In Brief

* * * * * * * * * * * *

Our website is:
http://community.amstat.org/lifetimedataanalysislidainterestgroup/home.
Published newsletters are archived under "Library".

* * * * * * * * * * * *

Nomination for Election 2018
The Nomination Committee calls for nomination for Chair-Elect, Secretary, Program Chair, and Council of Sections Representative.

* * * * * * * * * * * *

Annual General Meeting at JSM 2018
Annual General Meeting of the Lifetime Data Analysis Interest Group will be held at the Joint Statistical Meetings in Vancouver on Tuesday July 31 at 5 p.m. in the Vancouver Convention Centre – West 111.

* * * * * * * * * * * *

LIDA-IG Activities at JSM 2018
One invited session and three topic-contributed sessions; and call for invited session proposals for JSM 2019.

* * * * * * * * * * * *

Membership in the LIDA-IG
If you have an interest in life history data you are invited to join.
Membership forms can be found on our website.

LIDA Officer

Chair:	Richard Cook
Chair-Elect:	Jianwen Cai
Past Chair:	Mei-Cheng Wang
Secretary 2015-2018:	Jonathan Siegel
Treasurer 2016-2019:	Chiung-Yu Huang
Program Chair (2018):	Yu Shen
Webmaster:	Weiliang Qiu
Newsletter Editor:	Jun Yan

Chair's Message

It is now the height of summer, which means conference season is upon us! At the conferences I've been attending I have been struck by the many sessions on advances and applications involving lifetime data science. This attests to the ongoing demand and impact of our field. This will be in further evidence at the Joint Statistical Meetings where a record number of sessions are sponsored by our interest group!

During the winter months the LiDA Executive Committee was very active finalizing the proposal for the creation of a section of the American Statistical Association on Lifetime Data Science. As many of you will recall, a membership drive and electronic petition were carried out early in the year in support of this proposal. I am pleased to report that by the time of the submission the membership of our Interest Group rose to 224 individuals who are confirmed members of the ASA with an additional 35 individuals who were not members of the ASA! I'd like to thank the Executive Committee and membership for being so helpful during this time! The proposal is currently under review by the ASA Committee of Sections and news of the outcome should be available within the year.

Plans for the 2019 Lifetime Data Science Conference in Pittsburgh Pennsylvania are continuing to take shape with several workshops, world-renowned keynote speakers, and an exciting scientific program. Further details are provided in an entry in this newsletter. Please mark May 29–31, 2019 on your calendar and plan to join us in Pittsburgh!

The Annual General Meeting of the Lifetime Data Analysis Interest Group will be held at the Joint Statistical Meetings in Vancouver on Tuesday July 31 at 5 p.m. in the Vancouver Convention Centre – West 111. Please attend if you can make it to hear more details about the activities of our group! I hope your summer is an enjoyable one and I look forward to seeing many of you at the JSM!

Richard Cook, Chair 2018

Election 2018
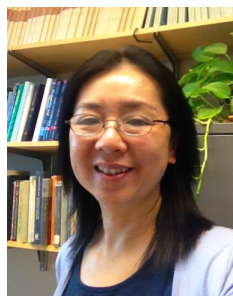
As the Past Chair of LIDA-IG, I will be in charge of the annual election this fall for the positions of 2019 Chair-Elect, 2019 Program Chair-Elect, Secretary, and Council of Sections Representative:

- The elected candidate for 2019 Chair-Elect will serve as Chair in 2020 and Past Chair in 2021.
- The elected candidate for Secretary will serve for a three year term, 2019∼2021.
- The elected candidate for 2019 Program Chair will be Program Chair in 2020 and Past Chair in 2021.
- The elected candidate for Council of Sections Representative will serve for a three year term, 2019∼2021.

