

泛華統計協會 會刊

International Chinese Statistical Association



Bulletin

January 1999

編者的話：

會刊是我們會員的主要交流園地，預計每年在一月及七月發行兩期，希望各位踴躍賜稿，文章以一至二頁的短文為主，須用中文繁體字或英文書寫，文章性質以一般性非專門性學術的文章為主，以前或本期會刊內的各篇短文都是很好的範例，稿件如獲採用，我們希望能由作者安排打字，完稿的上、下、左、右留邊(margin)至少要有四分之三英吋，頁碼離底邊二分之一英吋，打字打在 8" x 11"的白紙上。稿件的截止日期是六月十五日及十二月十五日。截止日期後收到的將列為下一期的稿件。

刊內附有本會的申請表 (application form)，其中會員動態內的著作 (publication) 以一年內的新作品為限。

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EDITOR'S NOTES

Karl K. Lin
Chair
Editorial Board of ICSA Bulletin

1. Members of the Editorial Board of ICSA Bulletin are grateful to Dr. Robert O'Neill, Director, Office of Biostatistics, Center for Drug Evaluation and Research, U.S. Food and Drug Administration for accepting our invitation to take time out of his busy schedules and write the article on entitled "The Status and Impact of Statistical Principles and Methodology in Facilitating the Availability of New Therapies: A Regulatory Perspective" based on the keynote speech he delivered at the 1998 ICSA Applied Statistics Symposium held at Connecticut College in New London, CT, June 5 - 7, 1998. The majority of ICSA members, including myself, were not able to attend the symposium to listen to Dr. O'Neill's speech. Dr. O'Neill's article provides a second opportunity for those members to learn his in-depth discussion on the evolution of the regulatory role that statisticians and statistical principles have played to facilitate the availability of new therapies into the marketplace, the current status of several guidances on statistical principles in clinical trials, how the availability of statistical leadership in regulatory agencies and in the pharmaceutical industry has made possible the input and advances to the current approaches to drug development and regulatory decisions for new drugs and biologicals, and ideas for involvement and future direction for the application of statistical principles and methods in drug development and regulation.
2. On behalf of the Editorial Board of ICSA Bulletin, I would like to thank Dr. Ku, another world class Chinese statistician, for his willing to share his professional achievements and experience in statistics with members of the Association by granting Dr. Timothy Chen the interview with him and by providing us some of his valuable pictures to be included in the article Dr. Chen wrote reporting the interview. As Dr. Chen pointed out at the end of the conversation, Dr. Ku's life story will be an encouragement for the younger generation of ICSA members.
3. If you notice the increase in contributed articles from different parts of the world in this January 1999 issue of ICSA Bulletin, it is mainly from the results of Dr. Timothy Chen's efforts to solicit for contribution of articles from the ICSA members who serve as representatives of members in various regions of the world. He also made the effort to conduct the interview with Dr. Ku and wrote the article entitled "A Conversation with H. H. Ku" himself for ICSA Bulletin. He has really done tremendous service to the Association. ICSA is very fortunate to have him in its previous Board of Directors and as current President. His mentality that he wants to do his best to serve the Association which selected him to serve deserves our whole-hearted respect. I want to thank him personally for his great contributions to ICSA Bulletin during the last three years.

4. My three-year term as Chief Editor of ICSA Bulletin will have expired by the time you receive your copy of January 1999 issue. I want to thank you Dr. Shein-Chung Chow, Past President of ICSA (1997), for offering me the opportunity to serve the Association in this capacity, and members of the Editorial Board, especially Drs. Timothy Chen and Weichung Joe Shih for their services during those years. It is really a great professional experience for me to work with many members on things related to the goal of providing better services for our members through the efforts of improving the quality of ICSA Bulletin. I think, with the helps of those members, we have achieved substantially the goal in the past three years. However, we are also realize that we are not professionals in the publication business, and that we have not done enough to serve the Association in this area due to the time we have to devote to our own regular jobs and other responsibilities. I sincerely hope that, under the leadership of next Chief Editor and with active participation of more members, the quality of the bulletin will be further improved.

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編者的話..... i
 Editor's Notes..... ii
 Executives and Members of Committees of ICSA 1999..... iv
 目錄 v
 Message from the President..... 1
 Message from the Executive Director..... 2
 Some Messages About Statistica Sinica..... 3
 Invited Paper by Dr. Robert O' Neill..... 4
 A Conversation with Dr. H. H. Ku..... 12
 Minutes from ICSA Membership Meeting on August
 12, 1998, Grand B Room, Anatole Hotel, Dallas, Texas..... 17
 1998年台北國際統計學術研討會辦理概況..... 23
 台灣地區1998年的一些學術活動..... 26
 News from Department of Statistics and Applied
 Probability Faculty of Science, National
 University of Singapore..... 29
 A Post-Conference Report on the Fourth ICSA Statistical
 Conference in Kunming, China..... 30
 Hong Kong Statistical Community in 1998..... 34
 FDASA-The Statistical Association within FDA..... 35
 Congratulations to ICSA Members Elected as ASA
 and IMS Fellows..... 41
 1998 ICSA Distinguished Service Award Recipients..... 43
 Pictures from 1998 ICSA Applied Statistics Symposium..... 44
 Announcement of ICSA 1999 Applied Statistics
 Symposium, June 18-20, 1999..... 46
 Call for Papers: ICSA 1999 Applied Statistical
 Symposium Proceedings..... 47
 Call for Papers: Abstract Form..... 48
 Registration Form..... 49
 ICSA Student Award and Travel Fellowships
 for 1999 Symposium..... 51

Announcement of A Session in Next Year's Joint Statistical Meetings Sponsored by ICSA.....	52
中央研究院統計科學研究所客座系列專題演講.....	53
Call for Nominations of President and Board Directors.....	54
Call for Nominations for 1999 ICSA Awards.....	55
Call for Nominations of New ICSA Bulletin Editor.....	56
New Members.....	57
Donations.....	58
Members Activities.....	58
ICSA Financial Statements-Profit and Loss Sheet, and Balanced Sheet.....	59
Job Advertisements.....	61
ICSA Membership Application Form.....	63
ICSA Membership Renewal Form.....	64
ICSA Membership Information Sheet.....	65

FROM THE PRESIDENT

January 1999

Dear ICSA Members:

After running for the office of the President in 1995 and not elected, I am grateful that my second try was a success. It is my privilege to serve as your President for one year.

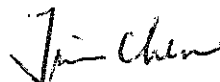
At 1998 JSM Dallas, I approached an American Statistical Association high official to request for more collaboration between ASA and ICSA, specifically for some sessions under the sponsorship of ICSA at JSM. He asked me that why we want to participate under the name of ICSA, instead of as individual members of ASA. I think a similar question could be raised by Chinese-American statisticians that why they need to become a member of ICSA, in addition to being a member of ASA.

Have been elected twice to the ICSA Board of Directors and helped organize ICSA Applied Statistics Symposium many times, I would like to explain the reasons of our existence. First, I see ICSA as a vehicle for service. Public service is a virtue we need to practice more. As parents, we want our children to do some public service, so they can be admitted to the best colleges. When they are in college, we marvel that they put in their precious time to serve the under-privileged. We have a lot to learn from our children. There are many Chinese statisticians in different stages of their professional career, we as an organization can fill their need better than other organizations.

Second, I see ICSA as a practicing arena for democracy. Without growing up in that kind of society, democratic principle is a value we learn to appreciate. Under representative government with check and balance, the officers can render better service, and things can be done with better idea. I would like to see that ICSA continues to function as a democratic entity, with members of various committees working together for the common good under the premises that the committees are accountable to the Board of Directors, and the Board is accountable to the members-at-large.

Third, I see ICSA as a forum for promoting scholarly achievement and professional learning. Knowledge can serve humankind, and statistics is a tool to gain knowledge. We want to encourage our members to excel in their research and professional careers, and to help the different countries where our members reside to use statistical tool to increase the level of scientific research, the quantity of industrial output, and the quality of human life. Here, we are proud that the journal of *Statistica Sinica*, which we co-sponsor with Institute of Statistical Science in Taiwan, has published good research papers, and the annual Applied Statistics Symposium has become a meeting of exchanging good ideas with very good attendance record. Our bi-/tri-annual International Conference has succeeded in bringing our members across continents together to build friendship and initiate collaborative research. We definitely need to continue to do these as our Constitution states plainly that we are to promote scientific exchange and professional education.

Therefore, I request all ICSA members to give your suggestions to me, or any Directors, or Committee Chairs, about new services we can provide; so that we can serve you better. In this issue of Bulletin, we ask you to nominate candidates for President-Elect, Directors, Bulletin Editor, and ICSA Awardees. I ask for your participation as nominators and candidates. Only when good people are willing to serve, we can fulfill our promise of service, and continue the practice of democracy. Please submit your best papers to our journal *Statistica Sinica* and show your support for the new Editors—Ker-chau Li and Yi-ching Yao. Please also submit a paper and attend the 1999 Applied Statistics Symposium, which will be held at Georgetown University. You can combine the Symposium attendance with your family vacation, since Washington D.C. is the city with the highest number of tourist attractions.

Tar Timothy Chen, President 

FROM THE EXECUTIVE DIRECTOR

Dear ICSA members:

This issue of the ICSA Bulletin represents the transition from 1998 to 1999. It is not only a season for family and friends to get together, but also a time for us to review the past year and to plan for the coming year.

For ICSA, 1998 has been a fruitful year. The following events signify some successes of this year:

- The first time ICSA published a proceeding from the Applied Statistics Symposium.
- The first time we tried to move the Symposium out of the Washington D.C. - New Jersey area. The 1998 Applied Statistics Symposium in Connecticut was well attended.
- The Membership Committee conducted the first survey during the Symposium.
- In the July 1998 Bulletin, we published the first interview with one of the distinguished Chinese statisticians - Professor Chin Long Chiang.
- The Kunming Conference is another successful event in 1998.
- We also recruited 69 new members throughout this year (based on the July Bulletin and this issue). With these new members, ICSA now has over 600 (including 210 permanent members) active members.
- In addition to the above, 8 of our members were elected as ASA Fellows this year.

The year 1998 is a truly great year for ICSA.

Looking ahead into the future, Dr. Tim Chen laid out some of the directions in his article. With the help from you, me and all members, we believe our association will be more prosperous. If you have suggestions or comments regarding how we can better service our members, please notify me:

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or email TINGN@PFIZER.COM.

at your earliest convenience.

Happy Holidays

Naitee

Some Messages about Statistica Sinica

Ching-Shui Cheng

The Board of Trustees of Statistica Sinica met in Taipei last August to elect not one, but two new Editors! Starting August 1, 1999, Professor Ker-Chau Li of UCLA and Professor Yi-Ching Yao of Academia Sinica will be Joint Editors of Statistica Sinica. I am very happy and grateful that they are willing to take on this important responsibility. It is fortunate for our journal to have such an outstanding team at its helm.

We received 158 submissions in 1997. The submission figure for 1998 is about the same, with the difference that there were 28 invited submissions in 1997 for various themes, but only three such submissions in 1998. This is an indication of increased submission rate. In the past few years, the number of submissions has stabilized at about 150-160 per year. On the other hand, the journal has grown from 1996's 1013 pages to 1997's 1180 pages and 1998's 1274 pages. This was mainly a consequence of our efforts to eliminate excessive backlogs and to speed up publication of accepted papers, not because more papers have been accepted (the acceptance rate, including all invited and regular submissions, has been slightly under 40%). Starting 1999, we expect the journal's size to be back at the pre-1997 level. Even at this level, with the kind of acceptance rate we would like to have, the current submission rate is still less than ideal. Once again, I appeal to all ICSA members for your support, and reiterate that the policy of Statistica Sinica is to publish original work in statistics and probability, including theory, methods and applications.

There will be a "Statistica Sinica Invited Papers" session in the 1999 Joint Statistical Meetings at Baltimore (see elsewhere in this issue of ICSA Bulletin for more details). Professor Wing Hung Wong will talk about statistics in molecular biology and genetics, Professor Cunhui Zhang will discuss some statistical models and methods for tumor growth experiments, and Professor Augustine Kong will serve as a discussant. This should be a stimulating session and I hope to see many of you there.

I would like to take this opportunity to thank you for your support and the Editorial Board Members for their hard work, and wish you a happy and productive 1999.

--- Invited Paper ---

(Editor's note: This invited paper is a written version of the keynote speech delivered by Dr. O'Neill at the 1998 ICSA Applied Statistics Symposium.)



Dr. Robert T. O'Neill

**The status and impact of statistical principles and methodology
in facilitating the availability of new therapies:**

A regulatory perspective

**Robert T. O'Neill, Ph. D.
Director, Office of Biostatistics
CDER, FDA**

1. Introduction

The goal of this talk is to provide an overview of the evolution of the regulatory role that statisticians and statistical principles have played to facilitate the availability of new therapies into the marketplace. In addition, I would like to discuss briefly the current status of several guidances, including a new international guidance on statistical principles in clinical trials, which

should substantially enhance the future quality and chance for success of clinical trials of new drugs. I will then describe how the availability of statistical leadership in regulatory agencies and in the pharmaceutical industry has made possible the input and advances to the current approaches to drug development and regulatory decisions for new drugs and biologicals. Finally, I will discuss ideas for involvement and future direction for the application of statistical principles and methods in drug development and regulation.

New therapies to treat or prevent diseases, especially new drugs and biologics, must by law be proven to be both effective and safe prior to their entry into the marketplace. To achieve this goal, new drugs and biological products go through a pharmaceutical development process and a regulatory review prior to a decision that a medical product is effective and safe. The regulatory standards for the evidence that supports the claim of an effective and safe product rely on experimental evidence of efficacy and safety.

Statistical principles are relevant to all aspects of the drug development process including the pre-market, post-approval, clinical and pre-clinical areas. Since the controlled clinical trial plays such a crucial role in the development of evidence of claims of efficacy and safety to support the licensure and marketing of a new drug and since it is this area that has received the most attention over the years, I will focus mainly on issues related to clinical trials. However, I will briefly touch on some other areas of pharmaceutical regulation that involve statistical principles and guidances.

