

Conference Program

International Conference on Reliability and Survival Analysis 2003 (ICRSA2003)

Organized by the Department of Statistics
and the Center for Reliability and Quality Sciences
University of South Carolina, Columbia

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US National Science Foundation (NSF),
US Army Research Office (ARO),
US National Institutes of Health (NIH),
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and College of Science and Mathematics (COSM),
University of South Carolina

May 21-24, 2003
Russell House
University of South Carolina
Columbia, South Carolina, USA

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Conference Program Committee

- **Edsel A. Peña**, (Program Co-Chair), Department of Statistics, University of South Carolina.
- **William J. Padgett**, (Program Co-Chair), Department of Statistics, University of South Carolina.
- **James Lynch**, Department of Statistics, University of South Carolina.
- **Odd Aalen**, Section of Medical Statistics, University of Oslo, Norway.
- **Terje Aven**, Stavanger University, Norway.
- **Donna Baker**, Los Alamos National Laboratory, USA.
- **Henry Block**, Department of Statistics, University of Pittsburgh, USA.
- **Martin Crowder**, Department of Mathematics, Huxley Building, Imperial College, London, UK.
- **Nader Ebrahimi**, Department of Mathematics, Northern Illinois University, USA.
- **Luis Escobar**, Department of Experimental Statistics, Louisiana State University, USA.
- **Nancy Flournoy**, Department of Statistics, University of Missouri, Columbia, USA.
- **Niels Keiding**, University of Copenhagen, Denmark.
- **John Klein**, Department of Biostatistics, Medical University of Wisconsin, USA.
- **Lynn Kuo**, Department of Statistics, University of Connecticut, USA.
- **Uwe Jensen**, Department of Stochastics, University of Ulm, Germany.
- **Robert Launer**, Mathematical Sciences, US Army Research Office, Research Triangle Park, NC, USA.
- **Sallie Keller-McNulty**, Los Alamos National Laboratory, USA.
- **Ian McKeague**, Department of Statistics, Florida State University, USA.
- **William Q. Meeker**, Department of Statistics, Iowa State University, USA.
- **Min Xie**, Department of Industrial and Systems Engineering, National University of Singapore, Singapore.
- **David Oakes**, Department of Biostatistics, University of Rochester, USA.
- **Frank Samaniego**, Department of Statistics, University of California at Davis, USA.
- **Thomas Savits**, Department of Statistics, University of Pittsburgh, USA.
- **Robert Strawderman**, Department of Biological Statistics and Computational Biology, Cornell University, USA.
- **Jane-Ling Wang**, Department of Statistics, University of California, Davis, CA, USA.
- **Mei-Cheng Wang**, Department of Biostatistics, Johns Hopkins University, USA.

Local Arrangements and Registration

Local arrangements, registration, and housing reservations for the conference were handled by **Mr. Tim Mesaric** and the **University of South Carolina Continuing Education**.

Welcome to ICRSA 2003

On behalf of the faculty and the students of the Department of Statistics of the University of South Carolina, Columbia, we, the organizers of the International Conference on Reliability and Survival Analysis (ICRSA) 2003, would like to welcome all the participants of this Conference to the University of South Carolina, the City of Columbia, and South Carolina. We appreciate your participating in this conference and hope that this will be a productive venue for all participants to further their research and interaction with other researchers in the areas of reliability, survival analysis, and related areas. We further hope that by having researchers in both reliability and survival analysis, this will enhance the synthesis of stochastic models and statistical inference methods in these two active areas of research.

We would like to thank also the Program Committee members for organizing invited sessions on a varied range of topics. The participation of all the invited speakers, contributed paper speakers, and poster presenters, are very much appreciated.

We would like also to acknowledge the support provided by the US National Science Foundation, the US Army Research Office, and the US National Institutes of Health and the National Cancer Institute, which enabled us to provide partial travel support to graduate student participants, the invited speakers, and other participants who needed some travel support. We also acknowledge the financial support provided by Dr. Gerard Crawley, Dean of the College of Science and Mathematics.

Enjoy the Conference, and please feel free to approach any of us if there is anything else that we could do to make this a successful conference for you.

The Organizers,

Edsel A. Peña

William J. Padgett

James D. Lynch

Tim Mesaric

Conference Program

**Wednesday
May 21, 2003**

**7:00–10:00PM
Registration/Reception/Mixer
Lobby of South Quad Dormitory**

**Thursday
May 22, 2003**

**7:30–8:45
Breakfast and Registration
Russell House**

<i>Session Number</i>	01
<i>Session Title</i>	Welcoming Session
<i>Time and Day</i>	8:45–9:00, Thursday
<i>Place</i>	Russell House Ballroom
<i>Session Organizer</i>	Organizers
<i>Session Chair</i>	James D. Lynch , University of South Carolina

8:45–8:49

Welcome Remarks

James D. Lynch

Chairman, Department of Statistics
University of South Carolina

8:49–8:54

Welcome Remarks

Jerome D. Odom

Vice-President for Academic Affairs and Provost
University of South Carolina

8:54–9:00

Welcome Remarks

Andrew A. Sorensen

President
University of South Carolina

<i>Session Number</i>	02 (Plenary)
<i>Session Title</i>	State of Survival Analysis
<i>Time and Day</i>	9:00–9:45, Thursday
<i>Place</i>	Russell House Ballroom
<i>Session Organizer</i>	Organizers
<i>Session Chair</i>	William J. Padgett , University of South Carolina