In accordance with the LIDA-IG charter, the Nominating Committee consists of the Past Chair (Mei-Cheng Wang), the Past Program Chair (Bin Nan), and one person designated by the Chair (TBD) and the Past Chair serves as Chair of the Nominating Committee. The Nominating Committee shall be responsible for nominating a slate of officers for each annual election. There is also the opportunity for nominations from the membership. Such nominations must be signed by at least five members of the Interest Group. The nominators should also be sure that the nominee is a member of the LIDA-IG and of the ASA and is willing to participate. Nominations should be sent to the Chair (Richard J Cook at `rjcook@uwaterloo.ca`) with a copy to the Secretary (Jonathon Siegel at `Jonathon.siegel@bayer.com`). The deadline for nominations is August 15, 2018. As last year, the election will be coordinated by the Committee on Sections (COS) of the American Statistical Association. Following a recommendation of the COS, the LIDA-IG charter now indicates that the elected positions of Secretary and Treasurer are for three year terms. By agreement of those currently holding the positions, the position of Treasurer will be a part of the election in 2019.

Mei-Cheng Wang, Nomination Committee Chair

Charter and Member Update

LIDA is in the process of applying to become an ASA section rather than an interest group. To that end, the application we submitted to the ASA Council of Sections includes a draft new section charter. The section charter, if approved, will change some things from our current charter as an interest group.

The biggest change we'll need to make is that as a section, we will be required to limit our members to ASA members. Although we will be able to continue to include all current members and any new interested associates in our mailing lists and activities, and everyone will continue to be welcome at our conferences etc., only ASA members will be able to vote, serve as section officers, or put things on our election ballot. We will be able to charge dues that will be collected through the ASA membership process like other section dues, although we havent worked out how much new dues will be. ASA staff will handle our accounting and bank accounts. ASA will handle our elections, which will occur at the same time as other ASA elections.

We will change our set officers somewhat to conform to current practice for sections. The program chair, who is responsible for our educational program and conferences and is currently appointed, will become an elected position. The program chair will rotate in, with a program-chair-elect who becomes program chair next year, somewhat like the current chair-elect and chair. There will be a new Council of Sections Representative position.

Our leadership structure will have a similar set of committees, but the ASA is requiring us to have a little more formality in the way we conduct business and keep records than we have been doing as an interest group. As before, our executive committee will oversee operations and well have a program and a nominations committee. We will have to document the way

we authorize and spend money more carefully, and ensure that committees have quorums and similar formalities.

Members will continue to be able to nominate people for elections and to propose amendments to the charter by petition, as before. However, the number of member signatures needed to put a person or amendment on the election ballot will increase somewhat, to 5% of our membership.

We think that the benefits of becoming a section, including access to ASA resources and services, session sponsorship at JSM, the ability to have ASA staff help us put on and account for conferences, and other benefits are worth it, as they will enable us to expand reach and more fully support research and practice in the field of lifetime data science.

Jonathan Siegel, Secretary

2019 Conference on Lifetime Data Science in Pittsburgh
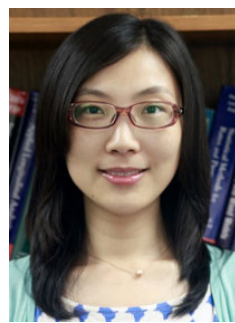
The 2019 conference on Lifetime Data Science will be held Following the resounding success of the inaugural conference at the University of Connecticut in 2017 a conference on Lifetime Data Science is planned for 2019 which is to be held at the University of Pittsburgh on May 29–31, 2019 (Wednesday to Friday). The 2019 conference will feature workshops, 3 plenary talks, approximately 40 invited sessions, and a poster session.
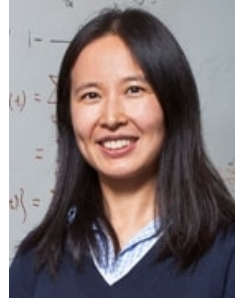
The short courses will be given by leading experts in methods for lifetime data analysis. Jin Qin (NIH) will give a short course on "A New Perspective on Right Censored, Left Truncated and Length Biased Survival Data". Ornulf Borgan (University of Oslo) and Sven Ove Samuelsen (University of Oslo) will lead a workshop on "Two Phase Studies for Lifetime Data", and Hein Putter (Leiden University) will give a workshop on "Dynamic Prediction using Landmarking".

Our distiguished keynote speakers include Dr. Odd Aalen from the University of Oslo, Dr. Danyu Lin from the University of North Carolina-Chapel Hill, and Dr. Ross Prentice from the University of Washington. The receipion will be held on May 29, 2019 with a poster competition, and the banquet will held on May 30, 2019, both at Wyndham Pittsburgh University Center.