In addition to the evolving contributions of statistical principles and statisticians to drug development and regulation that has occurred in the United States, the current environment in 1998 for drug development and regulatory review of evidence has been further influenced by the national and international need for efficiency, timeliness and better planning to facilitate the availability of new therapies globally. The international aspect of drug regulation has been a key initiative for almost the last ten years. The International Conference on Harmonization (ICH) of Technical Standards Steering Committee was established in 1989 and the first ICH meeting (ICH I) was held in Brussels in November, 1991. There have been a total of 4 ICH meetings since then, each dealing with the progress of topics concerning harmonization of drug efficacy, safety or quality standards. One objective of international harmonization of technical standards for pharmaceutical drug development is to prevent unnecessary duplication of clinical trials in humans, and thus to develop data to the extent possible, given differences in patient populations, clinical response and other criteria, that will be mutually acceptable to all regulatory bodies and so that data from trials conducted in one country may be accepted in others. This desire derives from the recognition that new therapeutic advances should be made available to patients as quickly as possible and that the global drug development and licensure process be as efficient as possible and take advantage of reputable research no matter where it is carried out.

2. Regulatory standards for evidence and statistical principles

In the United States, federal government regulations concerning the development of evidence for the safety and efficacy of a new drug specifically recognize statistical principles of good study design, data analysis, documentation and reporting in the development of evidence required to support the approval of a new drug. These statistical principles derive from the adequate and well controlled trial regulations regarding substantial evidence [May 1970, Federal Register] which, among other things, describe the characteristics of a well-controlled study:

- The need for a well documented protocol of the study design including planned sample sizes to meet objectives, a summary of the proposed analysis and the actual methods of analysis in the report of results.
- The use of a study design that permits a valid comparison with a control including a choice of control groups some of which may be more appropriate than others, and the importance of randomization to treatment, blinding of patient, investigator and observer when possible and other methods to minimize bias in the comparisons.
- A quantitative assessment of drug effect, including an analysis of the results and any appropriate statistical methods. The analysis should assess, among other things, the comparability of test and control groups and the impact of any interim data analysis.

In 1986 the FDA revised its regulations [The NDA Rewrite] in order to improve the quality of the licensure applications from sponsors and to permit FDA scientists, including medical officers and statisticians, to evaluate the clinical and statistical evidence in the NDA submission more thoroughly and efficiently. This regulation deals with the documentation of evidence developed by the pharmaceutical sponsor and formally recognizes that statistical aspects of clinical studies are important to the interpretation of a clinical study and should therefore be documented, discussed and reported in a special manner in new drug applications. A statistical section of the licensure application (NDA) is now required which includes documentation in a format specifically tailored for review by a professional statistician. To implement this regulation, a Guideline for the Format and Content of the Clinical and Statistical Sections of a New Drug Application [1988] was issued which contains in more detail the statistical principles and concepts to be reported and documented by a sponsor.

Now in 1998, the climate for drug development and regulatory review of industry research drug claims has evolved to the point that efficiency of both development and regulatory review is a premium, as evidenced in the United States by the implementation of the Prescription Drug User Fee Acts I and II (PDUFA I and II). PDUFA placed requirements for the timeliness of regulatory reviews, stating certain performance goals that needed to be met. In addition, early access to therapies under investigation is of interest to the public and the international and global drug development environment also has placed a premium on efficiency, timeliness and

optimum use of human resources in developing new drugs. This means that both the industry and regulatory agencies around the world are interested in harmonizing the technical standards for drug development and review. The International Conference for Harmonization of Technical Requirements , a joint effort of industry and regulatory agencies, in the United States, Europe and Japan has made remarkable progress over the last ten years in developing and publishing guidance in the areas of drug efficacy, safety and quality that will meet the intent of reducing global duplication of efforts.

Of note to the statistical community is the recent completion and publication of an ICH document '*Guidance on Statistical Principles for Clinical Trials*'. This guidance is the result of an extensive two year effort among regulatory and industry statisticians to create a consensus document that would be applicable in all three regions. The document was published in its final form in the United States in September, 1998 [www.FDA.GOV/CDER/GUIDANCE] and has similarly been published in Japan and the European Union. I would like to summarize briefly the key issues and concepts contained in the guidance in order to point out the breadth of issues and impact of the document.

The guidance is written in a manner that should be understandable to statisticians and non-statisticians alike. There is a purposeful philosophy to emphasize the principles and to stay away from the proscribing of specific statistical methodologies, though to a large extent the considerations are based upon statistical frequentist concepts.

3. Content of the '*Guidance on Statistical Principles for Clinical Trials*'

The document discusses in a general way, considerations for overall clinical drug development, including the concepts of a development plan, the exploratory clinical trial, and the confirmatory clinical trial. It goes on to discuss the scope of clinical trials including considerations for primary and secondary variables, composite variables, global assessment variables, multiple primary variables, surrogate variables and categorical variables. There is a treatment of the statistical design techniques to avoid bias, such as blinding and randomization. Then, trial design considerations are discussed in detail, including parallel group designs, crossover designs, factorial designs and multicenter trials and group sequential designs. The distinction is clearly made for the types of comparisons of major interest, namely trials designed to show superiority and trials designed to show equivalence or non-inferiority. Special attention is devoted to designs intended to show dose-response.

There is a treatment of sample size planning and data capture and processing strategies. Next, after the planning considerations are dealt with, there is a discussion of trial conduct considerations, including trial monitoring and interim analysis, changes in inclusion and exclusion criteria, monitoring accrual rates, sample size re-adjustment methods, interim analysis and early stopping strategies and considerations for the role of the independent data monitoring committee.

Then the guidance discusses a variety of data analysis considerations, including an emphasis on the pre-specification of the analysis, and the different analysis sets and their respective roles,

dealing with outlier observations, missing data and data transformations. There is a section discussing general considerations for estimation, confidence intervals and hypothesis testing, adjustments of significance levels and confidence levels. Subgroup analysis, interactions and covariate analysis receives some special discussion. Finally, the guidance deals with general considerations for the integrity of data and for computer software validation, the evaluation of safety and tolerability and presentation and reporting of results and evaluations.

As you may surmise from this brief overview of the topics, the Guidance is rather extensive in its coverage of statistical principles applicable to clinical trials in drug development and it should in the future provide direction to the global drug development and regulatory review community on the importance and relevance of core statistical principles to drug development and clinical trials.

4. Statistical Leadership, National and International

It is interesting to note the role that national and international statistical leadership from the regulators and industry played in making possible the development, successful completion and international acceptance and publication of this Guidance.

Beginning as far back as the early 1970's, the FDA and the industry gained experience with the design, analysis and evaluation of clinical trials that would satisfy the 1970 regulatory requirements adequate and well controlled studies and for substantial evidence. During the 1980's much of FDA's experience in this area became codified in guidances for the industry, especially in the area of statistical documentation of protocols and completed studies, and the focus on a statistical section of a new drug application.

During the approximate 30 year period up till 1998, FDA slowly developed a program of professional biostatistical talent to support the regulatory program, and these statisticians began to develop the field of regulatory statistics which has grown and matured over the years into a major influence on the quality of clinical research and on drug regulatory decision making. During this same period, the industry built up its statistical programs in response to FDA's expectations for quality study design and analysis. The collective statistical resources available in both the regulatory agency and in the many pharmaceutical companies who do research is now at a level never before attained. However, the expectations for the use of those resources and the value added to the drug development and regulatory review areas has simultaneously increased.

It would not have been possible in the early 1990's for the ICH document 'Guidance on Statistical Principles for Clinical Trials' to have been developed or agreed to by the international community. For one thing, in 1990 the statistical leadership in the regulatory agencies was not in place in two of the three regions, Japan and the European Union, and therefore the International Conference on Harmonization (ICH) saw no need for development of a statistical guidance document. Indeed, the ICH, which began in the late 1980's, did not decide to authorize the development of a statistical guidance until about 1995. It was at that time, after almost three fourths of the efficacy topics were close to completion that the importance of having

international consensus on a statistical guidance was recognized by ICH as extremely important to the success of harmonizing technical standards for clinical trial research. It was one of the very last topics considered for international harmonization, and it was become possible because the European Union had successfully placed experienced senior principal statisticians in the regulatory agencies of the United Kingdom and Germany, and Japan had sought out statistical advisors to the Ministry of Health who were able to represent the regions in the development and consensus building that needed to occur in the working groups charged with developing the statistical guidance. The industry statistical leadership came from senior industry statisticians with a great deal of experience who represented the pharmaceutical industry associations in the three regions. This leadership had been evolving by taking on more responsible senior positions in the pharmaceutical industry and in the national associations representing the pharmaceutical industry.

It was also necessary that experienced statisticians in all three regions have the opportunity to contribute to the topics in the Guidance. This came about as a result of the role that professional societies played in communicating the early drafts and versions of the guidances and for the earlier input that had occurred in related statistical guidances available from each region that served as the basis for the ultimate consensus document. Statistical societies such as the Society for Clinical Trials, the International Biometric Society and the International Society for Clinical Biostatistics, as well as the Drug Information Society provided the various fora to discuss, communicate and obtain the feedback needed on early aspects of the topics. In the end, the development of statistical policy was the major impact of these collective forces.

5. Other Guidances with statistical input

In addition to the '*Guidance on Statistical Principles for Clinical Trials*' there are a variety of other Guidance that have been or are being produced by FDA that contain substantial statistical thinking, either from a policy perspective or from a good practices and advice perspective. These include a guidance on individual bioequivalence which is primarily focused on generic drug comparisons but which also concerns evaluation of drug formulation changes. There is a guidance being prepared and discussed in public on population pharmacokinetics. Under development for several years, there is a statistical guidance on the design and analysis of animal carcinogenicity studies which is nearing completion and circulation for public comment. There are FDA initiatives such as the Good Review Practices effort that is intended to help harmonize how different reviewers within FDA approach similar problems and two of these guidances concern the statistical approaches to the integrated safety analysis and the integrated efficacy analysis.

6. Methodology: new applications and keeping up with new developments

In addition to the development of guidances for national and international use or for internal FDA staff guidance, there is the constant need for meeting the ever more complex clinical research and development problems we face. The FDA, as a science based regulatory agency is constantly responding to new proposals and requests for case specific analyses, study designs or

methods of analysis and resulting interpretations. This dynamically moving environment stimulates statisticians to formulate new approaches or to think deeply about the appropriateness of industry suggested approaches. In essence, these experiences for the regulatory statisticians are at the core of how regulatory statistics began and continues to expand. For example, there are always challenges to using methods to combine data from several studies and to consider meta-analytic strategies to examine collective evidence. We are facing new challenges to the definition of measures of evidence, to the concepts of statistical confirmation, replication and consistency of effects. The use of p-values as measure of evidence is being questioned. The role of innovative study designs that can remain interpretable and can support evidentiary claims are also constantly being proposed and need to be evaluated and acted on. FDA statisticians deal with these issues by formulating strategies to confirm or validate proposed methodology or advance the field by introducing or producing innovative research to solve some of the problems.

7. Policy development

Some of the statistical issues develop into policy considerations that involve difficult debates and go beyond the methodology developments themselves. For example, we are questioning or facing challenges on the measure of evidence for efficacy such as when is one clinical study enough? What level of strength of evidence is needed for such a study, how internally consistent does it need to be to support a strong finding; what do the statistical concepts of confirmation, replication and generalizability of evidence mean in this context?

Policy debates occur with our medical colleagues on how much and which measure of statistical uncertainty should be included in the label of a new drug. These matters are important as the drug label contains information that is legally allowed for advertising and promotion. FDA has found that basic statistical measures can be inappropriately advertised for competitive advantage when the statistical basis for such promotion is unfounded. Finally, the regulatory statistical community must always leave open the door for new methods and strategies to deal with non-standard data structures and messy data issues. For example, recent interest in taking account of drug and protocol compliance through methodological approaches should be addressed and intelligently incorporated into analyses and inferences when appropriate. Tools to enhance the success of clinical trials, such as sample size re-estimation methods, trial statistical monitoring methods and methods to analyze longitudinal data with informative censoring are always being advanced and need response by FDA.

8. Concluding remarks: where do we go from here

In concluding this overview of the current status of statistical principles and methodology in facilitating the availability of new therapies, I am brought to the point that statistical resources are in place on both a national, international, industry and regulatory basis. While one may always desire more, the statistical resources collectively available to meet the problems facing us in the next millennium are in place. We must always ask whether we are involved in the most important of the problems we face, and where the influence of statistical approaches positively advance public health. Almost certainly, statistical thinking will become more rather than less needed as future information needs expand, the problems become more complex, and planning

becomes more of a valued commodity. However, given the track record of the recent past for incorporation of statistical principles and methodology, and the leadership of the statistical community, I am optimistic the future demands can be met.

A CONVERSATION WITH H. H. KU

T. Timothy Chen

University of Maryland Greenebaum Cancer Center
Baltimore, Maryland 21201

Harry Hsien Hsiang Ku was born on March 3, 1918, in Beijing, China. He received his B.S. degree in civil engineering in 1940 and M.S.E. in 1941 from the Purdue University; and a M.S. in 1960 and Ph.D. in statistics in 1968 from George Washington University, D.C. He is a Fellow of the American Statistical Association (elected 1970), and a Fellow of the American Association for the Advancement of Science.

The following conversation took place at Dr. Ku's home on September 26, 1998.

Chen: Dr. Ku, you came to the United States from China in 1938 to study at Purdue University. Could you let us know about your family background? How did you decide coming to the U.S. for college education instead of attending a college in China?

Ku: I was studying civil engineering at Chiao-Tung University in Shanghai. Because of the Japanese invasion in 1938, my father decided to send my brother and me to the U.S. for education.

Chen: What did you study at the Purdue University?

Ku: I studied civil engineering.

Chen: After finishing your study at Purdue, you worked for one year at M. W. Kellogg Company and 16 years at the Embassy of the Republic of China (Taiwan). What did you do during that period?

Ku: For M. W. Kellogg Co., I helped in the design of converting refineries to 100 octane gasoline in Bay City, Texas, and Baltimore. At the Embassy of Republic of China, I helped in selecting tools and machinery for building the Burma Road.

Chen: How did you get the position at the National Bureau of Standards (now National Institute of Standards and Technology) in 1958, and why did you decide to transfer to the Statistical Engineering Laboratory in 1959?

Ku: In 1958, I had a chance meeting with Dr. A. MacPherson, who introduced me to the Building Research Division of NBS. I attended an in-house course in statistics and liked the subject. After one year, I transferred to the Statistical Engineering Laboratory.

