

RGC Ref. No.: UGC/IIDS14/P01/14 (please insert ref. above)
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**RESEARCH GRANTS COUNCIL**

**COMPETITIVE RESEARCH FUNDING SCHEMES FOR  
THE LOCAL SELF-FINANCING DEGREE SECTOR**

**INTER-INSTITUTIONAL DEVELOPMENT SCHEME (IIDS)**

**Completion Report**  
(for completed projects only)

<p><b><u>Submission Deadlines:</u></b></p> <p>1. The unspent balance, if applicable, and auditor's report: within <b><u>six</u></b> months of the approved project completion date.</p> <p>2. Completion report: within <b><u>twelve</u></b> months of the approved project completion date.</p>
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**Part A: The Project and Investigator(s)**

**1. Project Title**

Workshop Series in Applied Statistics

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**2. Investigator(s) and Academic Department/Units Involved**

Research Team	Name / Post	Unit / Department / Institution
Principal Investigator	Dr LIU Nga Wai / Lecturer I	Department of Mathematics and Statistics / Hang Seng Management College
Co-investigator(s)	Mr ZEL Tsz Fung, Stanley / Lecturer I	Department of Mathematics and Statistics / Hang Seng Management College
	Dr YU Chak Yan, Marco / Assistant Professor	Department of Mathematics and Statistics / Hang Seng Management College
Others	N.A.	N.A.

**3. Project Duration**

	Original	Revised	Date of RGC Approval ( must be quoted)
Project Start Date	1-Oct-14	N.A.	N.A.

Project Completion Date	31-Aug-15	30-Jun-15	3-Nov-14
Duration ( <i>in month</i> )	5 days	N.A.	N.A.
Deadline for Submission of Completion Report	31-Aug-16	30-Jun-16	3-Nov-14

**Part B: The Final Report****5. Collaboration with other Self-financing Degree-awarding Institutions / Schools**

Collaborating self-financing institution / school	% of participation	Distinctive element(s) that the institution / school is responsible for the project
Hang Seng Management College	100	Entire Project

**6. Project Objectives**

## 6.1 Project delivery

Timing	Original Milestones	Revised Milestones	Date of RGC Approval ( <i>must be quoted</i> )
Day 1	20-Nov-14	N.A.	N.A.
Day 2	22-Jan-15	N.A.	N.A.
Day 3	19-Mar-15	N.A.	N.A.
Day 4	21-Mar-15	N.A.	N.A.
Day 5	28-Mar-15	N.A.	N.A.

## 6.2 Speaker(s)

Title / Name (Surname in capital letters)	Post / Institution / School	Title / Topic of presentation / course	Previous research links with Hong Kong institutions / schools (Nature and Date (month/year))
Dr CHOY Siu Kai	Associate Professor / Hang Seng Management College	Image Segmentation Using Fuzzy Region Competition and Spatial/Frequency Information	N.A.
Dr TANG Jeff	Assistant Professor / Caritas Institute of Higher Education	Synthesizing Close Interacting Characters' Animation with Topological Analysis	N.A.

Dr LAM Shu Yan Benson	Assistant Professor / Hang Seng Management College	Review of Stereoscopic Imaging Methods	N.A.
Dr FAN Xiaodan	Associate Professor / The Chinese University of Hong Kong	Bayesian Detection of Gastric Slow Waves from Micro-electrode Data	N.A.
Dr BILONICK Richard	Assistant Professor / University of Pittsburgh	Application of Latent Variable/Structure Equation, Modeling to Medicine and Public Health	N.A.
Dr YU Chak Yan Marco	Assistant Professor / Hang Seng Management College	Analyzing Medical Images in Ophthalmology	N.A.
Dr GOULD Robert	Lecturer SOE / University of California, Los Angeles	DataFest: Teaching Data Science in an Undergraduate Statistics Department	N.A.
Prof PECK Roxy	Professor / California Polytechnic State University	Developing Statistical Thinking and Conceptual Understanding	N.A.
Prof LEE Man Sing Stephen	Professor / University of Hong Kong	Post-model selection inference and its bootstrap	N.A.
Prof TANG Man Lai	Professor / Hang Seng Management College	Recent development on surveys with sensitive questions	N.A.
Prof LI William	Professor / University of Minnesota	Conjoint Analysis and Discrete Choice Experiments for Quality Improvement	N.A.
Dr TIAN Guoliang	Associate Professor / University of Hong Kong	A new framework of statistical inferences based on the valid joint sampling distribution of observed counts in an incomplete contingency table	N.A.
Prof BALAKRISHNAN N.	Professor / McMaster University	Gamma Degradation Model and Related Issues	N.A.

Dr CHAN Ping Shing Ben	Associate Professor / The Chinese University of Hong Kong	Optimal designs for time-censored Accelerated Life Experiments	N.A.
Prof NG Hong Keung Tony	Professor / Southern Methodist University	Statistical Inference for Component Reliability Characteristics based on System Lifetime Data	N.A.
Prof WONG Heung	Professor / The Hong Kong Polytechnic University	Modeling spatial time series by graphical models	N.A.