The conference will contain many invited sessions on a broad range of topics in lifetime data science such as biased sampling schemes, biomarkers, causal inference, clinical trials, competing risks, dependence models, epidemiological methods, frailty models, high dimensional data, infectious disease, interval censoring, joint modeling, measurement error, missing data, mixture models, multistate processes, prediction, pregnancy studies, recurrent events, transplantation, and truncation.

Ying Ding and *Yu Cheng*, Co-Chairs, Local Organizer

Figure 1: Invited speakers at SAM 2018, University of Washington, St. Louis.

LIDA-IG Activities at JSM 2018 and Call for Invited Session Proposals for JSM 2019
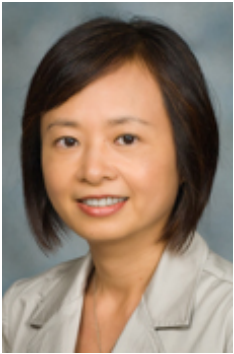
We appreciate the invited session organizers who chose LIDA-IG as either the primary sponsor or co-sponsor. For the 2018 JSM Program at Vancouver, one invited session organized by Dr. Naisyin Wang is co-sponsored by LIDA-IG. As an interest group, we have allocation of one topic contributed session organized by Dr. Qingning Zhou. In addition, we have two topic-contributed sessions co-sponsored by LIDA-IG, which are organized by Drs. Xuelin Huang and Mei-Ling Lee, respectively. Please Mark your calendar and attend these sessions to support LIDA-IG.

- 215 (Mon, 7/30/2018, 2:00 PM — 3:50 PM) CC-West 224
  Non- and Semiparametric Methods to Accommodate Dependency and Heterogeneity in Complex Data — Invited Papers
  sponsored by Section on Nonparametric Statistics, IMS, Lifetime Data Analysis Interest Group
  Organizer(s): Naisyin Wang, U of Michigan
  Chair(s): Gongjun Xu, U of Michigan

- 18 (Sun, 7/29/2018, 2:00 PM — 3:50 PM) CC-West 215/216
  Survival Analysis Developments for Improving Medical Decision Making — Topic Contributed Papers)
  ENAR, Biometrics Section, Lifetime Data Analysis Interest Group
  Organizer(s): Xuelin Huang, University of Texas MD Anderson Cancer Center
  Chair(s): Yayuan Zhu, University of Texas MD Anderson Cancer Center

- 113 (Mon, 7/30/2018, 8:30 AM — 10:20 AM) CC-West 202
  Recent Advances in Design and Analysis of Two-Phase Studies — Topic Contributed Papers
  Lifetime Data Analysis Interest Group
  Organizer(s): Qingning Zhou, University of North Carolina at Charlotte
  Chair(s): Yinghao Pan, Fred Hutchinson Cancer Research Center

- 468 (Wed, 8/1/2018, 8:30 AM — 10:20 AM) CC-West 222
  First-Hitting-Time Based Threshold Regression and Applications — Topic Contributed Papers
  Section on Risk Analysis, Lifetime Data Analysis Interest Group, International Chinese Statistical Association
  Organizer(s): Mei-Ling Ting Lee, University of Maryland
  Chair(s): Man-Hua Chen, Tamkang University

We strongly encourage LIDA-IG members to include LIDA-IG as the primary or co-sponsor, when you propose an invited session related to lifetime data or associated areas for JSM 2019 in Denver, Colorado. An invited session proposal only needs to include a session title, general description of the session, list of participants, and tentative presentation titles (can be modified later). If a proposal is not selected for an invited session, it can be re-submitted as a topic contributed session. Proposals for invited sessions of JSM 2019 are due at the beginning of September. More accurate information will be available at the JSM in Vancouver.