Chen: You then went to George Washington University to study for your statistics degrees. At that time you already worked full-time, how did you complete your study at GW?

Ku: Professor Solomon Kullback gave two three-hour evening courses in statistics at George Washington University. I rushed to the University right after work. At NBS, I was encouraged to further my studies. I could do some of the homework at the office.

Chen: Were there teachers or mentors who influenced you a lot during the early period of your research career?

Ku: Professor Solomon Kullback and Dr. Joan Rosenblatt both helped me a great deal in my early research career. Kullback and I worked together in research of contingency table analysis. Rosenblatt encouraged me to do research.

Chen: In your paper of 1962 (Kullback, Kupperman, & Ku, *Technometrics*, 4, 573-608), you developed the idea of partitioning chi-square to test for interaction. Could you give us some background of this paper?

Ku: Prior to the 1962 paper, which was nick-named as Ku-cubic and you referenced to, I had been working on partitioning of chi-square for multidimensional contingency tables (of dimension equal or less than four). The 1962 paper summarized my work up to that time.

Chen: From 1962 to 1971, you published 16 papers. Some of them must be part of your Ph.D. dissertation. Could you tell us what was your research?

Ku: My Ph.D. dissertation followed my research on contingency table analysis.

Chen: In a paper published in 1966 (Ku, *Journal of Research, NBS*, 70C, 263-273), you summarized the use of propagation of error to get standard error of a new statistic. This paper was highly cited according to the Science Citation Index. Could you tell us the background of this paper and the reason why it was so useful?

Ku: At National Bureau of Standards (now NIST), all determinations of definitive values of standards are calculated from functions of sets of measurements of their components. Hence, the use of propagation of error is unavoidable. The same is true whenever the value of interest is expressed

in values of components that can be measured.

Chen: You were elected to be a Fellow of the American Statistical Association in 1970, two years after you obtained your Ph.D. in Statistics. What was the citation given to you during that occasion?

Ku: The citation from American Statistical Association in 1970 reads "By virtue of his signal contribution to the field of Statistics."

Chen: You were also awarded the Department of Commerce Award for Meritorious Service (Silver Medal) in 1974, and the Department of Commerce Award for Distinguished Service (Gold Medal) in 1981. Could you summarize for us your accomplishment at National Bureau of Standards?

Ku: The citation for Silver medal in 1974 reads, "For distinguished contribution to the achievement and reporting of precision and accuracy in scientific work," and for Gold Medal in 1981 reads, "For outstanding leadership in applying improved statistical methods to enhance the accuracy and effectiveness of scientific experiments and measurements."

Chen: You retired in January 1985 from the position of Chief, the Statistical Engineering Division. What have you been doing since then?

Ku: After my retirement from NBS, I worked in Mol, Belgium twice; once in 1988 for Central Bureau for Nuclear Research and once in 1991 for Institute of Reference Material Measurements.

Chen: Could you tell us about your family?

Ku: My wife, Helen, a retired teacher, is a Canadian citizen. My son, Richard, teaches in Rhode Island. I have three grandchildren.

Chen: ICSA is consisted mostly of statisticians like you, originally from China, Taiwan, or Hong Kong. Do you have any good advice for us?

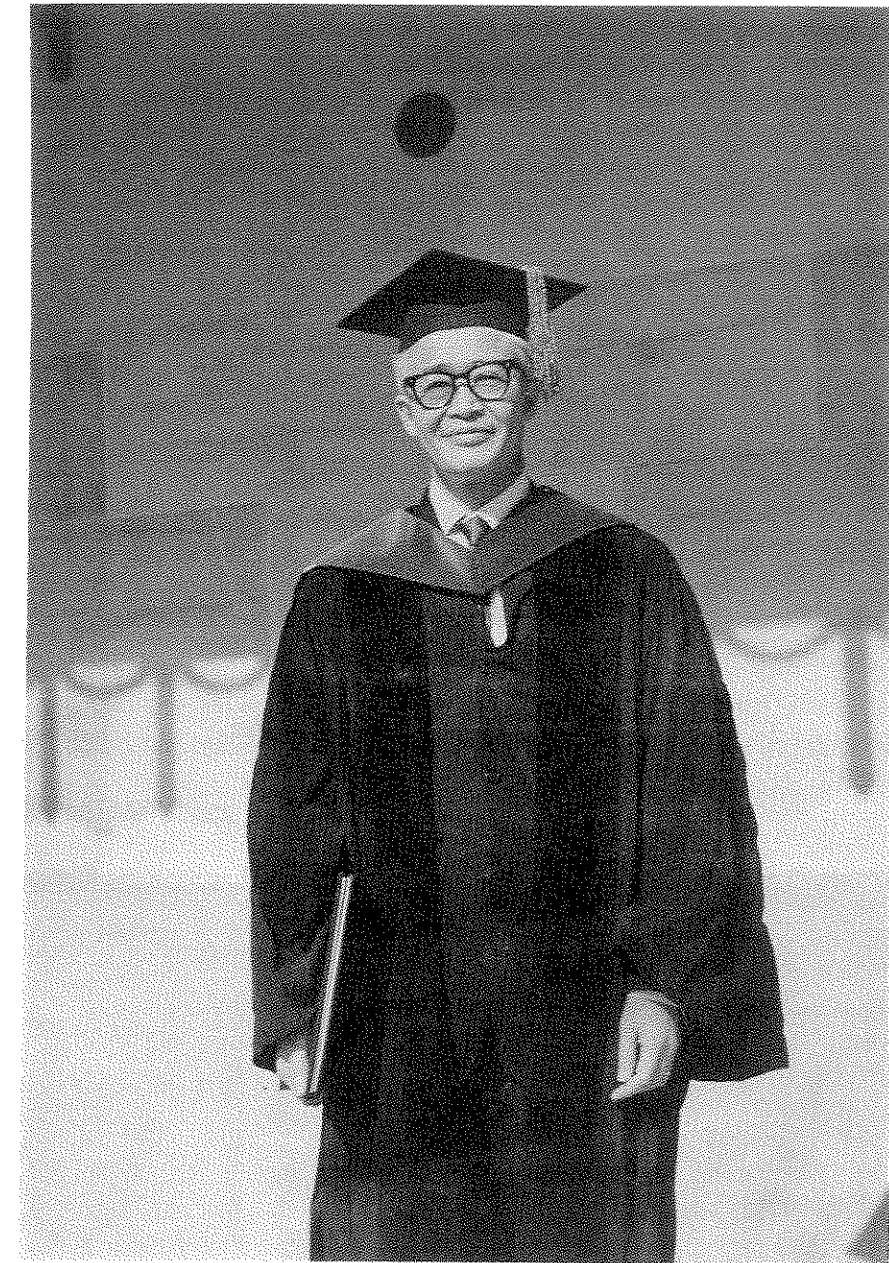
Ku: I believe it is better to work in a research environment, such as National Institutes of Health or National Institute of Standard and Technology. Of course, all universities would also be fine, but I have no experience in working in universities.

Chen: Dr. Ku, thank you very much for spending time with me this afternoon. Your life story will be an encouragement for the younger generation of ICSA members.

Figure 1. Dr. Ku in cap and gown, receiving Ph.D. from George Washington University.

Figure 2. Dr. Ku with his son and two grandsons.

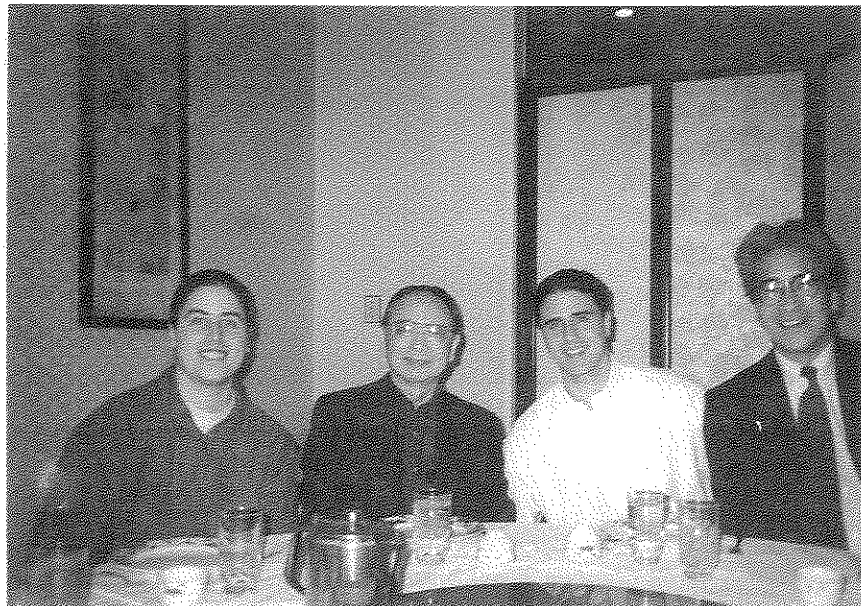
Figure 3. Dr. Ku with his wife and granddaughter.



Dr. Ku in cap and gown, receiving Ph.D. from George Washington University.



Dr. Ku with his wife and granddaughter.



Dr. Ku with his son and two grandsons.

Minutes from ICSA Membership Meeting on August 12, 1998, Grand B Room, Anatole Hotel, Dallas, Texas.

Chair: Tim Chen (for Jeff Wu)

Attendees: About 100 ICSA members

Minutes: Naitee Ting

1. Agree on the proposed agenda

Agreed.

2. Agree on the minutes from the previous membership meeting

Agreed.

3. Further discussion on issues from the previous meeting

No discussion.

4. Report from the president

Jeff Wu could not make to this membership meeting. He sent in his report -

Dear Board Members:

Let me first apologize for not being able to attend the meeting in Dallas. For personal reasons I need to be in Taiwan during the period of the Joint Meetings. I am grateful to Tim Chen who will chair the meeting on my behalf.

We had a very successful Applied Statistics Symposium in Connecticut in June. It was the first time we had this meeting outside the New Jersey - D.C. corridor. Thanks to the dedication and work of our colleagues in Connecticut, the meeting went very well. We had our board meeting on June 7. Please refer to the minutes of the meeting. For those who did not attend the meeting, I would like to mention a resolution on the nomination process. It was unfortunate that we only had one candidate for the Presidency in this year's election. We should be more vigilant in the future to avoid similar mistakes.

The membership drive c'ttee headed by Joe Shih and Xuming He has started some ground work on our recruiting campaign. Xuming will be back to Illinois(from Singapore) and I am confident the activities will pick up next year(also aided by the very active Tim Chen). I would like to ask the board members to discuss the possibility in the future to create a section on government statistics and on industrial statistics to complement our very successful biostatistics section. We need to broaden our activities outside the Boston-DC corridor. Is it advisable to create local chapters to encourage such activities in areas like Chicago, LA, Bay Area, Atlanta etc.?

The 4th International ICOSA meeting will take place in Kunming on 8/19-21. All the signs suggest that it will be a successful meeting. Tim Chen has proposed the 5th meeting in Taipei in 2000. It is time for us to think about the possibility of having a meeting in the US. This may be joint with the Applied Statistics Symposium. Even though it will be 2002 at the earliest, it never hurts to plan ahead.

Our 6-year agreement with the Institute of Statistical Science on Statistica Sinica will expire in 1999. The current chair editor CS Cheng will also retire from his excellent work in 1999 summer. I have appointed CS Cheng, Smiley Cheng, Albert Lo, LJ Wei, WH Wong and myself as the 6 members on the SS Board of Trustees to represent ICOSA. (The Institute has 7 members on the board.) The board will meet on 8/17 in Taipei to discuss and elect the next chair editor(s) and the renewal of the agreement. Once I have the information and meeting results, I will email to you to seek your opinion and approval in early fall.

Finally I wish you an enjoyable meeting in Dallas.

Jeff Wu

5. Business Report

5.1 Executive Director

We need support from every member of ICOSA. Please send in your thoughts, comments, and activities to the Bulletin. Please help recruit new members, and contact members lost of follow up. If you have any information or any suggestions, please contact the Executive Director:

Naitee Ting, 198 Spicer Hill Road, Ledyard, CT 06339-1534
 Phone (860) 441-4871, Fax (860) 441-3219,
 or email TINGN@PFIZER.COM.

If you or your friends need information about ICOSA, please make use of our web www.icsa.org. In order for ICOSA to become a stronger organization, we need more members, and more participation from each member.

5.2 Treasurer

Xiu Chen could not make to this meeting. She prepared account summaries for the board:

International Chinese Statistical Association Balance Sheet (08/02/98)	
ASSETS	
Current Assets	
Checking/Savings	
6 Month CD	25,000.00
Checking	1,374.34
Saving	49,860.66

Total Checking/Savings	76,235.00
Total Current Assets	76,235.00
TOTAL ASSETS	76,235.00
LIABILITIES & EQUITY	
Equity	
Retained Earnings	61,578.07
Net Income	14,656.93
Total Equity	76,235.00
TOTAL LIABILITIES & EQUITY	76,235.00

International Chinese Statistical Association
Profit and Loss (08/02/98)

Ordinary Income/Expense	
Income	
Contributions Income	
Unrestricted	750.00
Total Contributions Income	750.00
Membership Dues	9,700.00
Short Course	7,464.00
Total Income	17,914.00
Expense	
ASA meeting (banquet)	500.00
Bank Service Charges	39.93
Casual Labor	204.00
Licenses and Permits	20.00
Office Supplies	102.16
Postage and Delivery	1,580.06
Printing and Reproduction	1,985.00
Web Page Hosting	264.00
Total Expense	4,695.15
Net Ordinary Income	13,218.85
Other Income/Expense	
Other Income	
Interest Income	1,438.08
Total Other Income	1,438.08
Net Other Income	1,438.08
Net Income	14,656.93

5.3 Statistica Sinica

Submissions have been stable. Statistica Sinica was recently selected as one of SCI (Science Citation Index) citing journals in statistics. Now all the references cited by papers in SS will be entered into SCI database. Dr. Hwai-Chung Ho has been working very hard in promoting SS. He established exchange programs with India and South Korea. These programs allow Academia Sinica to receive Indian and South Korean journals, and the corresponding Indian and South Korean libraries to receive Statistica Sinica.

