Table of Contents

Equivalent Geometrical Designs with Same Word-Length Pattern ............................................. 1
   Hsien-Tang Tsai; Jen-der Day

Joint Quaternary Design Tables for Geometrical Designs ......................................................... 6
   Jen-der Day; Hsien-Tang Tsai

Improving Tuning Time of Radio Frequency Devices thru Six Sigma Process .............................. 10
   Chiao-Tzu Huang; Shin-Yi Lai; Wei-Ling Wang

Integrating Taguchi Method and Durbin-Watson Statistic for Independent Component
Selection: With Application to Etch Process Fault Detection .................................................. 15
   Chun-Chin Hsu

Six Sigma Based Approach to Enhance the PCB Yield ............................................................... 20
   Li-Fei Chen; Hung-Chun Lin; Hui-Po Hsu; Chao-Ton Su

Reliability of Tunnel Ventilation Control: A Conceptual Design .............................................. 24
   Ondřej Nývlt; Lukáš Ferkl; Jan Šulc

Designing of Efficient Families of Strategies for Predicting Unknown Population Mean ............... 29
   H.S. Jhajj

A Software Reliability Model with Vtub-Shaped Fault-Detection Rate Subject to
Operating Environments .............................................................................................................. 33
   Hoang Pham

Human Error in Health Care: An Investigative Study ................................................................. 38
   B.S Dhillon

Reliability Modeling of a Server System with Hybrid Replication Method ................................. 43
   Mitsutaka Kimura; Mitsuhiro Imaizumi; Toshio Nakagawa

Optimal Management Policy for a Distributed Processing System ............................................ 48
   Mitsuhiro Imaizumi; Mitsutaka Kimura

Determination of Bank Interest Margins Considering Bankruptcy ............................................. 53
   Syouji Nakamura; Miwako Arafuka; Toshio Nakagawa

Optimal Maintenance Policy of Airframe Cracks ...................................................................... 56
   Kodo Ito; Toshio Nakagawa

Approximation of Inspection Threshold for Multi-Component System ..................................... 61
   Takashi Satow
Buyer's Order Quantity and Manufacturer's Wholesale Price, Process Mean, and Production Run Length Settings ................................................................. 66
Chung-Ho Chen

Weighted Approach in Estimating Evaluation Indexes for Measurement Systems with Correlated Characteristics ......................................................... 71
R.S. Peruchi; A.P. Paiva; P.P. Balestrassi; R. Sawhney; G. Rajpal; V. Marella

Lean Six Sigma Based Requirement Analysis of Quality Management for Complex Product Maintenance ................................................................. 78
Hong-bing Ye; Bo-gong Ji; Qing-jun Meng

Experimental Flexible Two-phase Loop for Quality Optimization of Piping Components .......................................................... 83
M. Bevilacqua; F.E. Ciarapica; G. Giacchetta; B. Marchetti

Frequency Response Design of Uncertain Vibration Systems .................................................................................................................. 88
G. J. Savage; Y. K. Son

NHPP Models with Change-Point for Software Reliability Assessment and Its Application to an Optimal Software Release Problem ............................................. 93
Yuka Fukuta; Shinji Inoue; Shigeru Yamada

Optimal Maintenance Problems Based on Jump Diffusion Models Considering the Operating Phase of Cloud OSS ........................................ 98
Kenta Miyaoka; Yoshinobu Tamura; Shigeru Yamada

A Software Optimal Release Problem Based on a Hazard Rate Model with Change-Point .......................................................... 103
Shinji Inoue; Yuki Nakagawa; Shigeru Yamada

Bootstrapping Interval Estimations for Software Reliability Assessment Based on a Discrete NHPP Model ...................................................... 108
Shinji Inoue; Hironori Matsuno; Shigeru Yamada

An Interval Estimation Approach of Optimal Software Release Time Based on a Nonparametric Bootstrap Method ........................................ 113
Shinji Inoue; Shigeru Yamada

Optimization of a Bi-Objective Imperfect Preventive Maintenance Model .................................................................................. 118
Chung-Ho Wang; Sheng-Wang Tsai; Jiu-Zhang Lu

Minimizing Periodic Preventive Maintenance Costs in Series-Parallel Systems Using Improved Genetic Algorithm ...................................... 123
Yi Hsu

A Study on the Structure of the Product Profit ................................................................. 128
Jyh-Wen Ho

The Impact of Used Products on Channel Coordination and Quality Decision for Warranted Products ............................................................. 131
Hui-Chiung Lo; Ruey Huei Yeh; Nani Kurniati; Jung-Jung Lin
Maintenance Scheduling Analysis under Limited Resources with Application to Pumps of a Power Plant ................................................................. 136
  Yao Hsu; Wen-Fang Wu; Tzu-Yu Kuo; Shih-Cheng Liu; Jo-Hsin Huang

  Wei-Jung Shiang; Hsin Rau; Ting-Kuo Peng

Reliability of Permitted Packet Unreliability and Latency in a Multi-State Imperfect Vertex Computer Network ........................................................................... 146
  Cheng-Fu Huang; Yi-Kuei Lin

A Study of Compound Failure Rate Control Schemes for Monitoring IC Wafers Quality and Lifetime Reliability .............................................................. 151
  Yung-Yu Yang; Yun-Shiow Chen