9:00–9:45

A Quick Tour of Modern Survival Analysis

Lee Jen Wei

Harvard University

<p>9:45–10:00 Coffee Break Russell House</p>

<i>Session Number</i>	03 (Invited)
<i>Session Title</i>	Dynamic Models of Failure Time Data
<i>Time and Day</i>	10:00–11:30, Thursday
<i>Place</i>	Room 203, Russell House
<i>Session Organizer</i>	Odd Aalen , University of Oslo, Norway
<i>Session Chair</i>	Odd Aalen , University of Oslo, Norway

10:00–10:30*Modelling, estimation and inference with time-varying effects in survival analysis***Thomas Scheike**

University of Copenhagen, Denmark

10:30–11:00*Hazard as a stochastic process: A Levy process model of individual frailty***Hakon K. Gjessing***, **Odd O. Aalen**, **Nils Lid Hjort**

Norwegian Institute of Public Health, Norway

11:00–11:30*On a dynamic approach to the analysis of multivariate failure time data***Odd O. Aalen***, **Johan Fosen**, **Harald Fekjær**, **Ørnulf Borgan**

University of Oslo, Norway

<i>Session Number</i>	04 (Invited)
<i>Session Title</i>	Bayesian Methods in Survival Analysis and Reliability
<i>Time and Day</i>	10:00–11:30, Thursday
<i>Place</i>	Room 205, Russell House
<i>Session Organizer</i>	Lynn Kuo , University of Connecticut
<i>Session Chair</i>	Lynn Kuo , University of Connecticut

10:00–10:30*Bayesian Analysis of Competing Risks***Sanjib Basu**

Northern Illinois University

10:30–11:00*Bayesian Analysis of Nonproportional Hazards Models for Survival Data***Tathagata Banerjee**, **Ming-Hui Chen***, **Dipak Dey**

University of Connecticut

11:00–11:30*Network Reliability Assessment in a Random Environment***Suleyman Ozekici**, **Refik Soyer***

George Washington University

<i>Session Number</i>	5 (Invited)
<i>Session Title</i>	Planning Accelerated Tests
<i>Time and Day</i>	10:00–11:30, Thursday
<i>Place</i>	Room 303, Russell House
<i>Session Organizer</i>	William Meeker , Iowa State University
<i>Session Chair</i>	William Meeker , Iowa State University

10:00–10:30

Bayesian Optimum Planning for Accelerated Life Tests

Yao Zhang*, **William Q. Meeker**

Pfizer Global Research and Development

10:30–11:00

Accelerated Life Test Plans Robust to Misspecification of Stress-Life Relationship under the Lognormal or Weibull Distributions

Francis G. Pascual

Washington State University

11:00–11:30

Test Planning for Accelerated Destructive Degradation Tests

Luis A. Escobar*, **William Q. Meeker**

Louisiana State University

<i>Session Number</i>	06 (Invited)
<i>Session Title</i>	Frailty Models in Survival Analysis
<i>Time and Day</i>	10:00–11:30, Thursday
<i>Place</i>	Room 305, Russell House
<i>Session Organizer</i>	David Oakes , University of Rochester
<i>Session Chair</i>	David Oakes , University of Rochester

10:00–10:30

Non-parametric estimation for baseline hazard function and covariate effects with time-dependent covariates

Amita Manatunga*, **Feng Gao**, **Shande Chen**

Emory University

10:30–11:00

Robust Inference for Proportional Hazards Univariate Frailty Regression Models

Michael R. Kosorok

University of Wisconsin, Madison

11:00–11:30

Combining Stratified and Unstratified Log-Rank Tests for Matched Pairs Survival Data

David Oakes*, **Changyong Feng**

University of Rochester

11:30–1:30
Lunch Break
(On Your Own)

12:00–6:00
Poster Session/Displays I
(See list of Presenters at End of Program)

<i>Session Number</i>	07 (Invited)
<i>Session Title</i>	New Ideas in Reliability and Survival Analysis
<i>Time and Day</i>	1:30–3:00, Thursday
<i>Place</i>	Room 203, Russell House
<i>Session Organizer</i>	Terje Aven , Stavanger University, Norway
	Uwe Jensen , University of Ulm, Germany
<i>Session Chair</i>	Uwe Jensen , University of Ulm, Germany

1:30–2:00
Covariate Order Tests for Covariate Effect
Jan Terje Kvaloy
 Stavanger University College, Norway

2:00–2:30
How to use expert judgement in regularity analyses to obtain good predictions
Atle Hjorteland
 Statoil, Norway

2:30–3:00
Aalen's Additive Risk Model Applied to Software Reliability
Axel Gandy
 University of Ulm, Germany

<i>Session Number</i>	08 (Invited)
<i>Session Title</i>	Modelling with Frailties
<i>Time and Day</i>	1:30–3:00, Thursday
<i>Place</i>	Room 205, Russell House
<i>Session Organizer</i>	Nader Ebrahimi , Northern Illinois University
<i>Session Chair</i>	Nader Ebrahimi , Northern Illinois University

1:30–2:00

The role of frailty models in genetics

Philip Hougaard

Biostatistical Department, Lundbeck, Denmark

2:00–2:30

Fitting the Frailty Distribution Using Empirical Bayes

Pamela Ohman-Strickland

UMDNJ-School of Public Health

2:30–3:00

Inference in Frailty Measurement Error Models for Clustered Survival Data

Xihong Lin

University of Michigan, Ann Arbor

<i>Session Number</i>	09 (Invited)
<i>Session Title</i>	Semiparametric and Longitudinal Models
<i>Time and Day</i>	1:30–3:00, Thursday
<i>Place</i>	Room 303, Russell House
<i>Session Organizer</i>	Organizers
<i>Session Chair</i>	Andrew Lawson , University of South Carolina