5.4 ICSA Bulletin

The Bulletin is yours, we need your input. For any articles, your information, or your thoughts, please send it to the Executive Director (name and address are given above, Section 5.1).

5.5 Membership Committee

Report from the membership committee appeared on the July 1998 Bulletin.

5.6 Public Relations Committee

Huey Ju could not make to the meeting. She sent in a written report:

1. Established a data base for the Joint Committee of Pharmaceutical Affairs (JCOPA). The mission of the committee is to promote the pharmaceutical industry in Taiwan. The membership includes DOH, NIH of pharmaceutical association...etc.

2. Cosponsored a panel discussion session with Committee of Women in Statistics, Caucus of Woman in Statistics in 1998 ASA meetings (see attached article which was published in June Amstat issue)

5.7 Applied Statistics Symposium 1998

Report from the 1998 Applied Statistics Symposium appeared on the July 1998 Bulletin.

5.8 Kunming Conference

The conference will take place between August 19 and 21 at Kunming, China. Up to this point, about 100 to 110 members from North American region will participate in the Kunming Conference. We anticipate about 50 or more participants from China. Hence the total number may be up to 160.

5.9 Program Committee

Chien-Pai Han presented the directions of how to make to the restaurant. Everyone (member or non member) is welcomed.

6. Nomination Committee - Report of election result

Nomination committee announced results from the 1998 election:

Chien-Pai Han won this election and he will serve as the President-Elect of 1999. For members of board director, there are 5 vacancies. The top 5 are **Nancy Lo, Zhiliang Ying, Dan-Yu Lin, I-Shou Chang, and Rongdean Chen**. They will be the new members of board director, serving the 1999-2001 term. For the Biometrics Section, James Chen won and he will serve the Chair-Elect of 1999.

7. Awards Committee

Three ICSA Distinguished Service Award were presented:

Dr. Wei Duan (DGBAS, R.O.C.)

- o As Director-General of Budget, Accounting & Statistics, Dr. Wei has helped to reshape the official statistics system in Government
 - o Help in urging government officials and legislators to use statistics properly.
 - o Help promote the awareness of importance of statistics for public
 - o Help statistics community to grow and prosper.
 - o Help staging many Conferences
 - o Contributions to ICSA and Statistica Sinica
- Nominated by Dr. Ben-Chang Shia, Fu-Jen University, Taiwan

Dr. Chern-Ching Chao (Academia Sinica, Taiwan)

- o Help reorganize the operation of Statistica Sinica
 - o Promote the usage of statistics in the community
 - o Contributions to ICSA and other statistical organizations
- Nominated by Smiley Cheng, University of Manitoba, Canada

Professor Shi-Yong Feng (Academia Sinica, Beijing)

- o Help organize a very successful 3rd ICSA Statistical Conference in Beijing
 - o Serve on various statistical organizations
 - o Promote statistics in China
 - o Contributions to ICSA and other statistical organizations
 - o Help to organize the 4th ICSA Statistical Conference in Kunming
- Nominated by Smiley Cheng, University of Manitoba, Winnipeg

Since none of the awardees made to the Dallas Joint Meetings, Tim Chen carried the plaques to Taipei and China, and handed to them. The board reviewed this report and commented that for future awards, each category should have no more than two awardees.

8. Announcement of future meetings

1999 Applied Statistics Symposium, June 18-20, Georgetown University
2000 Applied Statistics Symposium, New Jersey Area
2000 Joint ICSA/ISBA Statistics Conference, Dec.

9. Announcement of members who are newly elected ASA Fellows

This year is a very successful year for ICSA members to be elected as ASA Fellows.
We have 8 Fellows this year:

Christy Chuang-Stein
Chien-Pai Han
Dennis Kon-Jin Lin
Wei-Yin Loh
Chih-Ming Wang
Jane-Ling Wang
Mei-Cheng Wang
Lianng Yuh

Let us congratulate them.

10. Other items for discussion

No discussion

If members want to find information from us, or to contact us, please make use of the ICSA home page - <http://www.icsa.org>, and send emails to either Dr. Timothy Chen at tchen001@umaryland.edu, or Dr. Naitee Ting at tingn@pfizer.com

一九九八年台北國際統計學術研討會辦理概況

李昭勝

交通大學統計研究所所長

一九九八年台北國際統計學術研討會學術委員會召集委員

※本文轉載自「一九九八年台北國際統計學術研討會實錄」

1. 出席會議人士

本次研討會為近年來在中華民國舉行規模較大的學術性會議之一，參與研討者達六四七人，盛況誠屬空前；其中上百人係由海外十五個國家或地區風塵僕僕趕來參與盛會。而新加坡統計局局長張保羅博士、韓國人口與社會統計局局長金民卿女士與美國普查局統計研究中心主任TommyWright博士等友邦政府官員受邀來台共襄盛舉，更讓此次國際性會議增色不少，對國際統計事務之聯繫深化許多。

2. 會議主題

本次研討會係以「統計理論與應用之新發展」為大會主題，包括廿三項研討子題，除現已蓬勃發展、眾所周知的生物統計、實驗設計、預測分析及時間數列分析外，新開發的計量財務，以及與政府施政密切相關的社會福利、環境保護、衛生保健、產業發展與縣民所得等也是研討重點，其目的在結合統計理論與實務的應用，並加強統計的研究發展，以作為未來統計事業發展的方針，並增進與國際間統計學術與經驗之交流，使國外人士瞭解我國統計發展狀況。

3. 開幕式

大會於八月十五日下午二時假中央研究院學術活動中心大禮堂舉行，由大會會長行政院韋主計長端主持，除蒙李總統登輝先生賜頒賀詞，並邀請行政院蕭院長萬長、中央研究院楊副院長祥發蒞臨觀禮並致詞。韋主計長於會中指出，我國統計歷經數十年來的辛勤耕耘，統計的質與量已漸獲國際肯定，並期勉統計工作者都能做到「人觀全程，事觀全局，物觀全貌」，足以掌握宇宙中亂中有序的真理，俾對於人類社會福祉作出更大的貢獻。

李總統書面賀詞中，肯定我國統計數字的指揮控管與檢驗政策功能優異，於此次亞洲金融風暴中適時提供決策者正確資訊，使我國經濟受創程度遠低於許多亞洲國家，而繼續加強國際合作，促進統計理論與實務之應用，並落實對

本土環境及社會生活之關懷，以謀求國家之永續發展，則為統計界邁向二十一世紀之重要課題。行政院蕭院長致詞則指出，在面臨「腦力競爭」的新時代及高倍速的競爭環境，將日益突顯統計的重要性，而提供迅速翔實的統計數字，更是文明國家理應負擔的責任，他更引述一九九五年「經濟學人」雜誌的評比，對我國統計業務予以高度肯定與重視，並提出充實社會統計、加強金融統計及擴充地方統計，為未來政府統計工作重要的努力方向，令人深深感受到統計工作者的任重道遠。李總統的書面賀詞與蕭院長的致詞均獲得與會人士的一致重視，隔日媒體即以「統計救了台灣」為標題大幅報導，並受到各界矚目。

4. 研討會議

研討會於八月十五、十六及十七日三天假中央研究院學術活動中心及地球科學所等六個研討室，分五十四場進行討論，發表論文共一六五篇。研討論文內容廣泛且豐富，包括生物統計、時間數列、統計推論、大樣本理論、無母數方法、貝氏分析、實驗設計、商業統計、教育及社會統計、專家系統、統計應用、計量財務、機率理論及應用、影像重建、迴歸樹、半母數方法、預測分析、製藥統計、多變量分析、統計計算、隨機過程、工業統計及政府統計等廿三個子題，包羅萬象。其中政府統計部分提出十九篇論文，範圍含蓋物價、所得、就業、產業發展、經濟預測、生命統計及社會福利等，皆為統計工作同仁於業餘完成，頗值嘉許。

此次研討會論文研討時，各研討室座無虛席，更有站立聆聽的爆滿景況，意猶未盡者於中場休息時間繼續討論的現象亦時有所見，論文的品質亦顯著提升；由於統計人的踴躍出席、熱烈發言及認真討論，對統計知識與經驗之交流甚有助益。

5. 歡迎茶會

大會為歡迎與會人員，於八月十五日晚上在中央研究院學術活動中心演講廳舉行歡迎茶會，以雞尾酒會方式進行。在大會會長韋主計長致詞歡迎與會貴賓，並逐一介紹籌備委員會主任委員劉副主計長三錡、顧問、學術委員會召集委員及合辦單位代表後，茶會正式開始，大家以輕鬆愉快的心情，享受大會準備的餐點，互相寒暄，氣氛熱絡，在在顯現統計大家庭的溫馨。

6. 大會晚宴

大會會長韋主計長於八月十六日晚上，假環亞飯店國際宴會廳舉行大會晚宴，歡迎遠道而來的貴賓，並酬謝籌備人員的辛勞。

大會為娛樂嘉賓，於用餐之前，特別安排復興劇校的表演，內容包括戲碟、雜耍、戲曲欣賞、柔術滾燈、魔術表演、中國式疊羅漢等，表演者個個歌聲扣人心弦、肢體柔軟、舞姿獨到，節目內容極具創意及趣味性，此種高水準的演出，對與會嘉賓，尤其是遠道來華的外國友人，均留下極深刻的印象。

在一個小時的表演結束後，大會會長即致詞表示媒體以「統計救了台灣」為標題，轉載李總統肯定統計的控管功能對於我國社經發展的影響力，請與會貴賓共享這份屬於統計人的榮耀，並期盼大家能再接再勵，對人類福祉作出更大的貢獻；泛華統計協會主席吳建福博士更藉此一盛會，頒發傑出服務獎 (Distinguished Service Award) 予大會會長韋端博士及趙晨慶博士，以表彰他們多年來對統計學術研究與交流的貢獻。為提高與會貴賓用餐的興緻，席間更以那卡西及卡拉ok助興，大家除盡情享受中國美食外，在微醺之中，更紛紛放下身段上台歡唱，氣氛熱絡達到最高點。

7. 中央研究院宴請與會貴賓

為盡地主之誼，本次研討會的合辦單位之一——中央研究院，特於八月十七日晚上在福華飯店宴請與會中外嘉賓，由統計科學研究所魏所長慶榮主持，席間並邀請統計人的另一半表達做為統計人“牽手”的經驗與心得，大家均以身為統計人家庭的一員為榮；餐會高雅隆重、賓主盡歡，為研討會劃下完美的句點。

8. 參觀旅遊

研討會結束後，為鬆弛身心並加深與會貴賓對我中華文化之認識，於八月十八日舉辦故宮博物院—陽明山國家公園之旅，由與會人士自由參加。此次活動，故宮博物院特別提供中、英文解說導覽，使參觀者更深入瞭解我國文化精髓，參觀活動於中午結束；午餐後再赴陽明山國家公園，先聽取多媒體簡介，隨即赴小油坑踏青，與會者對於我國的山川、文物，均留下極為深刻的印象。

台灣地區 1998 年的一些學術活動

李隆安

中央研究院統計科學研究所

台灣地區目前有兩個學會組織，一個是中國統計學社，另一個是中華機率統計學會。

中國統計學社是一個古老的學術組織，1930 年創立於中國大陸南京的中央大學，每年都舉辦一些學術活動，並於 1948 年成立台灣分社。後因國民政府於 1949 年遷台，將近十年，無論是分社或是總社都停止社務，直至 1961 年在台的一些有識人士籌備復社，才在 1962 年召開成立大會。從此中國統計學社每年在台舉辦一些學術活動，中華民國主計單位相關的統計人士一直是中國統計學社的主力，而行政院主計處也一直是學社重要協辦學術活動的夥伴。

西元 1981 年中央研究院增設統計科學研究所，中國統計學社每年的學術研討會就增加一位協辦單位，從此學社、主計處、中研院統計所成為每年台灣地區學術重大研討會主辦的連體嬰，每年也因活動地點的改變，也增加活動地點地主學校的大力參與，30 年來台灣地區凡有統計學者的學校幾乎都主辦過中國統計學社每年的學術研討會。

中華機率統計學會是 1992 年正式成立，周元燾院士幕後推動之功不可沒，他本人也榮任第一任理事長，魏慶榮先生為第二任理事長，現任理事長為中央研究院數學所研究員黃啓瑞先生。中華機率統計學會也是每年舉辦一次重大學術研討會，偶而也與其他學術組織一同合辦研討會，例如 1997 年即與中國統計學社、中研院統計所一同主辦 " 1997 IMS Asian and Pacific Regional Meeting "。1998 年 4 月 11 日中華機率統計學會與台灣大學流行病學研究所、農藝系、中研院統計所、國科會數學研究推廣中心，以及地主單位：台灣大學數學系共同主辦本年度的機率統計學術研討會。

台灣地區每年都舉辦的系列性質的研討會，除了上述兩個學術組織每年固定的研討會外，另有兩個長年性的研討會，一個是政治

大學主辦的機率統計之理論與應用研討會，今年是第四屆於 1998 年 3 月 14 日在政大舉行，另一個是南區統計研討會，主要是由濁水溪以南的學校輪流主辦，今年是第七屆，於 1998 年 6 月 5~6 日在嘉義的中正大學舉辦，這一次學術研討會是與中國統計學社的學術研討會共同舉行。

每隔數年由主計處主辦一次重大的國際性質的學術研討會：Taipei International Statistical Symposium (TISS)，第一次是 1986 年 8 月 3~5 日由主計處、中研院統計所、中國統計學社及中華經濟研究院共同主辦，第二次是 1990 年 6 月 28~30 日由主計處、中研院統計所、及中國統計學社共同主辦，第三次是 1993 年 12 月 17~19 日由主計處、中研院統計所、中國統計學社、及泛華統計協會共同主辦，今年則為第四次，於 8 月 15~17 日由主計處、中研院統計所及中國統計學社共同主辦。每次 TISS 都力邀一些國際人士參加，今年有美國、加拿大、印度、香港、日本、韓國、西班牙、希臘、比利時、英國、德國、挪威及中國大陸等地區的人士參加，詳情請看李昭勝先生的報告。

