



RQD2013

CONFERENCE PROGRAM

19TH ISSAT INTERNATIONAL CONFERENCE
RELIABILITY and **QUALITY** in **DESIGN**

HONOLULU, HAWAII, U.S.A. ★ AUGUST 5–7, 2013

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Shigeru Yamada (Japan)

Ruey Huei Yeh (Taiwan)

Panlop Zeephongsekul (Australia)

Paper Awards

ISSAT RQD 2012 Best Paper Award

Reducing Test Specimen Size for Reliability Determination by Combining Lifetime Calculation and Prior Information, as Exemplified by Hydraulic Pumps

Achim Romer (Bosch Rexroth, Germany)

Bernd Bertsche (Universitaet Stuttgart, Germany)

Josef Kurfess (University of Applied Sciences Ulm, Germany)

ISSAT RQD 2012 Best Student Paper Award

A Cuscore Statistic for Monitoring Degradation Paths

Michelle Mancenido (Arizona State University, USA)

Rong Pan (Arizona State University, USA)

Conference Sponsor

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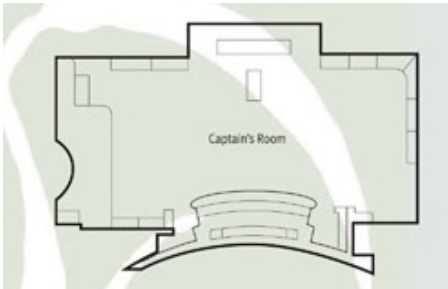
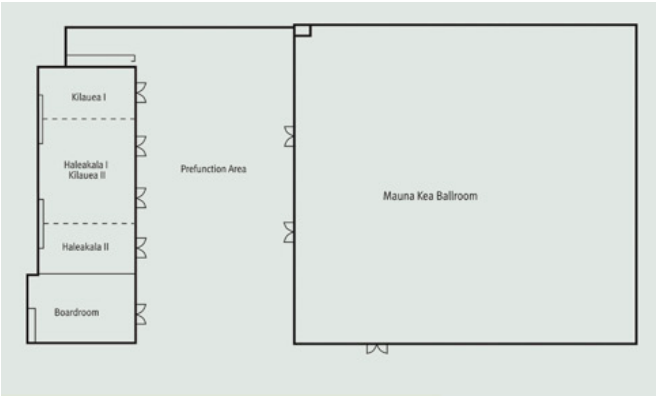
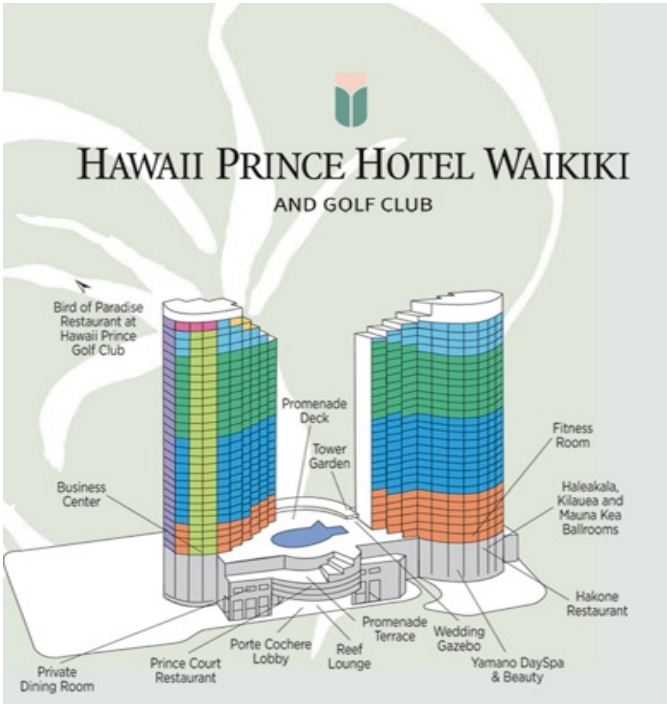
In cooperation with

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<http://asq.org/reliability>