1:30–2:00

Semiparametric estimation in an accelerated failure model with time-dependent covariates

Eric V. Slud

University of Maryland, College Park

2:00–2:30

A new model for joint analysis of an event process and associated longitudinal outcome

Elizabeth H. Slate*, **Edsel A. Peña**

Medical University of South Carolina

2:30–3:00

Estimating Load-Sharing Properties in a Dynamic Reliability System

Paul Kvam

Georgia Tech University

<i>Session Number</i>	10 (Invited)
<i>Session Title</i>	The Relationship between Reliability and Quality
<i>Time and Day</i>	1:30–3:00, Thursday
<i>Place</i>	Room 305, Russell House
<i>Session Organizer</i>	Sallie Keller-McNulty and Donna Baker , Los Alamos National Laboratory
<i>Session Chair</i>	Jerome Morzinski , Los Alamos National Laboratory

1:30–2:00

Process Quality and Reliability

!!!!WITHDRAWN!!!!

Mark A. Anderson

Honeywell-Los Alamos National Laboratory

2:00–2:30

Six Sigma and Reliability - Is There any Connection?

A. Blanton Godfrey

Dean and Joseph D. Moore Professor, College of Textiles, NCSU

2:30–3:00

Reliability: The Other Dimension of Quality

William Q. Meeker

Iowa State University

<i>Session Number</i>	11 (Plenary)
<i>Session Title</i>	State of Degradation and Failure Prediction Models
<i>Time and Day</i>	3:00–3:45, Thursday
<i>Place</i>	Russell House Ballroom
<i>Session Organizer</i>	Organizers
<i>Session Chair</i>	Jeffrey A. Robinson , General Motors Research & Development Center, MI

3:00–3:45

Degradation Models and Failure Prediction

Jerry Lawless

University of Waterloo, Canada

3:45–4:00
Coffee Break

<i>Session Number</i>	12 (Contributed)
<i>Session Title</i>	Goodness-of-Fit Procedures
<i>Time and Day</i>	4:00–5:30, Thursday
<i>Place</i>	Room 203, Russell House
<i>Session Organizer</i>	Contributed Talks
<i>Session Chair</i>	Jason Owen , University of Richmond

4:00–4:22

Repairable Systems and Hazard-Based Goodness-of-Fit Tests

Ma. Zenia N. Agustin*, **Edsel A. Peña**

Southern Illinois University at Edwardsville

4:22–4:44

Goodness of Fit Test Based on Order Statistics

Fazil Alioglu Aliev

Baskent University, Turkey

4:44–5:06

Tests for Trend under Extended Null Hypotheses

G. Elvebakk*, **J. T. Kvaløy**, **B. H. Lindqvist**

University of Tromsø, Norway

5:06–5:28

Goodness of Fit of a Joint Model for Event Time and Nonignorable Missing Longitudinal Quality of Life Data - A Study

Sneh Gulati

Florida International University

<i>Session Number</i>	13 (Contributed)
<i>Session Title</i>	Inference Issues in Survival and Reliability Methods
<i>Time and Day</i>	4:00–5:30, Thursday
<i>Place</i>	Room 205, Russell House
<i>Session Organizer</i>	Contributed Talks
<i>Session Chair</i>	Arzu Onar , University of Miami

4:00–4:22
Information Sufficiency under Presence of Length-Biased Sampling Plan
Olcay Akman
 Coastal Carolina University, South Carolina

4:22–4:44
Statistical Inference for Competing Risks Model via Empirical Likelihood
Yichuan Zhao*, **Ian W. McKeague**
 Georgia State University

4:44–5:06
On the Reliance of the Logrank Test for Assessing Equality of Survival Curves
Gabriel Suci
 Inveresk Research

5:06–5:28
Empirical Likelihood for Cox Regression Model
Gengsheng Qin
 Georgia State University

<i>Session Number</i>	14 (Invited)
<i>Session Title</i>	Weibull and Related Distributions
<i>Time and Day</i>	4:00-5:30, Thursday
<i>Place</i>	Room 303, Russell House
<i>Session Organizer</i>	Min Xie , National University of Singapore, Singapore
<i>Session Chair</i>	Chin Diew Lai , Massey University, New Zealand

4:00–4:30
On discrete Weibull distributions
Olivier Gaudoin
 Institut National Polytechnique de Grenoble, France

4:30–5:00
Confidence intervals and joint confidence regions for the parameters of the Weibull distribution
Zhenmin Chen
 Florida International University

5:00–5:30
Properties of some extended Weibull models with bathtub shaped failure rate function
Chin Diew Lai*, **Min Xie**
 Massey University, New Zealand

<i>Session Number</i>	15 (Invited)
<i>Session Title</i>	Ideas in Survival Analysis and Reliability
<i>Time and Day</i>	4:00–5:30, Thursday
<i>Place</i>	Room 305, Russell House
<i>Session Organizer</i>	Luis Escobar , Louisiana State University
<i>Session Chair</i>	Luis Escobar , Louisiana State University

4:00–4:30*Resampling methods in relative risk models***Wenyu Jiang, Jack Kalbfleisch***

University of Michigan, Ann Arbor

4:30–5:00*First Hitting Time Models for Survival Data***G. A. Whitmore*, Mei-Ling Ting Lee**

McGill University, Canada

5:00–5:30*A Class of Degradation Based Models for Reliability Analysis***Vijay Nair**

University of Michigan, Ann Arbor

6:30–8:00**Mixer at Top of Carolina**

Friday May 23, 2003

7:00–8:30
Breakfast
Russell House

<i>Session Number</i>	16 (Contributed)
<i>Session Title</i>	Algorithms and Computer-Intensive Methods
<i>Time and Day</i>	8:00–9:30, Friday
<i>Place</i>	Room 203, Russell House
<i>Session Organizer</i>	Contributed Talks
<i>Session Chair</i>	Webster West , University of South Carolina

8:00–8:22

Characterization and Computation of the NPMLE with Univariate Censored Data

Shuguang Song

The Boeing Company, Seattle, Washington

8:22–8:44

Block Bootstrap Estimation of the Distribution of Cumulative Outdoor Degradation

Victor Chan*, **Soumendra N. Lahiri**, **William Q. Meeker**

Western Washington University

8:44–9:06

An EM Estimation of Distribution Functions with Accelerated Life Test Data

!!!!WITHDRAWN!!!!