Yu Shen, Program Chair 2018

LIDA-IG Activities at SAM 2018 Workshop

The Fourth International Workshop on the Statistical Analyses of Multi-outcome Data (SAM 2018) was held at Washington University in St. Louis on June 11–12, 2018. Eighty participants from four continents (North America, Europe, Asian, and Australia) attended the two-day workshop. The first three meetings were successfully convened in the University of Paris VI
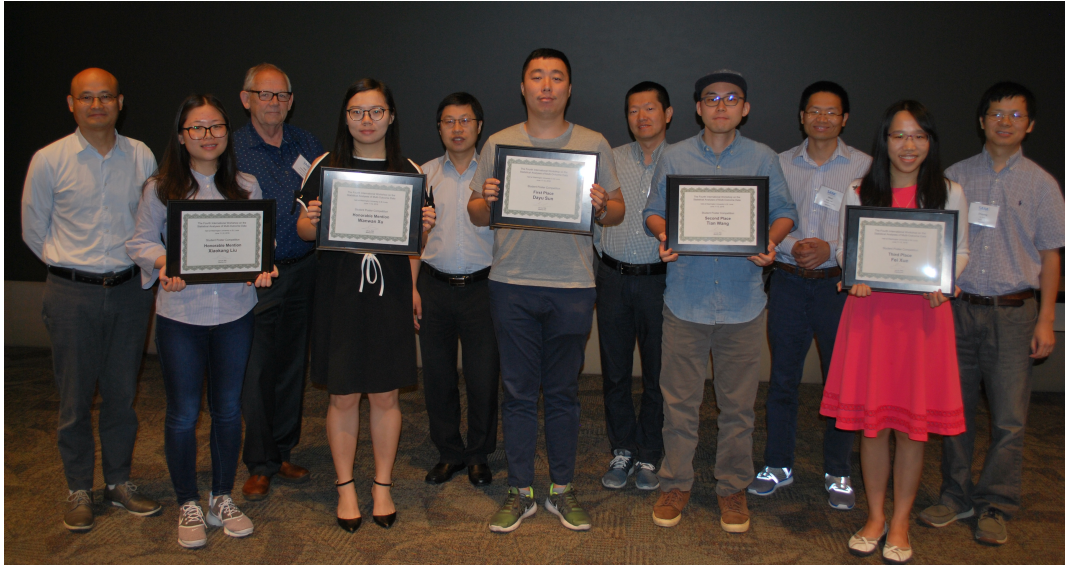
Figure 2: Winners of the student poster competition at SAM 2018, University of Washington, St. Louis.

(2012), Cambridge University (2014), and Renmin University of China in Beijing (2016).

Twenty-one invited speakers (Figure 1) presented interesting topics on joint models, dynamic prediction, and various flexible and robust models in multi-outcome data. The workshop is composed of two plenary sessions (given by Drs. Jeremy Taylor and Richard Cook) and 6 invited sessions. A tutorial was given on June 10 with an emphasis on the implementation of the advanced methods in practical data analysis. The workshop's website is `https://sites.wustl.edu/sam2018/`. Pictures and slides are available at `https://wustl.app.box.com/s/nk4ag4cqx5h7surtocailihvgg4b7et5`.

A student poster competition was held during the meeting. The top three winners were Dayu Sun (University of Missouri, Columbia), Tian Wang (Washington University in St. Louis), and Fei Xue (University of Illinois, Urbana–Champaign). Xiaokang Liu and Wanwan Xu (both from University of Connecticut) received honorable mention. See Figure 2 for a group picture of the winners with the organizers and reviewers.

The organizing committee acknowledges the sponsorship from the Division of Biostatistics at Washington University, the Institute of Clinical and Translational Sciences at Washington University, the Midwest Chapter of the International Chinese Statistical Association, and the Lifetime Data Analysis Interest Group of the American Statistical Association. We thank Linda Schreier, Jocelyn Johnson, Matthew Brown for their exceptional help to make this one the best in the series. We are also grateful to informative advice from Drs. Philip Miller and Chengjie Xiong. Planning is underway for the fifth workshop in mid 2020. To be involved in planning and organizing, please contact Lei Liu at `lei.liu@wustl.edu`.

Lei Liu, Washington University in St. Louis

Member Awards

Dipankar Bandyopadhyay, Professor of Biostatistics, Virginia Commonwealth University, was named 2018 Fellow of the ASA "for innovative statistical applications to high-impact problems in oral epidemiology and public health; for excellent research contributions to survival analysis, correlated data, spatial epidemiology, and robust regression; for extensive biomedical collaborations; and for exemplary service to the profession."