中研院統計所這次協辦的角色，除了協助安排中央研究院場地的安排，及 8 月 17 日的晚宴，也安排 8 月 16~17 日兩日參觀統計所。在 8 月 17 日的晚宴中，統計所所長魏慶榮先生特別讓統計學者的夫人有一個機會讓大家了解『做為統計學者夫人的甘苦談』，內容精彩無比，相信未能與會的人士覺得是一大損失。從夫人的「真心話」可以了解統計這一行職業帶給家庭負面的影響多於正面的，家人需要極大的「付出」來成就先生的事業，不過她們深以先生的成就為榮，更希望先生功成名就之時，不要忘記他的成就有一部份是建立在家人無怨無悔的共同努力。由於不准先生上台答辯，常見先生如：Prof. R. Carroll 者在台下擦拳磨腳的模樣，令大家捧腹大笑。夫人中也有妙語如珠者，譬如下面的一者：

“開學一陣子了，上中學的女兒告訴統計學家的爸爸，所有的課程中她最喜歡的一門課程是「概率」，做爸爸的聽了真是樂不可支，正慶幸自己的事業有了傳人，一旁的媽媽問女兒：您知道這門課是教什麼嗎？女兒回答說：這門課是教我們大「概」的算一算呀！”

中央研究院統計科學研究所從今年開始有了「客座系列專題演講」，今年 12 月 2~4 日由 UCLA 的李克昭教授主講「High dimensional data analysis via the SIR/PHD approach」。這個客座系列的演講屬於 Workshop 性質，由統計所每年主邀學有專精的統計學家從事系統化、專業化、深度化的講述某個專門領域，並提供與會者一份相當份量的上課講義，這份講義可以是講者未來出 monograph 或專書的初稿，相信這個系列的演講將是台灣地區未來重要的學術活動。有興趣來台講授客座系列演講的學者，可直接與該所聯繫。

除了上述週期性的學術活動，各大學及國家衛生院生統組在 1998 年分別有一些小型的學術活動，由於數量龐大，不在此處一一細述。總言之，台灣地區 1998 年的統計學術活動是相當活躍的。

NEWS FROM DEPARTMENT OF STATISTICS AND APPLIED PROBABILITY FACULTY OF SCIENCE NATIONAL UNIVERSITY OF SINGAPORE

A new Department of Statistics and Applied Probability was formed at the National University of Singapore (NUS) on April 1, 1998 as a reflection of the university's recognition of the importance of Statistics as well as its commitment to developing the subject in a focused and coherent manner. Professor Tailen Hsing is Head of the department. Professor Hsing joined NUS in 1996. He is also a professor of Statistics at Texas A&M University.

The department now offers modules at the undergraduate level leading to Bachelor of Science and Bachelor of Science (Honors) degrees in Statistics, and participates in the curriculum that leads to concentration in Economics with Statistics. It also offers graduate programs in statistics. The department provides an excellent atmosphere for research in all areas of Statistics and applied probability. It is currently in the planning stages of creating a statistical consulting center, which will provide the mechanism for offering statistical expertise to science, industry, government and commerce in Singapore as well as initiating collaborative research.

Statisticians formerly housed in the Department of Mathematics and the Department of Economics and Statistics of NUS have joined the new department. The new department is further enhanced by several new recruits: Professors Zhidong Bai, Burman Prabir, Young Truong, Yannis Yatracos, and Dr. Biman Chakraborty. The department hosts several permanent ICSA members and two of the current editorial members for *Statistica Sinica*. Professor Louis H.Y. Chen, Head of the Mathematics Department at NUS and President of the Bernoulli Society for Mathematical Statistics and Probability, holds a joint appointment in the department. For a complete list of the department staff, please go to the department homepage at <http://www.science.nus.edu.sg/~websap/>.

A Post-Conference Report On The Fourth ICSA Statistical Conference

After the successful first, second, and third conferences in Hong Kong, Taipei, and Beijing, respectively, the fourth ICSA Statistical Conference was held in later August, 1998, in the city of Kunming, China, a city with well-known unique natural and cultural surroundings and with spring-like weather all year around. The meeting started on the 19th with registration and a welcome banquet in the evening. Besides the continuing banquets every evening, the next two days were packed by 54 sessions with over 150 papers delivered by speakers from 13 countries and regions (i.e., Australia, Brazil, Canada, China, Greece, Hong Kong, Japan, Norway, Singapore, South Korea, Taiwan, United Kingdom and United States). These papers covered almost surely the entire spectrum of statistics and probability, from both applied and theoretical perspectives. There was also a special session on the roles of biostatisticians in industry, government, and academia in United States, and a plenary session on teaching statistics, which includes talks on statistical training and teaching in Mainland China, in Taiwan, in United States and in Canada, as well as talks on statistical teaching in specific areas such as Biostatistics and Business.

Besides the excellent technical program, many meeting participants also enjoyed the wonderful culture and social programs organized by the super local organizing committee. These included a dazzling folk-dancing show, a rarely-granted preview of the 1999 World Botanical Exposition, a guided tour of Kunming including the must-see "Stone Forest", and extended tours to breathtakingly scenic places like Li-Jiang, Ta-Li, and Bana. Many also experienced the thrill of sipping the "over-bridge noodle" from mouthwatering and boiling soup, of bargaining for 95% discount on jade and other local treasures, and of singing karaoke with liqueur-moisturized vocal cords. Simply put, this was one of the most memorable meetings to us and to many others. As Jim Ramsay wrote to one of us, in responding to the question of jet-lag, "But a small price to pay for such a great experience. We'll wind up putting lots of other people to sleep with our tales of China, anyhow. 'Gambei' will be forever a part of my limited Chinese vocabulary."

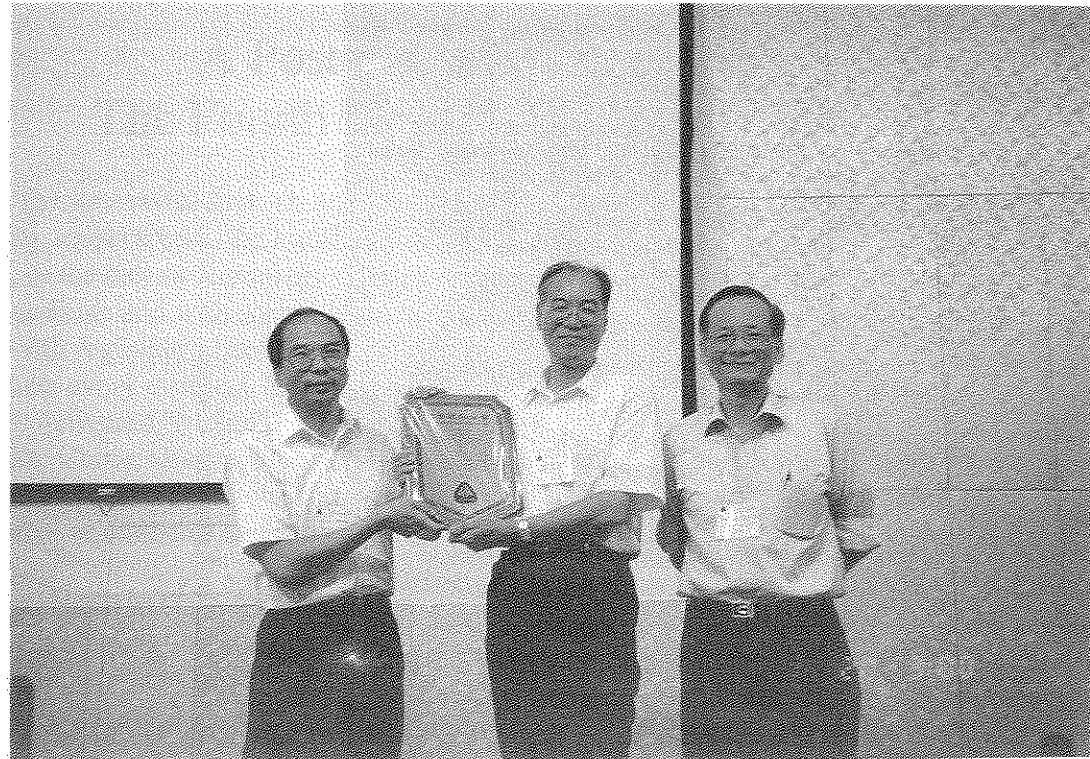
There are too many people to thank for their efforts that made this meeting not only possible, but also an exceptionally exciting one. The local organizing committee, chaired by Professor Xue-ren Wang, and the program committee, co-chaired by Professors Smiley Cheng and Zhiliang Ying, deserve the most thanks. The amount of work they had put in is simply unmeasurable. We also thank our advisors and organizing committee for their valuable input, and several institutions from Mainland China for financial support. Finally, we express our sincere gratitude to all the meeting participants -- no meeting can be called successful without participants' enthusiastic support and active participation!

Hope to see all of you in the 5th ICSA meeting!

George Tiao, Conference Co-Chair
Xiao-Li Meng, Conference Coordinator



The opening of the 4th ICSA Statistical Conference in Kunming, China



*Award presentation to Professor Shio-Yong Feng
at the 4th ICSA Statistical Conference in Kunming, China*



In Li-Jiang on -a mountain top



*Picture of some conference participants taken at the new Hong Kong Airport.
They were from the meeting in Taiwan to the meeting in Kunming, China.*



Hong Kong Statistical Community in 1998

Sik-Yum Lee

Most of the statistical activities in Hong Kong were organized by and/or related to the Hong Kong Census and Statistics Department, Hong Kong Statistical Society, and various Departments in the local Universities that have some connections with Statistics. The major events in 1998 are listed as follows:

- The Hong Kong Census & Statistics Department organized a series of activities to commemorate its 30th Anniversary.
- An important project of the Hong Kong Statistical Society is to establish a local examination and accreditation system for the Statistics profession. Recently, the related committee has secured financial support from the HKSAR Government for initiating the implementation of the system.
- The Department of Statistics, University of Hong Kong, has been renamed as "Department of Statistics and Actuarial Science". A Diploma course in Epidemiology & Biostatistics has been established in the Department of Community and Family Medicine, The Chinese University of Hong Kong.
- Some Personal Matters.
 - (i) Some senior statisticians, for example, Professor N.N. Chan (CUHK), Dr. W.K. Chiu (HKU) and Mr. H.K. Yip (HKCSD), retired this year. The Department of Statistics, Chinese University of Hong Kong, has hosted a one-day conference to honour Professor N.N. Chan's retirement.
 - (ii) Mr. Frederick W.H. Ho, the Commissioner of The Hong Kong Census & Statistics Department, was awarded the VON NEUMANN-SPALLART MEDAL by ISI; he has also been elected the vice-president of the International Association for Official Statistics for the term 1997-1999.
 - (iii) Mr. Alvin Wing-Kong Li was elected the president of the Hong Kong Statistical Society; he was also promoted to the rank of Assistant Commissioner, The Hong Kong Census & Statistics Department.
 - (iv) Professor Kok Lay Teo will take up the Chair of the Department of Applied Mathematics, the Hong Kong Polytechnic University in December, 1998.
 - (v) Professor Minggao Gu has joined the Department of Statistics, The Chinese University of Hong Kong.

I am greatly indebted to the Hong Kong Statistical Society for providing me the information on most of the above events. I apologize for missing some of the important ones due to the lack of information and the limitation of space.

FDASA - The Statistical Association Within FDA¹

Karl K. Lin
 Division of Biometrics II
 Office of Biostatistics
 Center for Drug Evaluation and Research
 Food and Drug Administration

When you hear people talk about statistical associations you probably will think those well known, large, national or international organizations like ASA, Biometric Society, IMS, ICOSA, or Statistical Society of Canada. However, as you can see from the data presented below, the one to be introduced here is a relatively small and young but unique and dynamic statistical association. It is the Food and Drug Administration (FDA) Statistical Association (FDASA). FDASA was established in 1996. It is an association within the nation's foremost consumer protection agency. FDA regulates over \$1 trillion worth of products, which account for 25 cents of every dollar spent annually by American consumers. FDA touches the lives of virtually every American every day. For it is FDA's job to see that the food we eat is safe and wholesome, the cosmetics we use won't hurt us, the medicines and medical devices we use are safe and effective, and that radiation-emitting products such as microwave ovens won't do us harm. Feed and drugs for pets and farm animals also come under FDA scrutiny. FDA also ensures that all of these products are labeled truthfully with the information that people need to use them properly. FDA is one of our nation's oldest consumer protection agencies. Its approximately 9,000 employees monitor the manufacture, import, transport, storage and sale of about \$1 trillion worth of products each year. It does that at a cost to the taxpayer of about \$3 per person. First and foremost, FDA is a public health agency, charged with protecting American consumers by enforcing the Federal Food, Drug, and Cosmetic Act and several related public health laws. To carry out this mandate of consumer protection, FDA has some 1,100 investigators and inspectors who cover the country's almost 95,000 FDA-regulated businesses. These employees are located in district and local offices in 157 cities across the country. Right now, there are about 150 mathematical statisticians working with professionals of other disciplines, such as medical doctors, chemists, pharmacologists, toxicologists, microbiologists, and engineers, in the six centers within FDA². The majority of them are with Ph.D. degrees in statistics or biostatistics. The primary responsibilities of statisticians working at FDA are review and evaluation of statistical analyses of safety and efficacy data contained in reports submitted to the Agency by

¹The views expressed herein are those of the author and not necessarily those of FDA. Most parts of this article are directly from the websites (a) <http://cdernet/dob3/fdasa/index.html> in the Biometrics STATNET in the FDA's CDERNET, and (b) <http://www.fda.gov/opacom/hpview.html>.

²The six centers within FDA are Center for Drug Evaluation and Research (CDER), Center for Biologics Evaluation and Research (CBER), Center for Food Safety and Applied Nutrition (CFSAN), Center for Devices and Radiological Health (CDRH), Center for Veterinary Medicine (CVM), and National Center for Toxicological Research (NCTR).

sponsors in the regulated industries such as pharmaceutical companies, biotech companies, and food manufacturers, in their applications for permissions or approvals to market their products; and research on statistical issues and methodology encounter in their regular reviews.

The FDA Statistical Association was formed: (1) To serve as a collective voice in promoting the advancement of statistical sciences within the regulatory environment of the FDA; (2) To address issues specific to the concerns of all FDA statisticians; and (3) To foster FDA-wide consistency and harmonization on crucial regulatory statistical issues.