Conference at a Glance

| MONDAY, AUGUST 5 | TUESDAY, AUGUST 6 | WEDNESDAY, AUGUST 7 |
|--|--|--|
| 8:00 - 9:00 Registration / Continental Breakfast Mauna Kea Ballroom Prefunction area | 8:00 - 8:15 Registration / Continental Breakfast Mauna Kea Ballroom Prefunction area | 8:00 - 8:15 Registration / Continental Breakfast Mauna Kea Ballroom Prefunction area |
| 9:00 - 9:30 Welcome - Awards Presentation Mauna Kea Ballroom | 8:15 - 10:15 Technical Sessions Mauna Kea Ballroom / Captain's Room | 8:15 - 10:15 Technical Sessions Mauna Kea Ballroom / Captain's Room |
| 9:30 - 11:30 Technical Sessions Mauna Kea Ballroom / Captain's Room | 10:15 - 10:30 Coffee Break Mauna Kea Ballroom Prefunction area | 10:15 - 10:30 Coffee Break Mauna Kea Ballroom Prefunction area |
| 1:00 - 3:00 Technical Sessions Mauna Kea Ballroom / Captain's Room | 10:30 - 12:00 Technical Sessions Mauna Kea Ballroom / Captain's Room | 10:30 - 12:00 Technical Sessions Mauna Kea Ballroom / Captain's Room |
| 3:00 - 3:15 Coffee Break Mauna Kea Ballroom Prefunction area | 12:15 - 1:15 Conference Luncheon Mauna Kea Ballroom B | 1:00 - 2:30 Technical Sessions Mauna Kea Ballroom / Captain's Room |
| 3:15 - 5:15 Technical Sessions Mauna Kea Ballroom / Captain's Room | 1:30 - 3:00 Technical Sessions Mauna Kea Ballroom / Captain's Room | 2:30 - 2:45 Coffee Break Mauna Kea Ballroom Prefunction area |
| 5:30 - 7:00 Welcome Reception Promenade Terrace | 3:00 - 3:15 Coffee Break Mauna Kea Ballroom Prefunction area | 2:45 - 4:15 Technical Sessions Mauna Kea Ballroom / Captain's Room |
| | 3:15 - 5:15 Technical Sessions Mauna Kea Ballroom / Captain's Room | 4:15 Adjourn! |



Technical Sessions at a Glance

| | Mauna Kea Ballroom | | Captain's Room | |
|---------------------|--------------------|---|----------------|---|
| MONDAY, AUGUST 5 | Session | | Session | |
| 9:30 - 11:30 | 1 | Six sigma and Quality Design | 2 | Reliability in Design |
| 1:00 - 3:00 | 3 | Stochastic Reliability Modeling | 4 | Quality Engineering in Design |
| 3:15 - 5:15 | 5 | Software Reliability and Testing | 6 | Maintainability and Availability |
| TUESDAY, AUGUST 6 | Session | | Session | |
| 8:15 - 10:15 | 7 | Network Reliability and System Analysis | 8 | Software Quality/Reliability Measurement and Management |
| 10:30 - 12:00 | 9 | Medical Device Quality, Reliability and Risk | 10 | Software Quality and Reliability Modeling |
| 1:30 - 3:00 | 11 | Reliability Analysis and Its Applications | 12 | Maintenance Policies & Optimization |
| 3:15 - 5:15 | 13 | Statistical Methods in Reliability Design | 14 | Health Care and Service Quality |
| WEDNESDAY, AUGUST 7 | Session | | Session | |
| 8:15 - 10:15 | 15 | Maintenance Optimization | 16 | Quality Analysis and Measurement |
| 10:30 - 12:00 | 17 | Probabilistic Modeling and Its Applications | 18 | Accelerated Life Testing and Modeling |
| 1:00 - 2:30 | 19 | Statistical Reliability Modeling & Applications | 20 | Maintenance Modeling |
| 2:45 - 4:15 | 21 | Engineering Reliability Design & Applications | 22 | System Reliability Modeling & Analysis |

Technical Sessions

SESSION 1: Six sigma and Quality Design

Chair: Chao-Ton Su (*National Tsing Hua University, Taiwan*)

Equivalent Geometrical Designs with Same Word-Length Pattern

Hsien-Tang Tsai (*National Sun Yat-sen University, Taiwan*)
Jen-der Day (*National Kaohsiung University of Applied Sciences, Taiwan*)

Joint Quaternary Design Tables for Geometrical Designs

Jen-der Day (*National Kaohsiung University of Applied Sciences, Taiwan*)
Hsien-Tang Tsai (*National Sun Yat-sen University, Taiwan*)

Improving Tuning Time of Radio Frequency Devices thru Six Sigma Process

Chiao-Tzu Huang (*National Chin-Yi University of Technology, Taiwan*)
Shin-Yi Lai (*National Chin-Yi University of Technology, Taiwan*)
Wei-Ling Wang (*National Chin-Yi University of Technology, Taiwan*)

Integrating Taguchi Method and Durbin-Watson Statistic for Independent Component Selection: With Application to Etch Process Fault Detection

Chun-Chin Hsu (*Chaoyang University of Technology, Taiwan*)