Linxiong Li

University of New Orleans

9:06–9:28

Parameter Estimation from Censored Samples using the Expectation-Maximization Algorithm

Chanseok Park

Clemson University

<i>Session Number</i>	17 (Contributed)
<i>Session Title</i>	Models and Analysis of Failure-Time Data
<i>Time and Day</i>	8:00–9:30, Friday
<i>Place</i>	Room 205, Russell House
<i>Session Organizer</i>	Contributed Talks
<i>Session Chair</i>	Ma. Zenia Agustin , Southern Illinois University, Edwardsville

8:00–8:22

Predicting Survival Based upon Attained Age in Patients with Cystic Fibrosis

Melinda Harder*, Hebe Quinton, Tom Lever, Joanne Maddock, Mark Detzer, Jonathan Zuckerman, Gerald O'Connor

Bates College

8:22–8:44

A Power Analysis for Tests Using Paired Lifetime Data

William J. Owen

University of Richmond

8:44–9:06

Optimal Progressive Censoring Plans for The Weibull Distribution

H. K. T. Ng*, **P. S. Chan**, **N. Balakrishnan**

Southern Methodist University

9:06–9:28

A Burr Type X Chain-of-Links Model

James G. Surles*, **Donna D'Ambrosio**

Texas Tech University

<i>Session Number</i>	18 (Contributed)
<i>Session Title</i>	Stochastic Process-Based Models
<i>Time and Day</i>	8:00–9:30, Friday
<i>Place</i>	Room 303, Russell House
<i>Session Organizer</i>	Contributed Talks
<i>Session Chair</i>	Inmaculada Aban , University of Nevada, Reno

8:00–8:22

Bayesian Approach in Warranty Cost Analysis: Non-zero Repair Time

S. Chukova*, **Y. Hayakawa**

Victoria University of Wellington, New Zealand

8:22–8:44

Statistical Inference of a Modulated Gamma Process

Ananda Sen, **Nibedita Bandyopadhyay***

Oakland University

8:44–9:06

A Dynamic Model for a System of Softwares Following the Littlewood Software Reliability Model

Marcus A. Agustin

Southern Illinois University at Edwardsville

9:06–9:28

Estimating the Convolution of Distributions Under the Koziol-Green Model of Random Censorship

Ke Wu

California State University, Fresno

<i>Session Number</i>	19 (Contributed)
<i>Session Title</i>	Recent Developments in Failure-Time Modelling
<i>Time and Day</i>	8:00–9:30, Friday
<i>Place</i>	Room 305, Russell House
<i>Session Organizer</i>	Contributed Talks
<i>Session Chair</i>	Torben Martinussen , Denmark

8:00–8:22

Attributable fractions for survival data

Sven Ove Samuelsen, Geir Egil Eide*

Haukeland University Hospital and Section for Medical Statistics, Norway

8:22–8:44

The Aalen Additive Hazard Model with Case-Cohort and Nested Case-Control Data

Sven Ove Samuelsen

University of Oslo, Norway

8:44–9:06

Statistical Analysis of Current Status Data with informative Observation Times

(Tony) Jianguo Sun

University of Missouri

9:06–9:28

A bivariate frailty model with cure fraction

Andreas Wienke*, Paul Lichtenstein, Anatoli I. Yashin

Max Planck Institute for Demographic Research, Germany

<i>Session Number</i>	20 (Plenary)
<i>Session Title</i>	State of Modelling and Inference for Repairable Systems
<i>Time and Day</i>	9:30–10:15, Friday
<i>Place</i>	Russell House Ballroom
<i>Session Organizer</i>	Organizers
<i>Session Chair</i>	Edsel A. Peña , University of South Carolina

9:30–10:15

Nonparametric Inference for Repair Models

Myles Hollander

Florida State University

10:15–10:30
Coffee Break

<i>Session Number</i>	21 (Invited)
<i>Session Title</i>	Bayesian Methods in Reliability
<i>Time and Day</i>	10:30–12:00, Friday
<i>Place</i>	Room 203, Russell House
<i>Session Organizer</i>	Terje Aven , Stavanger University College, Norway
<i>Session Chair</i>	Uwe Jensen , University of Ulm, Germany
	Terje Aven , Stavanger University College, Norway
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10:30–11:00	
	<i>On nonparametric counting process models for software reliability</i>
	Uwe Jensen
	University of Ulm, Germany
11:00–11:30	
	<i>Heterogeneity modeling for recurrent events</i>
	Bo Henry Lindqvist
	Norwegian University of Science and Technology, Norway
11:30–12:00	
	<i>On how to approach uncertainty in reliability and availability analyses, using the Bayesian paradigm</i>
	Terje Aven
	Stavanger University College, Norway

