

# Preface

On October 12–14, 2011, the Biostatistics and Risk Assessment Center (BRAC) and the Department of Epidemiology and Biostatistics of the University of Maryland hosted an international conference entitled “Risk Assessment and Evaluation of Predictions.” The conference was held in Silver Spring, Maryland.

In assembling this volume, we invited conference participants to contribute their articles. All papers were peer-reviewed, by anonymous reviewers, and revised before final editing and acceptance. Although this process was quite time-consuming, we believe that it greatly improved the volume as a whole, making this book a valuable contribution to the field of research in risk assessment and evaluation of predictions.

This volume presents a broad spectrum of articles presented at the conference. It includes 21 chapters organized into three parts:

- Part I: Risk Assessment in Lifetime Data Analysis,
- Part II: Evaluation of Predictions, and
- Part III: Applications.

Part I includes different methods for risk assessment in survival analysis such as accelerated failure time models; threshold regression models; residual survival models; competing risks; Neyman, Markov processes and survival analysis; and nonparametric inference. Part II covers many important issues related to evaluation of risk predictions as well as recent advances in the development of receiver-operating characteristic (ROC) curves. Part III presents a variety of applications from genetics, competing risk models and breast cancer, product life cycle evaluation, environmental exposure biomarkers, extreme wind speed, and consumer services.

We hope that this volume will serve as a valuable reference for researchers in these important areas.

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