Six Sigma Based Approach to Enhance the PCB Yield

Li-Fei Chen (*Fu Jen Catholic University, Taiwan*)
Hung-Chun Lin (*National Tsing Hua University, Taiwan*)
Hui-Po Hsu (*National Tsing Hua University, Taiwan*)
Chao-Ton Su (*National Tsing Hua University, Taiwan*)

SESSION 2: Reliability in Design

Chair: B.S. Dhillon (*University of Ottawa, Canada*)

Reliability of Tunnel Ventilation Control: A Conceptual Design

Ondřej Nývlt (*Czech Technical University, Czech Republic*)
Lukáš Ferkl (*Czech Technical University, Czech Republic*)
Jan Šulc (*Czech Technical University, Czech Republic*)

Designing of Efficient Families of Strategies for Predicting Unknown Population Mean

H.S. Jhajj (*Punjabi University, Patiala, India*)

A Software Reliability Model with Vtub-Shaped Fault-Detection Rate Subject to Operating Environments

Hoang Pham (*Rutgers University, USA*)

Human Error in Health Care: An Investigative Study

B.S Dhillon (*University of Ottawa, Canada*)

SESSION 3: Stochastic Reliability Modeling

Chair: Takashi Satow (*Tottori University, Japan*)

Reliability Modeling of a Server System with Hybrid Replication Method

Mitsutaka Kimura (*Gifu City Women's College, Japan*)
Mitsuhiro Imaizumi (*Aichi Gakusen University, Japan*)
Toshio Nakagawa (*Aichi Institute of Technology, Japan*)

Optimal Management Policy for a Distributed Processing System

Mitsuhiro Imaizumi (*Aichi Gakusen University, Japan*)
Mitsutaka Kimura (*Gifu City Women's College, Japan*)

Determination of Bank Interest Margins Considering Bankruptcy

Syouji Nakamura (*Kinjo Gakuin University, Japan*)
Miwako Arafuka (*Kinjo Gakuin University, Japan*)
Toshio Nakagawa (*Aichi Institute of Technology, Japan*)

Optimal Maintenance Policy of Airframe Cracks

Kodo Ito (*Kinjo Gakuin University, Japan*)
Toshio Nakagawa (*Aichi Institute of Technology, Japan*)

Approximation of Inspection Threshold for Multi-Component System

Takashi Satow (*Tottori University, Japan*)

SESSION 4: Quality Engineering in Design

Chair: Gordon Savage (*University of Waterloo, Canada*)

Buyer's Order Quantity and Manufacturer's Wholesale Price, Process Mean, and Production Run Length Settings

Chung-Ho Chen (*Southern Taiwan University of Science and Technology, Taiwan*)

Weighted Approach in Estimating Evaluation Indexes for Measurement Systems with Correlated Characteristics

R.S. Peruchi (*The University of Tennessee, USA*)
A.P. Paiva (*Federal University of Itajubá, Brazil*)
P.P. Balestrassi (*Federal University of Itajubá, Brazil*)
R. Sawhney (*The University of Tennessee, USA*)
G. Rajpal (*The University of Tennessee, USA*)
V. Marella (*The University of Tennessee, USA*)

Lean Six Sigma Based Requirement Analysis of Quality Management for Complex Product Maintenance

Hong-bing Ye (*Academy of Armored Forces Engineering, China*)
Bo-gong Ji (*Academy of Armored Forces Engineering, China*)
Qing-jun Meng (*Academy of Armored Forces Engineering, China*)

Experimental Flexible Two-phase Loop for Quality Optimization of Piping Components

M. Bevilacqua (*Università Politecnica della Marche, Italy*)
F.E. Ciarapica (*Università Politecnica della Marche, Italy*)
G. Giacchetta (*Università Politecnica della Marche, Italy*)
B. Marchetti (*Università degli Studi e-Campus, Italy*)

Frequency Response Design of Uncertain Vibration Systems

G. J. Savage (*University of Waterloo, Canada*)
Y. K. Son (*Andong National University, Korea*)

SESSION 5: Software Reliability and Testing

Chair: Shinji Inoue (*Tottori University, Japan*)

NHPP Models with Change-Point for Software Reliability Assessment and Its Application to an Optimal Software Release Problem

Yuka Fukuta (*Tottori University, Japan*)
Shinji Inoue (*Tottori University, Japan*)
Shigeru Yamada (*Tottori University, Japan*)

Optimal Maintenance Problems Based on Jump Diffusion Models Considering the Operating Phase of Cloud OSS

Kenta Miyaoka (*Tottori University, Japan*)
Yoshinobu Tamura (*Yamaguchi University, Japan*)
Shigeru Yamada (*Tottori University, Japan*)