<i>Session Number</i>	22 (Invited)
<i>Session Title</i>	Recent Advances in Survival Analysis
<i>Time and Day</i>	10:30–12:00, Friday
<i>Place</i>	Room 205, Russell House
<i>Session Organizer</i>	Jane-Ling Wang , University of California, Davis
<i>Session Chair</i>	Jane-Ling Wang , University of California, Davis
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10:30–11:00	
	<i>On some statistical inference problems involving the bivariate mean residual function</i>
	Javier Rojo* , Musie Ghebremichael
	Rice University
11:00–11:30	
	<i>Recurrent Event Processes With Shape And Size Parameters</i>
	Mei-Cheng Wang
	Johns Hopkins University
11:30–12:00	
	<i>Empirical likelihood based survival function estimation for current status data</i>
	Ian McKeague
	Florida State University

<i>Session Number</i>	23 (Invited)
<i>Session Title</i>	Regression Models and Recurrent Events
<i>Time and Day</i>	10:30–12:00, Friday
<i>Place</i>	Room 303, Russell House
<i>Session Organizer</i>	Organizers
<i>Session Chair</i>	Ying Qing Chen , University of California, Berkeley

10:30–11:00

Robust tests for trials with recurrent events occurring over multiple treatment periods

Richard J. Cook*, **Wei Wei**

University of Waterloo, Canada

11:00–11:30

Linear Regression With Censored Data

Peter J. Smith

RMIT University, Australia

11:30–12:00

Variable Selection Methods in Nonparametric Accelerated Lifetime Regression Models

K. B. Kulasekera

Clemson University

<i>Session Number</i>	24 (Invited)
<i>Session Title</i>	New Ideas in Reliability with Applications
<i>Time and Day</i>	10:30–12:00, Friday
<i>Place</i>	Room 305, Russell House
<i>Session Organizer</i>	Robert Launer , Army Research Office
<i>Session Chair</i>	Robert Launer , Army Research Office

10:30–11:00

Stress-Strength Testing: Some Classical and Some New Formulations and Results

Francisco Samaniego

University of California, Davis

11:00–11:30

Bayes Methods in Repair Models

Jayaram Sethuraman

Florida State University

11:30–12:00

When Does Indefinite Testing Assure Infinite Trustworthiness?

Nozer D. Singpurwalla

George Washington University

12:00–12:15
Group Photo Session
Location: Front of Longstreet Theatre

12:15–2:00
Lunch Break
(On Your Own)

12:00–6:00
Poster Session/Displays II
(See list of Presenters at the End of Program)

<i>Session Number</i>	25 (Invited)
<i>Session Title</i>	Bayesian Inference in Reliability and Survival Analysis
<i>Time and Day</i>	2:00–3:30, Friday
<i>Place</i>	Room 203, Russell House
<i>Session Organizer</i>	Organizers
<i>Session Chair</i>	Deb Sinha , Medical University of South Carolina

2:00–2:30*Bayesian Inference about the Ratio of Percentiles***Richard A. Johnson***, **Songyong Sim**

University of Wisconsin-Madison

2:30–3:00*Bayesian Nonparametric Estimation in a Series System or a Competing-Risks Model***Ram C. Tiwari**

National Cancer Institute, NIH

3:00–3:30*Monte Carlo Methods for Bayesian Analysis of Survival Data Using Mixtures of Dirichlet Process Priors***Hani Doss***, **Fred Huffer**

Ohio State University

<i>Session Number</i>	26 (Invited)
<i>Session Title</i>	Competing Risks
<i>Time and Day</i>	2:00–3:30, Friday
<i>Place</i>	Room 205, Russell House
<i>Session Organizer</i>	John Klein , Medical College of Wisconsin
<i>Session Chair</i>	Thomas Scheike , University of Copenhagen, Denmark

2:00–2:30

Cumulative Incidence Regression

Jason P. Fine

University of Wisconsin, Madison

2:30–3:00

Regression analysis of competing risks data using pseudo-observations

Per Kragh Andersen

University of Copenhagen, Denmark

3:00–3:30

Extensions and applications of the Cox-Aalen survival model

Thomas H. Scheike, Mei-Jie Zhang*

Medical College of Wisconsin

<i>Session Number</i>	27 (Invited)
<i>Session Title</i>	Models in Reliability and Survival Analysis
<i>Time and Day</i>	2:00–3:30, Friday
<i>Place</i>	Room 303, Russell House
<i>Session Organizer</i>	Martin Crowder , Imperial College, United Kingdom
<i>Session Chair</i>	Paul Kvam , Georgia Tech University

2:00–2:30

Modelling Converging Hazards

Robin Henderson*, Peter Barker

Lancaster University, United Kingdom

2:30–3:00

A flexible additive multiplicative hazard model

Torben Martinussen

The Royal Veterinary and Agricultural University, Denmark

3:00–3:30

Proportional Rates/Means Models for Clustered Recurrent Event Data

Jianwen Cai*, Douglas E. Schaebel

University of North Carolina at Chapel Hill

<i>Session Number</i>	28 (Invited)
<i>Session Title</i>	Statistical Modelling in Reliability
<i>Time and Day</i>	2:00–3:30, Friday
<i>Place</i>	Room 305, Russell House
<i>Session Organizer</i>	Frank Samaniego , University of California, Davis
<i>Session Chair</i>	Frank Samaniego , University of California, Davis

2:00–2:30

The Gompertz degradation model, functional equations and resulting distributions in one and two dimensions

Albert W. Marshall

University of British Columbia

2:30–3:00

The Physical Basis of Statistical Models in Reliability

Max Mendel

Boston Fund Services

3:00–3:30

Comparing Reliability Experiments with the Convolution Order

Moshe Shaked

University of Arizona

<i>Session Number</i>	29 (Plenary)
<i>Session Title</i>	Multivariate Failure Times
<i>Time and Day</i>	3:30–4:15, Friday
<i>Place</i>	Russell House Ballroom
<i>Session Organizer</i>	Organizers
<i>Session Chair</i>	James R. Hebert , University of South Carolina