Ying Qing Chen, Full Member at the Fred Hutchinson Cancer Research Center and Affiliate Professor of Biostatistics at the University of Washington, was named 2018 Fellow of the ASA "for influential contributions in statistical methods development and applications; for profound contribution to HIV/AIDS prevention research; and for dedicated service to the profession."

Chiung-Yu Huang, Professor of Biostatistics, University of California at San Francisco, was named 2018 Fellow of the ASA "for significant contribution to the literature on survival and recurrent event data analysis; for excellence in statistical methodology development for vaccine efficacy trials; for outstanding contributions to collaborative science across a wide range of areas, including malaria, influenza, transplant, and cancer research; and for outstanding service to ASA and to the profession."

Lei Liu, Professor of Biostatistics, Washington University, was named 2018 Fellow of the ASA "for excellence in research involving survival analysis and longitudinal data analysis, including multi-outcome data, and precision medicine; for significant contribution to collaborative science across a wide range of areas; and for dedicated service to the profession."

Mengling Liu, Associate Professor of Biostatistics, New York University, was named 2018 Fellow of the ASA for "outstanding research in survival and longitudinal methodology and epidemiologic methods; for important contributions to collaborative medical research; and for excellent administrative and scientific leadership."

**David A. Schoenfeld**, Professor of Medicine, Harvard Med-

ical School, Professor of Biostatistics, Harvard T. H. Chan School of Public Health, was named 2018 Fellow of the IMS "for the development of widely used statistical methods and software for the design and analysis of clinical trials, particularly with survival outcomes and biomarkers; and for statistical leadership in clinical research in cancer, HIV, amyotrophic lateral sclerosis, and critical care."

Sharon Xiangwen Xie, Professor of Biostatistics, University of Pennsylvania, was named 2018 Fellow of the ASA "for excellent statistical collaborative and methodological research in the area of neurodegenerative diseases; for exemplary mentoring of biostatistics graduate students and medical researchers; for leadership and development of outstanding biostatistics core facilities with national impact in neurodegenerative disease research; and for service to the profession."

Ying Zhang, Professor of Biostatistics, Indiana University, was named 2018 Fellow of the ASA "for outstanding contributions to the development of educational programs, and effective teaching and dissemination of statistical knowledge; for innovations in statistical methodology research in panel count data / interval-censored analyses; and for impactful applications to Huntington's Disease research."

Book Review

Biased Sampling, Over-identified Parameter Problems and Beyond
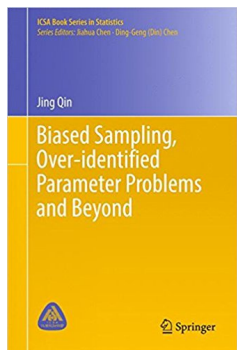
Jing QIN. Publisher: Springer, 2017. ISBN 978-981-10-4856-2.

Dr. Qin's book provides a comprehensive introduction to two important topics in statistics and economics, the biased sampling problems, where the observed sample is not a representative of the population of interest, and over-identified parameter estimation problems, where a model is often specified through estimating functions whose number is more than the free parameters of interest.

The discussion of the biased sampling and over-identified parameter problems focuses on various topics, including the length-based sampling, the case-cohort sampling, and many others. Specifically, Chapters 1 and 2 give examples and basic introductions to the length biased sampling and the closely related renewal process theory. Chapter 3 introduces more general biased sampling and their applications, including natural selection biased sampling problems and modelling based biased sampling problems. With the introductions in Chapters 1-3, the book further provides an excellent overview of various statistical inference methods in Chapters 4-9, including the parametric likelihood inference method (Chapter 4), optimal estimating function theory (Chapter 5), projection methods in semiparametric inference (Chapter 6), the generalized method of moments (GMM) method (Chapter 7), empirical likelihood method (Chapter 8), and Kullback-Leibler likelihood methods (Chapter 9). With these inference tools, general theories on biased sampling problem and case-cohort studies are introduced in Chapters 10 and 11, respectively. Other related discrete outcome problems with genetic applications and generalizations to continuous outcomes with outcome dependent sampling are further discussed in Chapters 12-15. Moreover, the book also introduces many related popular models and methods in statistics and economics, including density ratio models for two-sample and multiple-sample problems and for the case with covariates (Chapters 10-11, 17-18, 21), maximum rank estimation (Chapter 15), i.i.d. representation of a non-central hypergeometric distribution (Chapter 16), semiparametric finite mixture models (Chapter 17), casual inference and missing data (Chapters 19, 22), inference in finite populations (Chapter 20), and capture-recapture models (Chapter 23). In addition, Chapters 24 and 25 focus on the survival analysis models and related biased sampling problems. Finally, the pool adjacent violation algorithm and its applications to order restricted inferences, including isotonic regression analysis, the estimation of monotonic density and hazard functions, mixture models, current status data, and panel count data, are discussed in Chapter 26.