A Software Optimal Release Problem Based on a Hazard Rate Model with Change-Point

Shinji Inoue (*Tottori University, Japan*)
Yuki Nakagawa (*Tottori University, Japan*)
Shigeru Yamada (*Tottori University, Japan*)

Bootstrapping Interval Estimations for Software Reliability Assessment Based on a Discrete NHPP Model

Shinji Inoue (*Tottori University, Japan*)
Hironori Matsuno (*Tottori University, Japan*)
Shigeru Yamada (*Tottori University, Japan*)

An Interval Estimation Approach of Optimal Software Release Time Based on a Nonparametric Bootstrap Method

Shinji Inoue (*Tottori University, Japan*)
Shigeru Yamada (*Tottori University, Japan*)

SESSION 6: Maintainability and Availability

Chair: Yao Hsu (*Kainan University, Taiwan*)

Optimization of a Bi-Objective Imperfect Preventive Maintenance Model

Chung-Ho Wang (*National Defense University, Taiwan*)
Sheng-Wang Tsai (*National Defense University, Taiwan*)
Jiu-Zhang Lu (*National Defense University, Taiwan*)

Minimizing Periodic Preventive Maintenance Costs in Series-Parallel Systems Using Improved Genetic Algorithm

Yi Hsu (*National Formosa University, Taiwan*)

A Study on the Structure of the Product Profit

Jyh-Wen Ho (*Aletheia University, Taiwan*)

The Impact of Used Products on Channel Coordination and Quality Decision for Warranted Products

Hui-Chiung Lo (*Tamkang University, Taiwan*)
Ruey Huei Yeh (*National Taiwan University of Science and Technology, Taiwan*)
Nani Kurniati (*National Taiwan University of Science and Technology, Taiwan*)
Jung-Jung Lin (*Tamkang University, Taiwan*)

Maintenance Scheduling Analysis under Limited Resources with Application to Pumps of a Power Plant

Yao Hsu (*Kainan University, Taiwan*)
Wen-Fang Wu (*National Taiwan University, Taiwan*)
Tzu-Yu Kuo (*National Taiwan University, Taiwan*)
Shih-Cheng Liu (*National Taiwan University, Taiwan*)
Jo-Hsin Huang (*National Taiwan University, Taiwan*)

SESSION 7: Network Reliability and System Analysis

Chair: Shin-Guang Chen (*Tungnan University, Taiwan*)

Development of a Quality Model for Comparing Mobile Cloud Computing Systems

Wei-Jung Shiang (*Chung Yuan Christian University, Taiwan*)
Hsin Rau (*Chung Yuan Christian University, Taiwan*)
Ting-Kuo Peng (*Minghsin University of Science and Technology, Taiwan*)

Reliability of Permitted Packet Unreliability and Latency in a Multi-State Imperfect Vertex Computer Network

Cheng-Fu Huang (*National Taiwan University of Science & Technology, Taiwan*)
Yi-Kuei Lin (*National Taiwan University of Science & Technology, Taiwan*)

A Study of Compound Failure Rate Control Schemes for Monitoring IC Wafers Quality and Lifetime Reliability

Yung-Yu Yang (*Yuan Ze University, Taiwan*)
Yun-Shiow Chen (*Yuan Ze University, Taiwan*)

Performance Measure for a Multistate Distribution Network under the Delivery Spoilage Consideration

Cheng-Fu Huang (*National Taiwan University of Science & Technology, Taiwan*)
Cheng-Ta Yeh (*National Taiwan University of Science & Technology, Taiwan*)
Yi-Kuei Lin (*National Taiwan University of Science & Technology, Taiwan*)

Search for All MCs with Backtracking

Shin-Guang Chen (*Tungnan University, Taiwan*)

SESSION 8: Software Quality/Reliability Measurement and Management

Chair: Yoshinobu Tamura (*Yamaguchi University, Japan*)

Trend Analysis Based on Historical Data for OSS Reliability Assessment

Hirona Miyahara (*Tottori University, Japan*)
Yoshinobu Tamura (*Yamaguchi University, Japan*)
Shigeru Yamada (*Tottori University, Japan*)

Data Analysis for Decreasing Mold Defective Fraction in Automotive Rubber Products Based on Orthogonal Array Experiments

Shigeru Yamada (*Tottori University, Japan*)
Giichi Takabatake (*Tottori University, Japan*)

On Change-Point Detection and Its Application to Software Reliability Measurement Based on Hazard Rate Models

Shiho Hayashida (*Tottori University, Japan*)
Shinji Inoue (*Tottori University, Japan*)
Shigeru Yamada (*Tottori University, Japan*)

Quantitative Assessment for Software Safety Integrity Level with Optimal Software Release Policies