The Association will follow its mission by: (1) Conducting Inter-center seminars on common regulatory statistical issues; (2) Conducting workshops and conferences on both common and special issues; (3) Promoting continuing education activities and programs for FDA Regulatory Statistical Scientists; (4) Encouraging increased communications among FDA statistical scientists; (5) Preparing an FDA-wide newsletter on important statistical issues; and (6) Supporting statistically focused educational programs for other FDA scientists.

The membership of FDASA consists of statistical scientists interested in the objectives of the Association. There are two types of members - active members and associate members. Active members consist of statistical scientists who are current or retired statisticians or biostatisticians of the FDA. These active members is entitled to hold elected office, vote in Association elections, vote upon Association issues, and be voting members of Standing and Ad-hoc Committees. The associate membership category is for those who have an interest in the statistical sciences, and are either FDA employees or are under contract with the FDA. Associate members may not hold elected or appointed office nor vote, but may serve on Standing and/or Ad-hoc Committees.

1998 FDA Statistical Association Officers

President: Nancy Smith, CDER
President Elect: Gregory Campbell, CDRH
Board Members: Jawahar Tiwari, CBER; Kooros Mahjoob, CDER; John Dawson, CDRH; Stuart Chirtel, CFSAN; Jesse Meneses, CVM; Robert Delongchamp, NCTR
Past Presidents: Satya Dubey, CDER; Peter Lachenbruch, CBER

FDASA Sponsored Seminars and Short Courses

Seminars/Short Courses in 1998 (It may not be complete.)

November 18, 1988

Speakers: Dr. Dean Folkman and Dr. Mike A. Proschan
Topic: Valid Inference in Random Effects Meta-Analysis

November 2, 1988

Speaker: Dr. Peter Bruce, Vice President, Resampling Stats, Inc.
Topic: General Resampling Approach to Inference

October 22, 1998

Speaker: Dr. J. W. Shih, Merck Research Laboratories, Rahway, N.J.
Title: (One day statistical workshop) Interim Analysis for Re-Evaluation of Design Parameters in Clinical Trials

September 16, 1998

Speaker: Dr. Jesse Berlin
Topic: Analysis of Data from Multicenter Trials

August 17, 1998

Speaker: Dr. Otto von Guericke, University of Magdeburg Institute of Biometrics and Medical Informatics, Magdeburg, Germany
Topic: A New Mathematical Style for Analyzing Trials with Multiple Endpoints

April 24, 1998

Speaker: Dr. William F. Rosenberger, Department of Mathematics and Statistics and Epidemiology and Preventive Medicine, University of Maryland, Baltimore, MD
Topic: Adaptive Design of Phase I Clinical Trials

March 26, 1998

Speaker: Danyu Lin, Ph.D., Department of Biostatistics, University of Washington
Topic: Advanced Topics in Statistics Short Course: Analysis of Multiple Events in Competing Risks Data

March 25, 1998

Speaker: Danyu Lin, Ph.D., Department of Biostatistics, University of Washington
Topic: Statistical Issues in the Analysis of Multiple Events and Competing Risks Data

March 25, 1998

Speaker: Danyu Lin, Ph.D., Department of Biostatistics, University of Washington
Topic: Advanced Topics in Statistics Short Course: : Survival Analysis

March 13, 1998

Speaker: Harji I. Patel, Ph.D., Berlex Laboratories, Inc.
Topic: Simple Methods for Safety Data Monitoring

February 20, 1998

Speaker: Robert F. Wagner, Ph.D., Office of Science & Technology, CDRH, FDA Rockville MD
Topic: Analysis of Bias, Variance, and Generalizability of Classifier Performance Assessment

January 30, 1998

Speaker: Jason Hsu, Ph.D., Ohio State University
Topic: Practical Equivalence Inference in Statistics

January 30, 1998

Speaker: Jason Hsu, Ph.D., Ohio State University
Topic: Stepwise Confidence Intervals without Multiplicity Adjustment for Dose Response and Toxicity Studies

Seminars/Short Courses in 1997

September 12, 1997

Speaker: September 12, 1997, Jianming Ye, University of Chicago
Topic: On Measuring and Correcting the Effects of Data Mining and Model Selection

August 29, 1997

Speaker: Rina Chen, Ph.D., Israel Institute for Biological Research
Topic: Detection Of Rare Event Clustering

June 13, 1997

Speaker: David Mauger, Ph.D., Penn State University College of Medicine
Topic: Vitro-In Vivo Relationships For Oral Extended Release Drug Products

May 27 1997

Speaker: Jen-pei Liu, Ph.D., National Cheng-kung University
Topic: Statistical Evaluation of Individual Bioequivalence

May 27, 1997

Speaker: Jen-pei Liu, Ph.D., National Cheng-kung University
Topic: Statistical Evaluation of Similarity Factor f_2 as a Criterion for Assessment of Similarity between Dissolution Profiles

May 14, 1997

Speaker: Gary Koch, Ph.D., D.Sc. (Hon), University of North Carolina at Chapel Hill
Topic: Innovative Design and Analysis of Clinical Trial Data

May 14, 1997

Speaker: Gary Koch, Ph.D., D.Sc. (Hon), University of North Carolina at Chapel Hill
Topic: New Approach for the Analysis of Covariance

April 25, 1997

Speaker: Richard Simon, Ph.D., National Cancer Institute
Topic: Practical Bayesian Methods for Addressing Multiplicity Problems in Medical Research

April 24, 1997

Speaker: Richard Olshen, Ph.D., Stanford University
Topic: Comparing Digital And Analog Mammograms And Confidence Procedures For Functionals Of ROC Curves

April 18, 1997

Speaker: Mei-Cheng Wang, Ph.D., Johns Hopkins University
Topic: Analysis of Doubly-Truncated Data with a Case-Cohort Design

April 14, 1997

Speaker: Rebecca DerSimonian, Ph.D., National Institute of Child Health and Human Development
Topic: Meta-analysis in Clinical Trial

March 20, 1997

Speaker: Frank Harrell, Ph.D.
Topic: Bayesian Methods in Clinical Trials of Medical Device

March 12, 1997

Speaker: Eric V. Slud, Ph.D., University of Maryland
Topic: Early Accrual-stopping Sequential Designs for Clinical Trials

January 30, 1997

Speaker: Eugene R. Heyman, Ph.D., Boehringer Mannheim Pharmaceuticals
Topic: Some Practical Experience With Equivalence Testing Of A New Thrombolytic

Seminars/Short Courses in 1996

December 17, 1996

Speakers: Robert O'Neill, Ph.D., CDER and Susan Ellenberg, Ph.D., CBER
Topic: Statistical Principles for Clinical Trials: Guidance of International Conference of Harmonisation

October 25, 1996

Speaker: Steven Senn, Ph.D., University College London
Topic: The Crossover, Carry-over, Carry-on

October 23, 1996

Speaker: Stuart Pocock, London School of Hygiene and Medicine
Topic: Design and Interpretation of Studies for Therapeutical Equivalence: The Statistical Standpoint

FDASA Symposium

September 25-26, 1997

University of Maryland, Shady Grove Center

Papers on the following topics were presented in the various sessions of the two-day symposium:

A1 - Exact and Robust Methods

A2 - Diagnostic Methods I

B1 - Design and Analysis of Experiment/ Detection of Adverse Events

B2 - Methods in Toxicology

G2 - History of Statistics of FDA

C1 - Changes in the Middle of a Group Sequential Clinical Trial

C2 - Contributed Papers I

D1 - Longitudinal and Survival Data Analysis

D2 - Multiplicity Issues

E1 - Diagnostic Methods II

E2 - Contributed Papers II

Congratulations to the Following ICSA Members Who Were Elected as ASA and IMS Fellows in 1998

ASA Fellows:

Christy Chuang-Stein, Director of Biostatistics, Pharmacia and Upjohn: For sustained excellence in applications of statistics to medical research, particularly in the evaluation of pharmaceutical safety issues; for methodological research, service to the profession, and for editorial service.

Chien-Pai Han, Professor of Mathematics, University of Texas at Arlington: For innovative statistical research, especially in the areas of preliminary test, discriminant analysis, and sample survey methodologies; and for editorial and other service to the profession.

Dennis Kon-Jin Lin, Associate Professor, Department of Management Sciences and Information Systems, Penn State University: For important contributions to the design of experiments and other areas; for superb teaching; and for extensive service to the profession.

Wei-Yin Loh, Professor of Statistics, University of Wisconsin: For fundamental contributions to the theory and practice of bootstrap and tree-structured regression and classification methods; for excellence in teaching statistics; and for dedicated editorial service.

Chih-Ming Wang, Mathematical Statistician, Statistics Engineering Division, National Institute of Standard and Technology: For outstanding contributions to the areas of variance components; for exceptional collaborative work in opto-electronics and fiber optics; and for editorial and other service to the profession.

Jane-Ling Wang, Professor, Division of Statistics, University of California at Davis: For contributions to statistical theory and applications in non-parametrics, survival analysis and aging research.

Mei-Cheng Wang, Associate Professor of Biostatistics, Johns Hopkins University: For influential contributions to research in truncation and sampling-bias models; and for editorial and professional service.

Lianng Yuh, Director of Statistics, Department of Clinical Research, Central Research Division, Pfizer, Inc.: For outstanding leadership of a major biopharmaceutical group; for important contributions to biopharmaceutical statistics; for sustained encouragement of interaction between industry, academia; and for leadership and services to the profession and the pharmaceutical industry.

Judith E. Zeh, Research Associate Professor of Statistics, University of Washington: For excellence and leadership in statistical aspects of whale science; for contributions to clinical trials of STD; and for mentoring graduate consultants.

IMS Fellow:

Jane-Ling Wang, University of California, Davis: For her contributions to Survival analysis, Reliability theory, Curve estimation, Order-restricted inference, Large sample theory, Statistical methods in aging research and for editorial and professional service.

1998 ICOSA Distinguished Service Award Recipients and Their Contributions to ICOSA

Dr. Wei Duan (DGBAS, R.O.C.)

- o As Director-General of Budget, Accounting & Statistics, Dr. Wei has helped to reshape the official statistics system in Government.
- o Help in urging government officials and legislators to use statistics properly.
- o Help promote the awareness of importance of statistics for public.
- o Help statistics community to grow and prosper.
- o Help staging many Conferences.
- o Contributions to ICOSA and Statistica Sinica.

Dr. Chern-Ching Chao (Academia Sinica, Taiwan)

- o Help reorganize the operation of Statistica Sinica.
- o Promote the usage of statistics in the community.
- o Contributions to ICOSA and other statistical organizations.

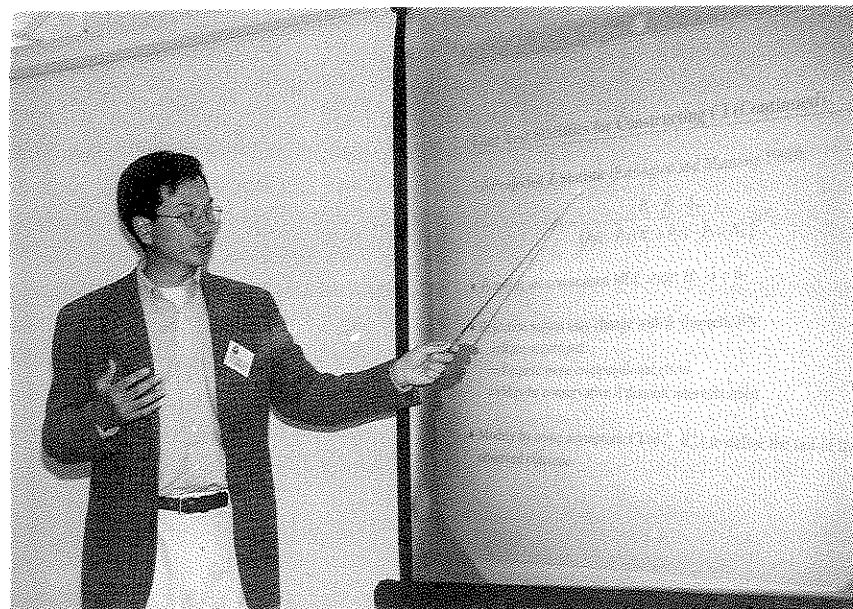
Professor Shi-Yong Feng (Chinese Academy of Sciences, Beijing)

- o Help organize a very successful 3rd ICOSA Statistical Conference in Beijing.
- o Serve on various statistical organizations.
- o Promote statistics in China.
- o Contributions to ICOSA and other statistical organizations.
- o Help to organize the 4th ICOSA Statistical Conference in Kunming.

Pictures From 1998 ICSA Applied Statistics Symposium



Symposium Keynote speaker Dr. Robert O'Neill of FDA (left), a presentation in one of the symposium sessions (below).



Pictures From 1998 ICSA Applied Statistics Symposium
(Continued)



In addition to the serious business, symposium participants had good time in other activities such as enjoying the nice lunch and weather (above) and singing in the banquet night (below).



ICSA 1999 Applied Statistics Symposium.

June 18-20, 1999

The International Chinese Statistical Association (ICSA) 1999 Applied Statistics Symposium will be held at Georgetown University in Washington DC. For detailed information, including directions to Georgetown University, hotel and local tourist information, please visit our Website, <http://www.icsa.org> under Symposia.