Dr. Qin did an excellent job putting these interesting topics together under the general framework of biased sampling and over identified problems. This book is easy to read with both contextual and technical details and various illustrative examples and exercises. It is very suitable for graduate students in statistics, biostatistics and related research areas as a topic course textbook, and for researchers and practitioners who are interested in statistical science.

Gongjun Xu
Department of Statistics, University of Michigan

New Articles in Lifetime Data Analysis

The July 2018 issue (Volume 24, number 3) of *Lifetime Data Analysis* has been published. The journal can be accessed at `https://link.springer.com/journal/10985`.

- A joint model of cancer incidence, metastasis, and mortality *by* Qui Tran, Kelley M. Kidwell, Alex Tsodikov. Pages 385-406
- Group and within-group variable selection for competing risks data *by* Kwang Woo Ahn, Anjishnu Banerjee, Natasha Sahr, Soyoung Kim. Pages 407-424
- The competing risks Cox model with auxiliary case covariates under weaker missing-at-random cause of failure *by* Daniel Nevo, Reiko Nishihara, Shuji Ogino, Molin Wang. Pages 425-442
- A regularized variable selection procedure in additive hazards model with stratified case-cohort design *by* Ai Ni, Jianwen Cai. Pages 443-463
- Flexible semi-parametric regression of state occupational probabilities in a multistate model with right-censored data *by* Chathura Siriwardhana, K. B. Kulasekera, Somnath Datta. Pages 464-491
- A semiparametric regression cure model for doubly censored data *by* Peijie Wang, Xingwei Tong, Jianguo Sun. Pages 492-508
- Two-sample tests for survival data from observational studies *by* Chenxi Li. Pages 509-531
- Practical considerations when analyzing discrete survival times using the grouped relative risk model *by* Rachel MacKay Altman, Andrew Henrey. Pages 532-547

Mei-Ling Ting Lee, Editor-in-Chief, Lifetime Data Analysis

Lifetime Data Science: Foundation and Frontiers

University of Pittsburgh, May 29–31, 2019

Keynote Speakers

Odd Aalen
University of Oslo

Danyu Lin
University of North Carolina - Chapel Hill

Ross Prentice
Hutchinson Cancer Center

Features

❖ Short courses by leading experts in methods for lifetime data analysis
❖ Many invited sessions on topics of current interest in lifetime data science
❖ Poster session and a Student Paper Competition
❖ Banquet on May 30, 2019

Scientific Program Committee

Mouna Akacha	Richard Cook	Jong Jeong	Ruth Pfeiffer	Raji Sundaram
Paul Albert	Ying Ding	Mei-Ling Ting Lee	Hein Putter	Andrew Titman
Rebecca Betensky	Ruzong Fan	Yi Li	Doug Schaubel	Brian Tom
Jianwen Cai	Jon Gran	Aiyi Liu	Thomas Scheike	Mei-Cheng Wang
Nilanjan Chatterjee	Chiung-Yu Huang	Lei Liu	Yu Shen	Ronghui (Lily) Xu
Ming-Hui Chen	Noorie Hyun	Torben Martinussen	Jonathan Siegel	Grace Yi
Wei Chen	Helene Jacqmin-Gadda	Bin Nan	Xiao Song	Jun Yan
Yu Cheng		Edsel Pena	Jianguo (Tony) Sun	Donglin Zeng

Conference Website: lids2019.pitt.edu

University of Pittsburgh   ASA   LiFe TiMe