6.3 Please provide copies of promotional materials, number of participants, survey/statistics on participants, e.g. country of origin, research background, etc., a copy of evaluation form/questionnaire and the consolidated feedback with response rate. Photos of the event(s) are preferred but optional.

See attached for:

1. Promotional materials
2. Survey Questionnaire
3. Survey Feedback Analysis
4. Photos of the Events

6.4 Objectives as per original application

1. To promote discussion on different applications of Statistics among faculty members in our college as well as other participants of the workshop.
2. To establish a network of scholars in various institutions who are interested in the topics discussed in the workshop.
3. To introduce up-to-date and practical knowledge in Applied Statistics to students and non-experts.
4. To raise their interest in, and thus their appreciation of the various subjects of discussions in the workshop.

6.5 Revised objectives

Date of approval from the RGC: N.A.

Reasons for the change: N.A.

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## 6.6 Realisation of the objectives

*(Maximum 1 page; please state how and to what extent the project objectives have been achieved; give reasons for under-achievements and outline attempts to overcome problems, if any)*

### To address the four objectives:

1. During many of the talks, questions were raised from the audience for clarifications of some subtle points. After each lecture and during breaks, there were plenty of discussions among participants on presented matters.
2. As reflected in the feedback forms, over 90% of the participants the Workshop provides a good venue for networks to be established. Many of the participants, both from local and from overseas institutions, did form networks, expressing strong interest in discussing presented topics in hopes of further development.
3. Topics presented in the Workshop are on established research with new results and ideas. Though the technicalities are subtle, the ideas and lines of thought are, to various degrees, accessible to non-experts.
4. It was reflected in the feedback forms that over 90% of the participants found the Workshop interesting and inspiring.

### Room for improvement:

1. Improve our promotion tactics to attract a bigger audience.
2. Provide pre-workshop sessions for students and/or non-expert to better prepare them so as to raise their ability and level of appreciation of the matters discussed in the Workshop.

## 6.7 Summary of objectives addressed to date

Objectives <i>(as per 5.1/5.2 above)</i>	Addressed <i>(please tick)</i>	Percentage achieved <i>(please estimate)</i>
1. Promote discussion on different applications of Statistics among all participants of the workshop.	✓	95
2. Establish a network of scholars in various institutions who are interested in the topics discussed in the workshop.	✓	90
3. Introduce up-to-date and practical knowledge in Applied Statistics to students and non-experts.	✓	95
4. Raise their interest in, and thus their appreciation of the various subjects of discussions in the workshop.	✓	90

## 7. Research-related Outcome

7.1 Potential for further development of the research and the proposed course of action  
(Maximum half a page)

1. Many of the participants have established links in order to continue discussions on research topics presented at the Workshop.
2. Some of the speakers have been/will be invited again to give talks at 2016-17 and future IIDS funded workshops organized by Hang Seng Management College, including Dr. Richard Bilonick, Prof. Robert Gould, Prof. Roxy Peck and Prof. William Li.

7.2 Research collaboration achieved  
(Please give details on the achievement and its relevant impact)

Prof. M.L. Tang and Prof. Tony Ng wrote an article titled '*Sequential Nonparametric Procedures for Testing the Equality of Two Lifetime Distributions based on Progressively Censored Data*', which was accepted for publication by the journal *Sequential Analysis*.

7.3 Any new development and/or challenging research topic has / have been identified and inspired the possible new initiative(s) in future research work.

N.A.

## 8. The Layman's Summary

(Describe in layman's language the nature, significance and value of the research project, in no more than 200 words)

The project is a 5-day workshop with three to four lectures each day given by invited speakers on topics within the realm of Applied Statistics. Speakers include local scholars and from overseas. Topics are chosen with the following guideline.

- They are aligned with the research interests of faculty members in our college.
- They are deemed important and active research topics in the fields.
- They may be interesting to undergraduate students in our college as well as those in other institutions because of their (potential) practicality.

Topics chosen include

- Applied Statistics in Image Processing
- Statistical Methods in Medical Science/ Bioinformatics
- Statistics in Finance and Operation Research
- Teaching & Learning Data Science
- Statistical Theory and Data Analysis Techniques

Through this workshop, we wish

- to bring about a lively research environment for all participants of the workshop to share their findings with others, expand their horizons from their own research areas to other related fields, and to promote inter-institutional collaborations, and
- to expose the various applications of Statistics to students and non-experts and ignite their interest to continue their own learning and investigations of the subjects.

### **Part C: Research Output**

#### **9. Recognized conference(s) paper(s) related to this project was/were delivered**

*(Please attach a copy of each conference abstract)*

Month/Year/ Place	Title	Conference Name	Submitted to RGC <i>(indicate the year ending of the relevant progress report)</i>	Attached to this report <i>(Yes or No)</i>	Acknowledged the support of RGC <i>(Yes or No)</i>
N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

#### **10. Research Personnel trained**

Name	Capacity
N.A.	N.A.

#### **11. Other impact**

*(e.g. prizes, collaboration with other research institutions, technology transfer, etc.)*

N.A.