3:30–4:15

Aspects of the Analysis of Multivariate Failure Time Data

Ross L. Prentice

Fred Hutchinson Cancer Research Center and University of Washington

4:15–4:30
Coffee Break

<i>Session Number</i>	30 (Invited)
<i>Session Title</i>	Models Based on Poisson-Type Processes
<i>Time and Day</i>	4:30–6:00, Friday
<i>Place</i>	Room 203, Russell House
<i>Session Organizer</i>	Organizers
<i>Session Chair</i>	Marcus Agustin , Southern Illinois University, Edwardsville

4:30–5:00
On Stochastic Approximation Methods in Reliability
Gabriel V. Orman
 “Transilvania” University of Brasov, Romania

5:00–5:30
On Some Problems Relating to Model Selection for the Power Law Process
Asit P. Basu*, **Mary Richardson**
 University of Missouri-Columbia

5:30–6:00
Estimating and Simulating NonHomogeneous Poisson Processes
Lawrence M. Leemis
 The College of William and Mary

<i>Session Number</i>	31 (Invited)
<i>Session Title</i>	Residual Life Functions
<i>Time and Day</i>	4:30–6:00, Friday
<i>Place</i>	Room 205, Russell House
<i>Session Organizer</i>	Organizers
<i>Session Chair</i>	Kerrie Nelson , University of South Carolina

4:30–5:00
Analysis of proportional mean residual life model in presence of censoring
Ying Qing Chen
 University of California, Berkeley

5:00–5:30
A characterization of the multivariate normal distribution by using the hazard gradient
Jorge Navarro*, **Jose M. Ruiz**
 Universidad de Murcia, Spain

5:30–6:00
Information in Lifetime and Residual Lifetime Distributions
Nader Ebrahimi, **Ehsan S. Soofi***
 University of Wisconsin-Milwaukee

<i>Session Number</i>	32 (Invited)
<i>Session Title</i>	Quality of Life and Accelerated Testing
<i>Time and Day</i>	4:30–6:00, Friday
<i>Place</i>	Room 303, Russell House
<i>Session Organizer</i>	Organizers
<i>Session Chair</i>	John Spurrier , University of South Carolina.

4:30–5:00*Quality of Life — Adjusted Survival Analysis: Parametrics and Beyond***Pranab Kumar Sen**

University of North Carolina, Chapel Hill

5:00–5:30*A General Bayes Exponential Inference Model for Accelerated Life Testing***J. René Van Dorp, Thomas A. Mazzuchi***

George Washington University

5:30–6:00*A Bibliography of Accelerated Test Plans***Wayne B. Nelson**

Schenectady, NY

<i>Session Number</i>	33 (Invited)
<i>Session Title</i>	Survival Analysis: Some Current Research in Biostatistics
<i>Time and Day</i>	4:30–6:00, Friday
<i>Place</i>	Room 305, Russell House
<i>Session Organizer</i>	Robert Strawderman , Cornell University
<i>Session Chair</i>	Robert Strawderman , Cornell University

4:30–5:00*Marginal Estimation in Multistage Models Using Current Status Data***Somnath Datta**

University of Georgia

5:00–5:30*Estimation of Optimal Treatment Strategies for Survival Outcomes***Jamie Robins**

Harvard University

5:30–6:00*Semiparametric Bivariate Location-Shift Regression Model for Estimation of the Joint Effect of Treatment on Time to Disease Progression and Death***!!!!WITHDRAWN!!!!****Daniel O. Scharfstein*, James M. Robins, Mark J. van der Laan**

Johns Hopkins University

6:30–9:30
Happy Hour
Dinner
Talk
(at the Russell House Ballroom)

<i>Session Number</i>	34 (Banquet and Plenary)
<i>Session Title</i>	‘Surviving Contemporary Times’
<i>Time and Day</i>	8:30–9:15PM, Friday
<i>Place</i>	Russell House Ballroom
<i>Session Organizer</i>	Organizers
<i>Session Chair</i>	Thomas Mazzuchi , George Washington University

8:30–9:15
Surviving Financial Risk
Nozer Singpurwalla
 George Washington University

Saturday May 24, 2003

7:00–8:30
Breakfast
Russell House

<i>Session Number</i>	35 (Invited)
<i>Session Title</i>	Bayesian Modelling in Survival Analysis and Reliability
<i>Time and Day</i>	8:00–9:30, Saturday
<i>Place</i>	Room 203, Russell House
<i>Session Organizer</i>	Organizers
<i>Session Chair</i>	Alyson Wilson , Los Alamos National Laboratory

8:00–8:30

Some Issues in Bayesian Modeling of Health Surveillance Data

Andrew B. Lawson

University of South Carolina

8:30–9:00

Models and Bayesian analysis of recurrent events data with dependent termination

Debajyoti Sinha

Medical University of South Carolina

9:00–9:30

Uncertainty in Counts and Operating Time in Estimating Poisson Occurrence Rates

Harry F. Martz*, **Michael S. Hamada**

Los Alamos National Laboratory

<i>Session Number</i>	36 (Invited)
<i>Session Title</i>	Adaptive Designs with Delayed Responses
<i>Time and Day</i>	8:00–9:30, Saturday
<i>Place</i>	Room 205, Russell House
<i>Session Organizer</i>	Nancy Flournoy , University of Missouri, Columbia
<i>Session Chair</i>	William Rosenberger , University of Maryland at Baltimore County

