

2023 NCKU RELIABILITY WORKSHOP

暨國科會整合型計畫

「鋰離子電池衰變數據的可靠度分析」討論會



2023年5月18日

國立成功大學
統計學系

REGISTER NOW!

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樊采虹 教授
國立中央大學統計所
KEYNOTE SPEAKER



Prof. Yili Hong
VIRGINIA TECH
TALK / SPEAKER



俞一唐 教授
東海大學統計學系
TALK 2 SPEAKER

09:00~12:30 Invited Session

Keynote Speech



62333



A Complete Bayesian Degradation Analysis Based on Inverse Gaussian Processes

Chair: 王義富助理教授 (國立成功大學統計學系暨數據科學研究所)

Talk 1

Reliability Study of Battery Lives: A Functional Degradation Analysis Approach

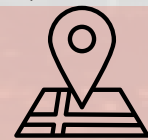
Chair: 彭健育副研究員 (中央研究院統計科學研究所)

Talk 2

Log-Location-Scale Increments Degradation Models

Chair: 李名鏞副教授 (靜宜大學資料科學暨大數據分析與應用學系)

14:00~18:00 Contributed Sessions



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國科會整合型計畫 - 第五次可靠度分析討論會

Session 1: Topics in Bayesian Accelerated Degradation Modelling

Chair: 董弘平助理教授 (國立陽明交通大學工業工程與管理學系)

Presenters: 吳竣楷碩士生 (NCU)、童義軒碩士生 (NCU)

Session 2: Topics in Design and Inference of Degradation Experiments

Chair: 林建華助理教授 (靜宜大學資料科學暨大數據分析與應用學系)

Presenters: 謝泓儒碩士生 (NCKU)、林俊源碩士生 (NCKU)、官佳輝碩士生 (NYCU)

主辦單位：國立成功大學統計學系暨數據科學研究所

協辦單位：國立中央大學統計學研究所

贊助單位：榕園統計文教基金會

議程委員：

鄭順林副教授、李宜真副教授、王義富助理教授

聯絡人：鄭順林副教授 (sljeng@ncku.edu.tw)

Degradation

2023 NCKU RELIABILITY WORKSHOP PROGRAM



國立成功大學統計學系



For more details please visit
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08:40~09:00

REGISTRATION

09:00~09:10

OPENING CEREMONY

09:10~10:10

KEYNOTE SPEECH

Chair: 王義富助理教授

Keynote Speaker: 樊采虹教授

A Complete Bayesian Degradation Analysis Based on
Inverse Gaussian Processes



10:10~10:30

TEA BREAK

10:30~11:30

TALK 1

Chair: 彭健育副研究員

Speaker: Prof. Yili Hong

Reliability Study of Battery Lives: A Functional
Degradation Analysis Approach



11:30~12:30

TALK 2

Chair: 李名鏞副教授

Speaker: 俞一唐教授

Log-Location-Scale Increments Degradation Models



12:30~14:00

LUNCH BREAK

14:00~15:30

CONTRIBUTION SESSION 1: 國科會整合型計畫第五次可靠度分析討論會 1

Topics in Bayesian Accelerated Degradation Modelling

Chair: 董弘平助理教授

吳竣楷碩士生(NCU)

Bayesian Modeling of Accelerated Trend Renewal Processes for Lithium-ion Battery Data

童義軒碩士生(NCU)

Bayesian Predictive Analysis for Accelerated Degradation Tests Based on Inverse Gaussian
Processes

綜合討論 1



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16:00~18:00

CONTRIBUTION SESSION 2: 國科會整合型計畫第五次可靠度分析討論會 2

Topics in Design and Inference of Degradation Experiments

Chair: 林建華助理教授

謝泓儒碩士生(NCKU)

Optimum Design for Accelerated Degradation Tests with Different Measurement Frequencies

林俊源碩士生(NCKU)

In Sample Lifetime Prediction of Lithium-ion Batteries Based on a Mixed Effects Piecewise
Linear Degradation Model

官佳輝碩士生(NYCU)

Nonparametric Methodology for Predicting the Lifespan of Rechargeable Lithium-Ion Batteries

綜合討論 2



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