I. Program Time Allocation

June 18, Friday -- Short Courses, 9:00 am -- 5:00 pm

ICSA Board of Directors meeting, 6:00 -- 9:00 pm. (closed)

June 19, Saturday -- Conference and Banquet, 8:45 am -- 10:00 pm

ICSA Membership Meeting, 4:30 -- 5:30 pm

June 20, Sunday -- Conference and Lunch, 8:30 am -- 1:25 pm

II. Keynote Speech

Professor Chin-long Chiang of UC Berkeley

"My Life as a Statistician"

III. Short Courses Presenters

Jason Hsu (Ohio State U), Multiple Comparisons (afternoon)

Gordon Lan (Pfizer), Interim Analyses in Clinical Trials (morning)

Kung-Yee Liang (Johns Hopkins U) Longitudinal Data Analysis using Generalized Linear Models(full-d)

Tom Louis (U Minnesota), Bayes and Empirical Bayes Methods for Data Analysis (full-day)

Jun Shao (U Wisconsin), The Bootstrap and Its Applications in Medical Statistics (full-day)

IV. Invited Sessions Organizers

Agnes Hsiung (NHRI, Taiwan), Statistical and Biostatistical Issues in Taiwan

Alice Hsuan (Janssen), Mentoring Session for Young Statisticians

Grace Yang (U Maryland), Mentoring Session for Students and Young Faculties

Dennis Lin (Penn State U), Industrial Statistics

R. S. Tsay (U Chicago), Statistics in Finance

Chihwa Kao (Syracuse U), Econometrics/ Time Series

Jianqing Fan (UCLA), Recent Advances in Nonparametric Methods

Minggao Gu (Chinese U of Hong Kong), Bootstrap Methods

Heping Zhang (Yale), Genetic Methods/Epidemiology

Margaret Wu (NIH), Recent Developments in Methods for Analyzing Longitudinal Data with Incomplete Observations

Jeff Wu (U Michigan), Experimental Design for Biopharmaceutics

J. P. Liu (NHRI, Taiwan), Bioequivalence

Mei-ling Ting Lee (Harvard), Life Time Data Analysis

Vance Berger (FDA) New developments in Permutation Tests for Clinical Trials

Edward Wegmen (George Mason U.) Data Visualization and Statistics

Harji Patel (Pfizer) Postmarketing Safety Data Monitoring and Assessment

Ming Tan (St Jude Children Hospital) Bayesian Methods in Biostatistics

V. Employer and applicant poster bulletins will be provided, please contact Dr. Colin Wu

colin@mts.jhu.edu.

VI. Important deadlines

•January 31, 1999 Student Awards manuscripts submission deadline

•March 15, 1999 Student Awards winners notification

•March 20, 1999 Deadline for abstract submission (invited and contributed)

Deadline for speakers' registration

•May 18, 1999 Hotel reservation deadline (at group rate)

•May 20, 1999 Add late registration fee

•May 31, 1999 Georgetown housing reservation deadline

•June 20, 1999 Proceedings manuscript submission deadline

VII. Program Committee members: T. Timothy Chen (Chair), Jim Hung, Chang Lao, Zhaohai Li,

Kung-Yee Liang, Karl Lin, Yi Tsong, William Wei, Colin Wu.

CALL FOR PAPERS

ICSA 1999 Applied Statistics Symposium Proceedings

Communications in Statistics will publish a special issue on the papers presented at the ICSA 1999 Applied Statistics Symposium and recommended by referees. Professors Chien-Pai Han and William W. S. Wei will be guest editors for this special issue.

Format:

CIS format. Please follow precisely the CIS typing instructions which can be found at the web site: http://www.dekker.com/cgi-bin/webdbc/md/author_notes.htm?d_cat_id=0361-0926

Deadline and Submission:

Submission should include a letter of transmittal and four copies of the paper. To help expedite the refereeing process, it is strongly suggested that the paper be sent as early as possible and be postmarked no later than June 20, 1999. Please send all submissions to:

Prof. William Wei
Department of Statistics
Temple University
Philadelphia, PA 19122

Call For Papers
ICSA 1999 Applied Statistics Symposium

Date: June 18-20, 1999
Place: Georgetown University, Washington D.C.

The Program Committee of the ICSA 1999 Applied Statistics Symposium invites you to submit statistical papers for presentation at this conference. Abstracts for both invited and contributed papers are due March 20, 1999.

E-mail submission of abstracts is preferred. Please complete the abstract form and sent it by e-mail to hung@cder.fda.gov by March 20, 1999. The abstract form can also be downloaded from the ICSA web site at <http://www.icsa.org>. Abstracts should be prepared in PLAIN TEXT FORMAT or Microsoft WORD FORMAT or WORDPERFECT FORMAT.

All speakers must pre-register by filling out the registration form and send it with a check to Dr. Zhaohai Li, The Biostatistics Center, The George Washington University, 6110 Executive Blvd., Suite 750, Rockville, MD 20852, by March 20, 1999. If you cannot submit your abstract by e-mail, please send a PC 3.5" diskette containing your abstract together with your registration form to Dr. Li.

If you would like to submit your paper for possible publication in a special issue of Communication in Statistics, please see Symposium Proceedings announcement. The deadline for manuscript submission is June 20, 1999.

ABSTRACT FORM

Author name:

Work Affiliation:

Mailing Address:

Tel:

Fax:

E-mail:

Type of Paper (invited [please provide organizer's name], contributed, student award):

Do you need an invitation letter from the Program Chair?

Title and Abstract [Type title in the first line, names of authors in the second line, address of the contact author in the third line. Then skip one line and type the text of abstract (do not exceed 200 words). Equations and mathematical symbols should be kept to a minimum]:

REGISTRATION FORM
INTERNATIONAL CHINESE STATISTICAL ASSOCIATION
1999 APPLIED STATISTICS SYMPOSIUM, JUNE 18 - 20
Georgetown University, Washington D.C.

Name (English) _____ (Chinese) _____
Last First MI

Organization _____

Mailing Address _____

Tel: () _____ Fax: () _____ Email _____

Registration Fee* Member 1999 \$50 (\$60 after 5/20) \$ _____
Nonmember or Inactive Member \$90 (\$100 after 5/20)
Student** Member 1999 \$0 (\$10 after 5/20)
Student** Nonmember or Inactive Member \$20 (\$30 after 5/20)

Half-Day Short Course*** \$100 (\$125 after 5/20) per course
Student \$25 (\$30 after 5/20) per course
Short Course 1, morning June 18, Gordon Lan \$ _____
"Interim Analysis in Clinical Trials"
Short Course 2, afternoon June 18, Jason Hsu \$ _____
"Multiple Comparisons"

Full-Day Short Course*** \$175 (\$200 after 5/20)
Student \$50 (\$60 after 5/20)
Short Course 3, June 18, Kung-Yee Liang \$ _____
"Longitudinal Data Analysis Using Generalized Linear Models"
Short Course 4, June 18, Thomas Louis \$ _____
"Bayes and Empirical Bayes Methods for Data Analysis"
Short Course 5, June 18, Jun Shao \$ _____
"The Bootstrap and Its Applications in Medical Statistics"

Banquet**** (\$25 x _____ Adults + \$10 x _____ Children) \$ _____
If a contributed or invited paper speaker,
session organizer or chair, please check _____

Housing cost _____ rooms x (_____ per day x _____ nights + \$10 key deposit) \$ _____
Please fill out reservation form (deadline May 31, 1999)

Renew ICSA year 2000 membership, regular \$40, student \$20 \$ _____

Donation \$ _____

TOTAL \$ _____

CANCELLATIONS: Total fee, less \$40 administrative fee, will be refunded if written cancellation received by May 31. Requests for refunds received after May 31 will not be honored.

ICSA Student Awards and Travel Fellowships International Chinese Statistical Association

The 9th Applied Statistics Symposium for ICSA will be held on June 18-20, 1999 at Georgetown University. For the first time, the Program Committee sponsors the Student Awards and Travel Fellowships. The main purpose of establishing this award is to encourage student members of ICSA to participate and present their research work at the annual meeting.

Qualification: The student must be an ICSA member (or join at the time of manuscript submission), a degree candidate in any term during 1999 at an accredited institute and be able to present the work at the 1999 symposium.

Manuscripts should be prepared double spaced using Biometrics or JASA guidelines for authors. They must be 20 pages or fewer exclusive of tables and figures. Use one inch margin and no smaller than 12 point type. The work must be that of the student and be relevant to applications in a variety of fields including bio-medicine, business, etc. The manuscript could be co-authored with a faculty adviser and/or a small number of collaborators, although the student must be the first author.

Review and Selection Process: The Award Committee will review blinded copies of the submitted manuscripts based on the following criteria:

- The manuscript should be well motivated by an application relevant to specific field(s).
- The methodology developed should be applicable to the motivating problem.
- Inclusion of an application of the proposed methodology to a particular study will be favorably considered.
- Clarity of presentation in writing will be considered as well.

Up to 5 travel award winners will be selected by the Awards Committee chaired by Prof. Kung-Yee Liang. All winners will receive a certificate, \$300 for travel and other expenses, and tuition for the short courses of their choice. The winners will be notified by March 15, 1999.

Submission of Manuscripts: Manuscripts should be received and postmarked no later than January 31, 1999. The submission should include

- A cover letter
- One complete title page with author(s), institutional affiliation, mailing address, phone/fax numbers and e-mail address
- Five copies of the manuscripts with only a title, no authors nor affiliation, on the first page.
- Two copies of the ICSA abstract form
- Two copies of the ICSA membership application for non-members (form can be downloaded from <http://www.icsa.org>)

All materials should be mailed to:

Dr. Timothy Chen, Program Chair
University of Maryland
Greenebaum Cancer Center- Rm N9E28
22 South Greene Street
Baltimore, MD 21201-1595

How did you learn about the symposium? Circle all applicable.

ICSA e-mail, ICSA Bulletin, Program Organizer, AMSTAT News, Professor, Friend

GEORGETOWN HOUSING RESERVATION FORM (deadline May 31, 1999)

Name _____
Last, First MI

All rooms in student dormitory have two single beds and a private bath. Occupy the whole room, \$56 per day; Share room with another person, \$28 per day, per person. Check in time is 4:00 pm to 9:00 pm daily in the Office of Guest Services located in the residence hall; Check out time is 10:00 am or special arrangement. No refund for rooms vacated before the departure date.

Reserve ___ rooms for ___ people.

Arrival date _____, Arrival time _____

Departure date _____, Number of nights _____

I will share room with another person.

Name of person sharing with me _____, or
Please arrange another person to share room with me, yes _____, my Sex _____

If prefer hotel near-by, please see ICSA website (<http://www.icsa.org>) under Symposia. Deadline for group rate, is May 18, 1999.

NOTE:

For parking and driving direction, please see ICSA website. The Reagan National Airport is very close to Georgetown University. Meals for spouse and children can be purchased at Georgetown University cafeteria, or near-by restaurants.

* Registration fee includes continental breakfast, coffee breaks, and lunch on Saturday and Sunday. If you are not a current member, you can **download a membership form** from ICSA website. If you **submit the membership form** together with registration form, you will become a member of ICSA.

** Should be certified by major professor or graduate director regarding student status.

*** Fees include continental breakfast, coffee breaks, and lunch on Friday. Taking short course must register for the symposium.

**** The banquet is free for children under age 6, \$10 for age 6-10, and \$25 for age over 10. The banquet is free for all the invited or contributed speakers, or session organizers or chairs.

Please mail the registration form with check made payable to ICSA (in U.S. dollar on U.S. bank) to: Professor Zhaohai Li, The Biostatistics Center, George Washington University, 6110 Executive Blvd, Suite 750, Rockville, MD 20852

Announcement of A Session in Next Year's Joint Statistical Meetings Sponsored by ICSA

Ching-Shui Cheng

"Statistica Sinica Invited Papers" Session in the 1999 Joint Statistical Meetings

ICSA will sponsor a session of "Statistica Sinica Invited Papers" in the 1999 Joint Statistical Meetings at Baltimore. Tentatively scheduled for 2-3:50, Sunday August 8, this session has two invited speakers: Professor Wing Hung Wong of UCLA and Professor Cunhui Zhang of Rutgers University. Professor Augustine Kong of the University of Chicago will be a discussant. The titles of the talks are:

Wing Hung Wong: "Statistics in Molecular Biology and Genetics";

Cunhui Zhang: "Some Statistical Models and Methods for Tumor Growth Experiments", a joint work with Yehuda Vardi and Zhiliang Ying.

Professor Wong will review recent developments in selected areas in molecular biomedicine where statistical and computational issues have been of central importance. These include the mapping of complex heritable traits, modeling and recognition of protein folds and motifs, and the computation of tertiary structures of macromolecules. By way of examples, he will discuss the roles and opportunities in these areas for statistical and mathematical scientists. Professor Zhang will discuss statistical issues arising from animal experiments for studying anti-tumor agents, a crucial step in the development of cancer therapies. Statistical analyses of data in such studies could be complicated by multiple measurements of tumor sizes, incompleteness of growth curves due to certain informative censorship, as well as relatively small sample sizes. Consequently, suitable and efficient modeling, bias correction and appropriate definition of endpoints are needed. New models and methods are introduced to address these issues and applied to real studies.

中央研究院統計科學研究所 客座系列專題演講

為促進國內外統計學術交流，本所針對正發展中的研究領域或已發展而有新的處理方式的領域，邀請客座蒞所訪問一至三個月，舉辦系列專題演講，並提供講義，由本所系列編號印出。

李克昭教授已應邀將擔任這「客座系列專題演講」之首位主講人，我們也期待您的參與討論。

High Dimensional Data Analysis via the SIR/PHD Approach

李克昭教授 主講

(Prof. Ker-Chau Li, Dept. of Statistics & Mathematics, UCLA, USA)

中央研究院地球科學研究所二樓演講廳

摘 要

Dimensionality is an issue that can arise in every scientific field. Generally speaking, the difficulty lies on how to visualize a high dimensional function or data set. This is an area which has become increasingly more important due to the advent of computer and graphics technology.

Sliced inverse regression (SIR) and principal Hessian direction (PHD) are two basic dimension reduction methods. They are useful for the detection of geometric information underlying noisy data of several dimensions - a crucial step in empirical model building which has been overlooked in the literature. In this series of lectures, I will review the theory of SIR/PHD and describe some ongoing research in various application areas.

演講場次	日期	時間	講 題
Lecture 1	87年12月2日 (星期三)	9:00 - 10:30 am	Introduction: dynamic graphics, principal component analysis, dimension reduction
Lecture 2		11:00 - 12:30 am	SIR: basic theory and application
Lecture 3		1:30 - 3:00 pm	SIR: further discussion
Lecture 4		3:30 - 5:00 pm	PHD: theory and application
Lecture 5	87年12月3日 (星期四)	9:00 - 10:30 am	Nonlinear Confounding: the limitation of SIR/PHD
Lecture 6		11:00 - 12:30 am	Classification: Fisher's linear discriminant analysis and SIR, hand-written digit recognition problems
Lecture 7		2:00 - 4:00 pm	Tree-structured regression via PHD and a new approach to analysis of two level factorial designs
Lecture 8	87年12月4日 (星期五)	9:00 - 10:30 am	Censored regression and error-in-regressor problems
Lecture 9		11:00 - 12:30 am	Nonlinear time series and multivariate SIR
Lecture 10		2:00 - 4:00 pm	Other research topics and conclusion

Call for Nomination for President and Board Directors

The ICSA Nominating and Election committee invite you to nominate candidates for the 1999 President-elect and five members of board directors.