Takahiro Nishikawa (*Tottori University, Japan*)
Shigeru Yamada (*Tottori University, Japan*)

AIR Application based on Jump Diffusion Models for Cloud Computing

Yoshinobu Tamura (*Yamaguchi University, Japan*)
Shigeru Yamada (*Tottori University, Japan*)

SESSION 9: Medical Device Quality, Reliability and Risk

Chair: Mingxiao Jiang (*Medtronic Inc., USA*)

Repairable Medical System Reliability

James McLinn (*Rel-Tech Group, USA*)

Performance Reliability Analysis for the Landing Gear System Based on the Simulation Model

Tianxiang Yu (*Northwestern Polytechnical University, China*)
Ruke Lei (*Northwestern Polytechnical University, China*)
Bifeng Song (*Northwestern Polytechnical University, China*)
Zetao Xiong (*Beijing University of Aeronautics and Astronautics, China*)

Overview of Design for Reliability

Guangbin Yang (*Chrysler Group LLC, USA*)

Reliability Program for Medical Device

Julio Pulido (*ReliaSoft, USA*)

Neuromodulation Leads Reliability Assessment in Therapy System

Mingxiao Jiang (*Medtronic Inc., USA*)
Bernard Q. Li (*Medtronic Inc., USA*)
Haitao Zhang (*Medtronic Inc., USA*)

SESSION 10: Software Quality and Reliability Modeling

Chair: Kehan Gao (*Eastern Connecticut State University, USA*)

Exploring Ensemble Filters for Software Defect Prediction

Taghi M. Khoshgoftaar (*Florida Atlantic University, USA*)
Kehan Gao (*Eastern Connecticut State University, USA*)
Lofton A. Bullard (*Florida Atlantic University, USA*)

Software Reliability Models Selection Method

Kun Han (*Academy of Armored Forces Engineering, China*)
Jin-mao Guo (*Academy of Armored Forces Engineering, China*)
Qing-jun Meng (*Academy of Armored Forces Engineering, China*)

Software Quality Analysis with Distribution Bias in Defect Data

Naeem Seliya (*Health Safety Technologies, LLC, USA*)
Taghi M. Khoshgoftaar (*Florida Atlantic University, USA*)

A Comparative Study of Iterative Feature Selection and Boosting for Software Quality Estimation

Kehan Gao (*Eastern Connecticut State University, USA*)
Taghi M. Khoshgoftaar (*Florida Atlantic University, USA*)
Randall Wald (*Florida Atlantic University, USA*)

SESSION 11: Reliability Analysis and Its Applications

Chair: Taghi Khoshgoftaar (*Florida Atlantic University, USA*)

Research on Mechanism of System State Transfer and Check Based on Adaptive Agent Simulation

Ying Shen (*Academy of Armored Forces Engineering, China*)
Wei-guang Liu (*Academy of Armored Forces Engineering, China*)
Qing-jun Meng (*Academy of Armored Forces Engineering, China*)

Multi-Class Classification for Ocean Turbine State Detection

Janell Duhaney (*Florida Atlantic University, USA*)
Taghi M. Khoshgoftaar (*Florida Atlantic University, USA*)

Experimental Results for Weighted-k-out-of-n System

Yoichi Higashiyama (*Ehime University, Japan*)
Ventsi Rumchev (*Curtin University of Technology, Australia*)

Detecting Changes in Readings from Remote Battery Systems

Gregory W. Ratcliff (*Emerson Network Power, USA*)
Randall Wald (*Florida Atlantic University, USA*)
Taghi M. Khoshgoftaar (*Florida Atlantic University, USA*)
Cody Neuburger (*Florida Atlantic University, USA*)
Liz Jeannette Aranguren Pachano (*Florida Atlantic University, USA*)

SESSION 12: Maintenance Policies & Optimization

Chair: Alessandro Persona (*University of Padova, Italy*)

Optimal Maintenance Policies with Preventive Maintenance

Minjae Park (*Hongik University, Korea*)

Hoang Pham (*Rutgers University, USA*)

The Optimization of a Maintenance Policy Related to a Global Service Contract

Toni Lupo (*Università degli Studi di Palermo, Italy*)

On the Opportunistic Predictive Maintenance Decision-Making for k-out-of-n:F Deteriorating Systems

Tuan Khac Huynh (*Université de Technologie de Troyes, France*)

Anne Barros (*Université de Technologie de Troyes, France*)

Christophe Béranger (*Grenoble Institute of Technology & CNRS, France*)

Spare Parts Management: A Comparison Between (S,S) Policy with Delayed Ordering and Policy Based on Binomial Distribution and Total Cost