8:00–8:30

The accelerated biased coin up-and-down-design in phase I trials

Mario Stylianou*, **Dean Follmann**

National Heart Lung and Blood Institute

8:30–9:00

Optimality, Variability, Power: A Template for Evaluating Response-Adaptive Randomization Procedures

William F. Rosenberger*, **Feifang Hu**

University of Maryland, Baltimore County

9:00–9:30

Handling Delayed Response in Response-Adaptive Randomization Procedures Using Urn Models

Feifang Hu*, **William F. Rosenberger**, **Z. D. Bai**

University of Virginia

<i>Session Number</i>	37 (Invited)
<i>Session Title</i>	Models and Inference for Reliability Systems
<i>Time and Day</i>	8:00–9:30, Saturday
<i>Place</i>	Room 303, Russell House
<i>Session Organizer</i>	Organizers
<i>Session Chair</i>	Olcay Akman , Coastal Carolina University

8:00–8:30

Probabilistic and Statistical Analysis of S-Order Old Age Life Distributions

Ibrahim A. Ahmad

University of Central Florida

8:30–9:00

Stochastic Comparisons of Parallel Systems

Subhash Kochar*, **Baha-Eldin Khaledi**

Indian Statistical Institute, India

9:00–9:30

A Survival Model of Medical Treatments: Life (Function) after Death

Gabor J. Szekely

Bowling Green State University

<i>Session Number</i>	38 (Invited)
<i>Session Title</i>	Semiparametric Modelling in Survival Analysis
<i>Time and Day</i>	8:00–9:30, Saturday
<i>Place</i>	Room 305, Russell House
<i>Session Organizer</i>	Ian McKeague , Florida State University
<i>Session Chair</i>	Ian McKeague , Florida State University

8:00–8:30

Semiparametric Time-Varying Coefficients Regression Model for Longitudinal Data

Yanqing Sun

University of North Carolina, Charlotte

8:30–9:00

Double robust estimation of causal parameters with censored longitudinal data

Mark J. van der Laan

University of California, Berkeley

9:00–9:30

Tests for Comparing Mark-specific Hazards and Cumulative Incidence Functions Between Two Groups, with Application to HIV Vaccine Trials

Peter Gilbert

Fred Hutchinson Cancer Research Center, Seattle

9:30–9:45
Coffee Break

<i>Session Number</i>	39 (Invited)
<i>Session Title</i>	Aspects of Reliability and Risk Modelling
<i>Time and Day</i>	9:45–11:15, Saturday
<i>Place</i>	Room 203, Russell House
<i>Session Organizer</i>	Organizers
<i>Session Chair</i>	Lori Thombs , University of South Carolina

9:45–10:15

On discrete time minimal repair processes

Felix Belzunce*, **E. Ortega**, **Jose-Maria Ruiz**

Univ. Murcia Campus de Espinardo, Spain

10:15–10:45

X-Testing using Binary Data with Applications to Reliability Demonstration Plans

David Mease

University of Michigan, Ann Arbor

10:45–11:15

Multivariate extremes, max-stable processes and the analysis of financial risk

Richard L. Smith*, **Zhengjun Zhang**

University of North Carolina, Chapel Hill

<i>Session Number</i>	40 (Invited)
<i>Session Title</i>	Reliability Classes of Distributions
<i>Time and Day</i>	9:45–11:15, Saturday
<i>Place</i>	Room 205, Russell House
<i>Session Organizer</i>	Thomas Savits , University of Pittsburgh
<i>Session Chair</i>	Thomas Savits , University of Pittsburgh

9:45–10:15

Mixtures of IFR Weibull Distributions

Eshetu T. Wondmagegnehu

Western Michigan University

10:15–10:45

Bathtub Shaped Failure Rate Function And Lower Bounds For Some Optimization Problems

Jie Mi

Florida International University

10:45–11:15

On Shapes and Mixtures

Thomas H. Savits

University of Pittsburgh

<i>Session Number</i>	41 (Invited)
<i>Session Title</i>	Survival Analysis and Demography
<i>Time and Day</i>	9:45–11:15, Saturday
<i>Place</i>	Room 303, Russell House
<i>Session Organizer</i>	Niels Keiding , University of Copenhagen, Denmark
<i>Session Chair</i>	Niels Keiding , University of Copenhagen, Denmark

9:45–10:15*The Accelerated Gap Times Model***Robert L. Strawderman**

Cornell University

10:15–10:45*Survival Models in Aging Studies of Biological Systems***Anatoli I. Yashin***, **Andreas Wienke**, **Konstantin G. Arbeev**, **Serge I. Boiko**, **Anna Semmenchenko**, **Svetlana V. Ukraintseva**

Max Planck Institute of Demographic Research, Germany

10:45–11:15*Age-period-cohort models in demography***Niels Keiding**

University of Copenhagen, Denmark

<i>Session Number</i>	42 (Invited)
<i>Session Title</i>	Recurrent Events and Survival Analysis
<i>Time and Day</i>	9:45–11:15, Saturday
<i>Place</i>	Room 305, Russell House
<i>Session Organizer</i>	Mei-Cheng Wang , Johns Hopkins University
<i>Session Chair</i>	Mei-Cheng Wang , Johns Hopkins University

9:45–10:15*Frequency of recurrent events at failure time: Modeling and inference***Yijian Huang**

Fred Hutchinson Cancer Research Center

10:15–10:45*Proportional hazards regression model with unknown link function***Jane-Ling Wang**

University of California, Davis

10:45–11:15*Inference for a General Class of Models for Recurrent Events***Edsel A. Peña***, **Elizabeth H. Slate**

