none">▪ GLMMs for ordinal data▪ Multivariate GLMMs for multi-center clinical trials▪ Beta-binomial model for clustered binary data: Teratology studies

DAILY SCHEDULE:

9:30-13:00	Theoretical lecture
14:30-17:00	Tutorial
Breaks	10:30-11:00