D. Battini (*University of Padova, Italy*)

A. Persona (*University of Padova, Italy*)

F. Sgarbossa (*University of Padova, Italy*)

SESSION 13: Statistical Methods in Reliability Design

Chair: Feng-Bin Sun (*HGST, a Western Digital company, USA*)

Statistical Analysis for Design Improvement of Wheels

Zhi-Sheng Ye (*The Hong Kong Polytechnic University, Hong Kong*)

Jian-Guo Li (*Tsinghua University, China*)

Min Xie (*City University of Hong Kong, Hong Kong*)

Reliability for Three-Level Supply Chain

X. Zhang (*RMIT University, Australia*)

P. Zeepongsekul (*RMIT University, Australia*)

Spare Parts Decision under Reliability Growth and Warranty Repair: A Customer Perspective

Tongdan Jin (*Texas State University, USA*)

Kranthi Katepalli (*Texas State University, USA*)

Heidi Taboada (*University of Texas at El Paso, USA*)

Jose Espiritu (*University of Texas at El Paso, USA*)

Reliability Analysis of Hybrid Energy System

Zhigang Tian (*Concordia University, Canada*)

Amir Ahmad Seifi (*Concordia University, Canada*)

On Duty Cycle Concept in Reliability - Definitions, Pitfalls and Clarifications

Feng-Bin Sun (*HGST, a Western Digital company, USA*)

Steve Lock (*HGST, a Western Digital company, USA*)

Wendai Wang (*Varian Medical Systems, USA*)

SESSION 14: Health Care and Service Quality

Chair: Hsin-Hung Wu (*National Changhua University of Education, Taiwan*)

Human Reliability and Un-safety Behavior Factors Investigation of the Prescription Preparing Processes in Pharmacy

Chih-Wei Lu (*Chung Yuan Christian University, Taiwan*)

An Invisible Knowledge Network of Relationship and quality: Themes, Concepts and Correlations

Ying-Shao Chang (*Chang Jung Christian University, Taiwan*)

Yender Lee (*Chang Jung Christian University, Taiwan*)

Yuan-Duen Lee (*Chang Jung Christian University, Taiwan*)

Research Trends in the Field of E-learning Quality, 2003-2012: A Citation Analysis

Chin-Hsiu Tai (*Chang Jung Christian University, Taiwan*)

Che-Wei Lee (*University of Pittsburgh, USA*)

Yender Lee (*Chang Jung Christian University, Taiwan*)

Invisible Network of Knowledge: Education, Management and Quality

Yuan-Duen Lee (*Chang Jung Christian University, Taiwan*)

Chiu-Chuan Lin (*Chang Jung Christian University, Taiwan*)

Chen-Fen Huang (*Chang Jung Christian University, Taiwan*)

Using MANOVA to Evaluate Service Process Satisfaction of a Tourism Factory – A Case of Brand's Health Museum

Ting Chin Shih (*Nymphaeas International Biomaterial Corporation, Taiwan*)

Chia-Hsien Tsai (*Brand's Health Museum, Taiwan*)

Hsin-Hung Wu (*National Changhua University of Education, Taiwan*)

SESSION 15: Maintenance Optimization

Chair: Mingchih Chen (*Fu Jen Catholic University, Taiwan*)

Structural Properties of an Optimal Maintenance Policy for a Markovian Deteriorating System Subject to Random Shocks

Nobuyuki Tamura (*Hosei University, Japan*)

Extended Optimal Replacement Policies for a Random Intervals with Working Time

Satoshi Mizutani (*Aichi Institute of Technology, Japan*)

Toshio Nakagawa (*Aichi Institute of Technology, Japan*)

Optimal Checkpoint Times for a Majority Database System

Kenichiro Naruse (*Nagoya Sangyo University, Japan*)

Toshio Nakagawa (*Aichi Institute of Technology, Japan*)

Optimal Policies for Cumulative Damage Models with Replacement Overtime

Xufeng Zhao (*Aichi Institute of Technology, Japan*)

Syouji Nakamura (*Kinjo Gakuin University, Japan*)

Toshio Nakagawa (*Aichi Institute of Technology, Japan*)

Optimal Replacement Policies for a Parallel System with Shortage and Excess Costs

Mingchih Chen (*Fu Jen Catholic University, Taiwan*)

Xufeng Zhao (*Aichi Institute of Technology, Japan*)

Toshio Nakagawa (*Aichi Institute of Technology, Japan*)

SESSION 16: Quality Analysis and Measurement

Chair: Hsin Rau (*Chung Yuan Christian University, Taiwan*)

An Invisible Network of Knowledge of Quality of Health Care

Cheng-Kun Wang (*Chang Jung Christian University, Taiwan*)