The minimum qualifications for the President-elect and Board Directors are as follows:

The candidates for President-Elect must

1. have been an active member for at least three years
2. have held office of ICSA (e.g. Director or Committee Member)
3. chair Board meetings during the year of presidency
4. attend at least one Board meeting per year as president-elect and past president (exception can be made for candidates outside North America).

The candidates for Directors must

1. be current members
2. if resides in North America, attend at least one Board meeting per year; if resides in Taiwan or HK, attend at least two Board meetings in three years; if resides in China, will attend at least one Board meeting in three years.
3. when unable to attend the Board meeting, send a proxy.

Please check with nominees about their qualifications before you submit their names to Nancy Lo, the Committee Chair. Nomination deadline is February 28, 1999. In your nomination, please include for each nominee: name, affiliation, address, and a paragraph of reasons for your nomination.

You may nominate one for President-elect and five for the board directors. Your input is important as the success of ICSA depends on strong leadership which can best be produced from a broad pool of candidates of these two offices. We are looking forward to receiving nominees from you.

Please submit your nomination to

Nancy C.H. Lo
Southwest Fisheries Science Center
P.O. Box 271
La Jolla CA 92037

e-mail : NLO@UCSD.EDU
FAX: 619-546-56565
Phone: 619-546-7123

Nominating and Election Committee:
Nancy C.H. Lo, James Fu, Gordon Lan, Xiao-li Meng, Agnes Hsiung

Nominations for 1999 ICSA Awards

The ICSA Awards Committee invites you to nominate candidates for the 1999 ICSA Awards. The committee is looking for "a few good members" who have made significant contributions to the Association. Examples of candidates are members who have:

1. Successfully organized and conducted a professional meeting,
2. Effectively led the ICSA activities,
3. Held a strong and effective editorship (including associate editorship) for *Statistica Sinica*,
4. Substantially increased the ICSA memberships,
5. Initiated and implemented a policy which resulted in a substantial visibility for the ICSA,
6. Established strong ties with other professional societies. Co-sponsored statistics activities with them.
7. Others, etc.

In your nomination please include the nominee's name, title, address, and description of his/her significant contributions. Once the awards are decided, they will be presented in August 1999 in Baltimore.

The committee will select the most deserving candidates, who have made multiple significant contributions resulting in a strong positive impact to the Association, to receive awards. Preference will be given to those who have not previously received such an award.

Your nominations must be received no later than February 28, 1999. Please send your nominations to:

Smiley W. Cheng
Chair, ICSA Awards Committee
c/o Department of Statistics
University of Manitoba
Winnipeg, Manitoba R3T 2N2
Canada

E-mail: Smiley_Cheng@Umanitoba.ca
Fax: (204) 474-7621
Tel: (204) 474-8172

The Awards Committee, ICSA
S. W. Cheng (Chair), Jack C. Lee, Wai-Yuan Tan, Grace Yang, Mark C. K. Yang,
Cun-Hui Zhang

Nomination of New ICSA Bulletin Editor

The Publication Committee invites ICSA members to nominate a new Bulletin Editor. The new BE will take over Dr. Karl Lin's position and be responsible for editing the ICSA Bulletins starting July, 1999.

The qualifications for a candidate are --

1. current ICSA member.
2. commitment to work as a Bulletin editor (approximately 40-60 working hours per year).
3. unbiasedly selecting and publishing the submitted member news.

Please send your nomination letter to the Publication Committee by February 28, 1999. Before you nominate a member, make sure that the person accepts the nomination. In your letter, please provide one or two paragraphs describing the nominee's qualification as a candidate for the BE. The nomination can be submitted by any one of the following delivery modes:

- By regular mail (To M-C Wang, Dept. of Biostatistics, Sch. of Public Health, Johns Hopkins Univ., Baltimore, MD 21205)
- By E-mail, mcwang@jhsph.edu
- By FAX, 410-955-0958 (To M-C Wang)

Publication Committee
Mei-Cheng Wang (Chair)
Jun Shao
Zhiliang Ying
Ching-Shui Cheng
Ker-Chau Li
Karl Lin

WELCOME NEW MEMBERS

We would like to welcome new members who joined between 7/98 and 11/98:

Barnhart, Huiman X.	Su, Xiang Yao
Cai, Jianwen	Sun, Jianguo
Carlson, Ralph	Tao, Aiyang
Chan, Hock Peng	Teoh, Jonathan
Chao, Chang-Tai	Ting, Ling
Chen, Zehua	Wilson, Amanda
Chu, Karin K.	Wu, Changbao
Craiu, Virgil Radu	Wu, Jane
Ding, Li	Wu, Yaohua
Du, Yunling	Xiao, Zhijie
Hsieh, Ju-Ling	Xie, Minge
Hu, MingXiu	Yang, Yanhong
Hu, Ming-Yi	Yang, Yu-Chen
Hua, Steven	Yang, Zhenlin
Jou, Ying-ming	Young, Sarah
Lam, Ming-Long	Yung, Yiu-Fai
Lee, Austin	Yu, Mr. & Mrs. Jimmy
Lee, Thomas C.M.	Yu, Yan
Li, Xia	Zhan, Min
Lu, Mei	Zhang, Ying
O'Neill, Robert	Zhou, Julie
Qian, Jiahe	

DONATIONS

Between July 1, 1998 and November 30, 1998, we have received donation from:

Chen, Timothy T.

MEMBER ACTIVITIES

Moun-Shen Lee have been elected as an ISI member this year.

Carl Moun-Shen Lee
Professor of Statistics
Department of Mathematics
Central Michigan University
e-mail: carl.m.lee@cmich.edu

Message from Ding, AiDong Adam

Recent publication

"Estimation of HIV Dynaic Prarmeters" by Hulin Wu, A. Adam Ding and Victor Degruittola. To appear in Statistics in Medicine, 1998

"Population HIV Dynamics in vivo: Applicable Models and Inferential Tools for Virological Data from AIDS Clinical Trials", by Hulin Wu, A. Adam Ding. To appear in Biometrics (1998)

International Chinese Statistical Association Profit and Loss January through November 1998

Ordinary Income/Expense	
Income	
Contributions Income	
Unrestricted	570.00
Total Contributions Income	570.00
Membership Dues	15,390.00
Reimbursed Expenses	
Banquet	1,635.00
Total Reimbursed Expenses	1,635.00
Short Course	7,464.00
Total Income	25,059.00
Expense	
Bank Service Charges	28.20
Casual Labor	216.00
Contributions	700.00
ICSA at ASA meeting	
Banquet	2,643.00
Board meeting	250.23
Total ICSA at ASA meeting	2,893.23
Licenses and Permits	20.00
Office Supplies	55.53
Postage and Delivery	3,011.65
Printing and Reproduction	3,303.00
Supplies	
Office	341.78
Total Supplies	341.78
Web Page Hosting	264.00
Total Expense	10,833.39
Net Ordinary Income	14,225.61
Other Income/Expense	
Other Income	
Interest Income	2,616.34
Total Other Income	2,616.34
Net Other Income	2,616.34
Net Income	16,841.95

**International Chinese Statistical Association
Balance Sheet
As of November 30, 1998**

ASSETS	
Current Assets	
Checking/Savings	
6 Month CD	25,000.00
Checking	2,520.56
Saving	51,295.88
Total Checking/Savings	78,816.44
Total Current Assets	78,816.44
TOTAL ASSETS	78,816.44
LIABILITIES & EQUITY	
Equity	
Retained Earnings	61,974.49
Net Income	16,841.95
Total Equity	78,816.44
TOTAL LIABILITIES & EQUITY	78,816.44

**Division of Biostatistics
National Health Research Institutes
Taipei, Taiwan, Republic of China**

The newly established Division of Biostatistics in the National Health Research Institutes in Taiwan is seeking outstanding researchers for the positions at the level of Assistant Investigator, Associate Investigator, and Investigator (the equivalent of Assistant Professor, Associate Professor, and Professor in Universities). Postdoctoral positions are also available. These are fully funded positions with sufficient opportunities for independent research and without teaching obligation. Candidates should have a Ph.D. or equivalent in statistics, biostatistics, or related fields. Individuals with established records of statistical and collaborative research in health related sciences are welcome. Strong problem solving, organizational, interpersonal verbal/written communication skills are plus.

As the only biostatistics department in Taiwan, the Division of Biostatistics in the National Health Research Institutes is committed to the missions which include engagement in intramural and extramural research on design, data management and analysis, and playing a leadership role in advancement of biostatistical research and education in Taiwan.

- Applicants should send:
1. Curriculum vitae with publication list
 2. Reprints of major recent publications
 3. Three reference letters
 4. Research plan

To: Jen-pei Liu, Ph.D., Search Committee
Division of Biostatistics, National Health Research Institutes
128 Yen-Chiu-Yuan Road, Section 2
Taipei 11529, Taiwan, R.O.C.

Tel: 886-2-2653-4401 ext. 7620; Fax: 886-2-2789-0253; e-mail: jpliu@nhri.org.tw

More information about the Division of Biostatistics in the National Health Research Institutes can be found at our web site: <http://www.nhri.org.tw/b5/biost/biost.htm> for Chinese version, and <http://www.nhri.org.tw/en/biost/biost.htm> for English version.

Faculty Position in Biostatistics

**University of Maryland Greenebaum Cancer Center,
Department of Epidemiology and Preventive Medicine,
The University of Maryland School of Medicine, Baltimore**

University of Maryland Greenebaum Cancer Center and the Department of Epidemiology and Preventive Medicine are expanding their cancer research program in clinical and pre-clinical studies in their Hematology/Oncology and Bone Marrow Transplant units. We are seeking an individual at the assistant professor level (non-tenure track) with documented expertise in medical consulting of 1+ years, preferably in an oncology group. It is expected that this individual will interact with several clinicians and laboratory-based scientists, all participating in a translational research team. Duties include designing, monitoring and analysis of clinical and pre-clinical studies, and doing research on statistical methodology. Candidates should have a Ph.D. in Biostatistics/statistics, with experience in a wide variety of software including SAS, S-Plus, and Stata. Knowledge of FORTRAN/C language is desirable. Salary is dependent upon qualifications and experience.

Qualified applicants should submit their curriculum vitae and names (addresses and phone numbers) of 3 references to Dr. T. Timothy Chen, Professor and Head, Biostatistics Section, University of Maryland Greenebaum Cancer Center, 22 South Greene Street, Room N9E28, Baltimore, MD 21201. For more information, phone 410-328-0212, e-mail: tchen001@umaryland.edu. For fullest consideration, applications should be received by February 28, 1999. The University of Maryland, Baltimore has a strong institutional commitment to the principal of diversity in all areas and is an AA/EEO/ADA employer.

Research Positions
Institute of Statistical Science
Academia Sinica, Taipei, Taiwan

The Institute of Statistical Science, Academia Sinica, invites applications for positions of Assistant Research Fellow, Associate Research Fellow and Research Fellow. Applicants must have a Ph.D. in statistics or related fields. Chinese speaking applicants are preferred. Interested candidates should send


1. Curriculum vitae,
2. Three letters of recommendation,
3. Reprints of selected papers (or dissertation),
4. Other academic records (transcripts for new Ph.D.)

to Dr. Chen-Hsin Chen, Search Committee, Institute of Statistical Science, Academia Sinica, Taipei, Taiwan 11529, R.O.C., Tel: 886-2-27835611 ext. 408, Fax: 886-2-27831523, e-mail: chchen@stat.sinica.edu.tw.

Application is closed on January 15, 1999. General information about the Institute may be viewed at <http://www.stat.sinica.edu.tw>.

Tsing-Hua University, Taiwan

The Institute of Statistics of National Tsing-Hua University is seeking for one faculty at all levels to begin work in the fall of 1999. Applicants must have a Ph.D. in statistics or related fields. Chinese speaking applicants with broad research interest and specialization in business, bio-statistics and industry applications are more preferred. Interested candidates should send: (a) a curriculum vita, (b) transcripts (new Ph.D.), (c) three letters of recommendation, (d) at least one copy or reprint of selected paper, to Dr. Sheng-Tsaing Tseng, Institute of Statistics, National Tsing-Hua University, Hsin-chu, Taiwan, 30043, R.O.C. Tel:886-3-5730772, Fax886-3-5728318, email:sttseng.nthu.edu.tw. Application Applications close on March 1, 1999. (Information about the Institute can be viewed using WWW at <http://www.stat.nthu.tw>).

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CITY			CITY						
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TEL :			TEL :						
E-MAIL ADDRESS						FAX NO.			
HIGHEST DEGREE		YR. GRADUATED	UNIVERSITY			OCCUPATION (TITLE)			
MEMBERSHIP	REGULAR		U.S.\$40		STUDENT		U.S.\$20		
	Biometrics Section		Free		DONATIONS				\$
	SPOUSE (50% LESS)				PERMENANT \$400				
	SPOUSAL'S NAME :				TOTAL AMOUNT		U.S.\$		
STATISTICAL AREA OF INTEREST <small>(TICK AS MANY AS YOU LIKE)</small>	<input type="checkbox"/>	A	AGRICULTURE			<input type="checkbox"/>	F	HEALTH SCIENCES	
	<input type="checkbox"/>	B	BUSINESS/ECONOMETRICS			<input type="checkbox"/>	G	PROBABILITY	
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	<input type="checkbox"/>	E	ENGINEERING			<input type="checkbox"/>	N	BIOSTATISTICS	
PLEASE MAKE CHEQUE PAYABLE TO: I. C. S. A. INTERNATIONAL CHINESE STATISTICAL ASSOCIATION MAIL THE FORM AND CHEQUE TO: I.C.S.A. c/o Naitee Ting, Ph.D. 198 Spicer Hill Ledyard, CT 06339-1534 U.S.A.									

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COUNTRY		COUNTRY		
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E-MAIL ADDRESS	FAX NO.			
HIGHEST DEGREE	YR. GRADUATED	UNIVERSITY	OCCUPATION (TITLE)	
MEMBERSHIP	REGULAR	U.S.\$40	STUDENT U.S.\$20	
	Biometrics-Section	Free	DONATIONS \$	
	SPOUSE (50% LESS)		PERMANENT \$400	
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