University of South Carolina

11:15–11:30
Coffee Break

<i>Session Number</i>	43 (Plenary)
<i>Session Title</i>	Aspects of Mixtures in Failure-Time Modelling
<i>Time and Day</i>	11:30–12:15, Saturday
<i>Place</i>	Russell House Ballroom
<i>Session Organizer</i>	Organizers
<i>Session Chair</i>	James Lynch , University of South Carolina

11:30–12:15
On the Failure Rates of Mixtures
Henry W. Block
University of Pittsburgh

<i>Session Number</i>	44 (Closing Session)
<i>Session Title</i>	Announcements and Closing of Conference
<i>Time and Day</i>	12:15-12:30, Saturday
<i>Place</i>	Russell House Ballroom
<i>Session Organizer</i>	Organizers
<i>Session Chair</i>	Edsel A. Peña , University of South Carolina

Announcements [MMR2004 (Alyson Wilson, LANL); Others (Chin-Diew Lai)]

Closing of Conference

Poster Session I Presenters

May 22, 2003 (Thursday)

Russell House Room 302

Period: 12:00–6:00

(Set-Up Time: Thursday Morning)

Poster Board #1

Simultaneous Group Sequential Analysis of Rank-Based and Weighted Kaplan-Meier Tests for Paired Censored Survival Data

Adin-Cristian Andrei*, Susan Murray

University of Michigan, Ann Arbor

Poster Board #2

Nonparametric Accelerated Degradation Models in Life-Testing

Mohammed Al-Haj Ebrahim*, James Higgins

Kansas State University

Poster Board #3

Quality of Life in Epilepsy Patients after Resective Surgery by Seizure Outcome

Dan Frobish

Northern Illinois University

Poster Board #4

The generalized hazardgram: An alternative nonparametric estimator for the hazard function

Juan R. González*, Pedro Delicado

Universitat Politècnica de Catalunya, Spain

Poster Board #5

Inference from Accelerated Degradation and Failure Data Based on Gaussian Process Models

W. J. Padgett, Meredith A. Tomlinson*

University of South Carolina

Poster Board #6

A General Counting Process Model for Recurrent Event Data

Russell S. Stocker IV*, Edsel A. Peña

University of South Carolina

Poster Session II Presenters

May 23, 2003 (Friday)
Russell House Room 302
Period: 12:00–6:00
(Set-Up Time: Friday Morning)

Poster Board #1

Comparison of Failure Probabilities in the Presence of Competing Risks

Ruta Bajorunaite*, John P. Klein

Medical College of Wisconsin

Poster Board #2

Bivariate Mean Residual Life Function

Javier Rojo, Musie Ghebremichael*

Rice University

Poster Board #3

Tensile reliability of an inhomogeneous bundle of fibers, using the Maximum Entropy Principle

Jim Gleaton*, Jim Lynch

University of North Florida

Poster Board #4

Modeling the agreement of discrete bivariate survival times using kappa index

Ying Guo*, Amita Manatunga

Emory University

Poster Board #5

Examining the Reliability of the DAC Statistic in Detecting Spatial Clusters and its Relationship with the Survivorship Function

J. Wanzer Drane, Alexandru I. Petrisor*

University of South Carolina

About Poster Presentations/Displays

The dimension of the poster boards is 3 feet by 4 feet. It will be able to accommodate a poster of size 36 inches by 48 inches, or 12 pages/slides each of size 8.5 inches by 11 inches. We will provide the connectors to the poster boards (e.g., thumb tacks, etc.). Set-up times of the posters will be during the morning, preferably during the coffee breaks, and in the afternoon, participants will be able to view the posters. **Questions and Answer** sessions for these posters will be during lunch breaks, coffee breaks, and after the end of the afternoon sessions. Poster displays will be in Room 302.

Book Displays and Other Information

There will be some book displays and some miscellaneous information in Room 302 where the poster displays will be held.

Possible After-Conference Activities
Saturday Afternoon
(On Your Own or Organized During Conference)

- Trip to the Congaree Swamp.
 - Golfing Activities.
 - Tour of the University of South Carolina.
 - Tour of the City of Columbia.
 - The Spoleto Arts Festival in Charleston, South Carolina also begins the weekend of the ICRSA. See the website <http://www.spoletousa.org/>.
 - Research Activities.
-

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Instructions to Access Electronic Mail

To access your electronic mail you may use the computers in the 2nd floor of the Russell House. These computers allow you to access the Internet through Internet Explorer, but will not allow you to `telnet` or to use `secure shell` client to your computer. If you cannot use Internet Explorer to access your mail, then you may use the computers at LeConte College Building. Follow the instructions below.

A publicly accessible computer lab is located in Room 124 in LeConte College Building [corner of Pickens St. and Greene St.], home of the Statistics Department and the Mathematics Department. Login information (username, password and domain) are posted next to the computers in that room. If you need to secure shell back to your home machines, `ssh` client is available on the PCs in this room.

Maps and Directions

Maps and directions will be provided by the USC Continuing Education. Please refer to materials included in your conference bag.

Shuttle and Taxicab Phone Numbers

- AAA Airport Shuttle Service 796-3626
- AAA Taxi Service 791-7282
- Ard’s Airport Shuttle 791-5767; 240-9681
- Capitol City Cab 233-8294
- Checker Yellow Cab Co Inc 799-3311
- Classic Taxi Cab Company 348-0662
- Earth Shuttle Service 714-0080
- Gamecock Cab Co 796-7700

Restaurants and Other Eating Places

Detailed information will be provided by Continuing Education. Please refer to materials included in your conference bag.