12 Years of Supply Chain Management and Quality Study (2001~2012)

Fu-Jin Hu (*Chang Jung Christian University, Taiwan*)

Jen-Hwa Kuo (*Chang Jung Christian University, Taiwan*)

Yender Lee (*Chang Jung Christian University, Taiwan*)

Chiu-Chuan Lin (*Chang Jung Christian University, Taiwan*)

Ten Years of Website & Website Quality Studies: Themes, Concepts and Relationships

Yuan-Duen Lee (*Chang Jung Christian University, Taiwan*)

Yender Lee (*Chang Jung Christian University, Taiwan*)

Jwu-Jenq Chen (*Chang Jung Christian University, Taiwan*)

Identifying and Mapping the Scientific Landscape of Service Quality Management Studies, 2003-2012

Yuan-Duen Lee (*Chang Jung Christian University, Taiwan*)

Yender McLee (*Chang Jung Christian University, Taiwan*)

Min-Tzu Chen (*Chang Jung Christian University, Taiwan*)

Yen-Hui Lin (*Chang Jung Christian University, Taiwan*)

Quality Inspection Policy for Color Filter Production System

Hsin Rau (*Chung Yuan Christian University, Taiwan*)

Chih-Chung Chien (*Chung Yuan Christian University, Taiwan*)

Kuo-Hua Cho (*Chung Yuan Christian University, Taiwan*)

Wei-Jung Shiang (*Chung Yuan Christian University, Taiwan*)

SESSION 17: Probabilistic Modeling and Its Applications

Chair: Liyang Xie (*Northeastern University, China*)

Human Factor Criteria for the Design of Cars

Hong Wang (*Northeastern University, China*)

Ningning Zhang (*Northeastern University, China*)

Chi Zhang (*Northeastern University, China*)

Xu Luo (*Northeastern University, China*)

Guangbin Sun (*Northeastern University, China*)

Dynamics Study and Finite Element Analysis of the 50t/h Dual-axis Inertia Horizontal Vibrated Fluidized Bed

Xiangwei Kong (*Northeastern University, China*)

Feng Guo (*Northeastern University, China*)

Dong Wang (*Northeastern University, China*)

Ning Yin (*Northeastern University, China*)

A Proposal for an Exact Algorithm for Solving a SALBP-1 Problem

Mosé Gallo (*University of Naples Federico II, Italy*)

Teresa Murino (*University of Naples Federico II, Italy*)

Valentino Pensato (*University of Naples Federico II, Italy*)

Liberatina Carmela Santillo (*University of Naples Federico II, Italy*)

Probabilistic Specimen Property-Fatigue Life Mapping and P-S-N Curve Fitting

Liyang Xie (*Northeastern University, China*)

Jianzhong Liu (*Beijing Institute of Aeronautic Materials, China*)

SESSION 18: Accelerated Life Testing and Modeling

Chair: Panlop Zeephongsekul (*RMIT University, Australia*)

Equivalent Accelerated Degradation Test Plans for a Nonlinear Random Coefficients Models

Seong-joon Kim (*Hanyang University, Korea*)

Suk Joo Bae (*Hanyang University, Korea*)

Research on Sample Size Determination to Estimate Fatigue Life in Reliability Test of Mechanical Products

Weimin Cui (*Northwestern Polytechnical University, China*)

Jiaoyang Wang (*Northwestern Polytechnical University, China*)

Tianxiang Yu (*Northwestern Polytechnical University, China*)

Bifeng Song (*Northwestern Polytechnical University, China*)

Accelerated Life Testings(ALTs) and Acceleration Modeling of Battery Disconnecting Systems(BDS)

Sung-Min Kim (*Korea Testing Laboratory, Korea*)

Kwang-Min Lee (*Korea Testing Laboratory, Korea*)

Jeong-Hwan Cho (*Kimpo University, Korea*)

Reliability and Durability Analysis for Fuel Cell Vehicle Based On Road Test

Songlin Zheng (*University of Shanghai for Science and Technology, China*)

Tie Chen (*University of Shanghai for Science and Technology, China*)

Shuying Wang (*University of Shanghai for Science and Technology, China*)

Xintian Lin (*University of Shanghai for Science and Technology, China*)

SESSION 19: Statistical Reliability Modeling & Applications

Chair: Gary Harlow (*Lehigh University, USA*)

Efficient and Practical Reliability Engineering

Jiajun Shao (*Sunlight Technology, Beijing, China*)

Junxian Han (*Sunlight Technology, Beijing, China*)

A Dual Stochastic Process Model with Applications to Security Systems

Yao Zhang (*Rutgers University, USA*)

Hoang Pham (*Rutgers University, USA*)

An Approach for the Fast Calculation Method of Pareto Solutions of a Two-Objective Network

Tomoaki Akiba (*Chiba Institute of Technology, Japan*)
Natsumi Takahashi (*Tokyo Metropolitan University, Japan*)
Shuhei Nomura (*Tokyo Metropolitan University, Japan*)
Hisashi Yamamoto (*Tokyo Metropolitan University, Japan*)

Statistical Modeling for Low Cycle Fatigue

D. Gary Harlow (*Lehigh University, USA*)

SESSION 20: Maintenance Modeling

Chair: Yada Zhu (*IBM T. J. Watson Research Center, USA*)

A Multi-Decision Makers Approach to Select the Maintenance Plan for a Multi-Component System

Antonella Certa (*Università degli Studi di Palermo, Italy*)
Mario Enea (*Università degli Studi di Palermo, Italy*)
Giacomo Galante (*Università degli Studi di Palermo, Italy*)
Toni Lupo (*Università degli Studi di Palermo, Italy*)

Selective Maintenance for a Multi-Component System with Two Types of Failure Modes under Age-Based Imperfect Maintenance

Mayank Pandey (*University of Alberta, Canada*)
Ming J. Zuo (*University of Alberta, Canada*)
Dao Duc Cuong (*University of Alberta, Canada*)

A Methodology for Maintenance Time Prediction in Virtual Maintenance Environment

Geng Jie (*Beijing University of Aeronautics and Astronautics, China*)
Zhou Dong (*Beijing University of Aeronautics and Astronautics, China*)
Lv Chuan (*Beijing University of Aeronautics and Astronautics, China*)

Periodic Inspection Optimization for Infrastructure Systems Subject to Hidden Failures

Dzung T. Phan (*IBM T. J. Watson Research Center, USA*)
Yada Zhu (*IBM T. J. Watson Research Center, USA*)

SESSION 21: Engineering Reliability Design & Applications

Chair: Minjae Park (*Hongik University, Korea*)

Lifetime Estimation of Ceramic Package Light-Emitting Diodes using Complex-Stress and Real-Time Monitoring

Byungjin Ma (*Korea Electronics Technology Institute, Korea*)
Jemin Kim (*Korea Electronics Technology Institute, Korea*)
Sungsun Choi (*Korea Electronics Technology Institute, Korea*)
Kwanhoon Lee (*Korea Electronics Technology Institute, Korea*)

Application of Standard FMECA and FMECA with Grey Relation Analysis, in a Wall-Hung Boiler Case Study

M. Bevilacqua (*Università di Ancona, Italy*)
F. E. Ciarapica (*Università di Ancona, Italy*)
L. Postacchini (*Libera Università di Bolzano, Italy*)
G. Mazzuto (*Università di Ancona, Italy*)

Measurement System Analysis Applied to AISI 12L14 Steel Turning

R.S. Peruchi (*The University of Tennessee, USA*)
P.P. Balestrassi (*Federal University of Itajubá, Brazil*)
A.P. Paiva (*Federal University of Itajubá, Brazil*)
R. Sawhney (*The University of Tennessee, USA*)
E.M. Anda (*The University of Tennessee, USA*)
S.A. Niknam (*The University of Tennessee, USA*)

A Distribution of Quick Chargers Used by Electric Vehicles on an Expressway Considering with the Type of Charging Place

Junji Koyanagi (*Tottori University, Japan*)

SESSION 22: System Reliability Modeling & Analysis

Chair: Zhenmin Chen (*Florida International University, USA*)

Research on Mechanism Wear Reliability Analysis Methods Based on Theory of Operational State

Cheng-ming He (*Academy of Armored Forces Engineering, China*)
Qing-hua Liang (*Academy of Armored Forces Engineering, China*)
Qing-jun Meng (*Academy of Armored Forces Engineering, China*)

Reliability Modeling for k-out-of-n Surveillance Systems Subject to Two Stochastic Processes

Yao Zhang (*Rutgers University, USA*)
Hoang Pham (*Rutgers University, USA*)

Statistical Process Control for the Fairness of Network Resource Distribution

Zhenmin Chen (*Florida International University, USA*)
Qingyun Liu (*Florida International University, USA*)

Reliability for Fluid Bearings Design

K. Diop (*University of Angers, France*)
A. Charki (*University of Angers, France*)
S. Champmartin (*Centre Arts et Métiers Paris Tech d'Angers, France*)
A. Ambari (*Centre Arts et Métiers Paris Tech d'Angers, France*)

*Thank you for contributing and participating
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We hope you enjoy the entire program



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