Performance Measure for a Multistate Distribution Network under the Delivery Spoilage Consideration ......................................................................... 156
  Cheng-Fu Huang; Cheng-Ta Yeh; Yi-Kuei Lin

Search for All MCs with Backtracking ............................................................................ 161
  Shin-Guang Chen

Trend Analysis Based on Historical Data for OSS Reliability Assessment ............................. 165
  Hirona Miyahara; Yoshinobu Tamura; Shigeru Yamada

Data Analysis for Decreasing Mold Defective Fraction in Automotive Rubber Products Based on Orthogonal Array Experiments ..................................................... 170
  Shigeru Yamada; Giichi Takabatake

On Change-Point Detection and Its Application to Software Reliability Measurement Based on Hazard Rate Models ............................................................ 175
  Shiho Hayashida; Shinji Inoue; Shigeru Yamada

Quantitative Assessment for Software Safety Integrity Level with Optimal Software Release Policies ....................................................................................... 180
  Takahiro Nishikawa; Shigeru Yamada

AIR Application based on Jump Diffusion Models for Cloud Computing ............................... 185
  Yoshinobu Tamura; Shigeru Yamada

Repairable Medical System Reliability ............................................................................. 190
  James McLinn

Performance Reliability Analysis for the Landing Gear System Based on the Simulation Model ................................................................................. 195
  Tianxiang Yu; Ruke Lei; Bifeng Song; Zetao Xiong

Overview of Design for Reliability ................................................................................... 201
  Guangbin Yang
Reliability Program for Medical Device ................................................................. 206
Julio Pulido

Neuromodulation Leads Reliability Assessment in Therapy System ........................................... 211
Mingxiao Jiang; Bernard Q. Li; Haitao Zhang

Exploring Ensemble Filters for Software Defect Prediction ................................................. 216
Taghi M. Khoshgoftaar; Kehan Gao; Lofton A. Bullard

Software Reliability Models Selection Method ................................................................ 221
Kun Han; Jin-mao Guo; Qing-jun Meng

Software Quality Analysis with Distribution Bias in Defect Data ........................................ 225
Naeem Seliya; Taghi M. Khoshgoftaar

A Comparative Study of Iterative Feature Selection and Boosting for Software Quality Estimation ......................................................................................................................... 230
Kehan Gao; Taghi M. Khoshgoftaar; Randall Wald

Research on Mechanism of System State Transfer and Check Based on Adaptive Agent Simulation ......................................................................................................................... 235
Ying Shen; Wei-guang Liu; Qing-jun Meng

Multi-Class Classification for Ocean Turbine State Detection .............................................. 240
Janell Duhaney; Taghi M. Khoshgoftaar

Experimental Results for Weighted-k-out-of-n System ....................................................... 245
Yoichi Higashiyama; Ventsi Rumchev

Detecting Changes in Readings from Remote Battery Systems .............................................. 250
Gregory W. Ratcliff; Randall Wald; Taghi M. Khoshgoftaar; Cody Neuburger; Liz Jeannette Aranguren Pachano

Optimal Maintenance Policies with Preventive Maintenance ................................................ 255
Minjae Park; Hoang Pham

The Optimization of a Maintenance Policy Related to a Global Service Contract ................ 260
Toni Lupo

Khac Tuan Huynh; Anne Barros; Christophe Bérenguer

Spare Parts Management: A Comparison Between (S,S) Policy with Delayed Ordering and Policy Based on Binomial Distribution and Total Cost ........................................ 270
D. Battini; A. Persona; F. Sgarbossa

Statistical Analysis for Design Improvement of Wheels ....................................................... 275
Zhi-Sheng Ye; Jian-Guo Li; Min Xie
Ten Years of Website & Website Quality Studies: Themes, Concepts and Relationships .................. 359
Yuan-Duen Lee; Yender Lee; Jwu-Jenq Chen

Identifying and Mapping the Scientific Landscape of Service Quality Management Studies, 2003-2012 ........................................................................................................ 364
Yuan-Duen Lee; Yender McLee; Min-Tzu Chen; Yen-Hui Lin

Quality Inspection Policy for Color Filter Production System ................................................. 370
Hsin Rau; Chih-Chung Chien; Kuo-Hua Cho; Wei-Jung Shiang

Human Factor Criteria for the Design of Cars ...................................................................... 375
Hong Wang; Ningning Zhang; Chi Zhang; Xu Luo; Guangbin Sun

Dynamics Study and Finite Element Analysis of the 50t/h Dual-axis Inertia Horizontal Vibrated Fluidized Bed .......................................................... 378
Xiangwei Kong; Feng Guo; Dong Wang; Ning Yin

A Proposal for an Exact Algorithm for Solving a SALBP-1 Problem ........................................ 383
Mosé Gallo; Teresa Murino; Valentino Pensato; Liberatina Carmela Santillo

Probabilistic Specimen Property-Fatigue Life Mapping and P-S-N Curve Fitting .................... 389
Liyang Xie; Jianzhong Liu

Equivalent Accelerated Degradation Test Plans for a Nonlinear Random Coefficients Models ........................................................................................................ 394
Seong-joon Kim; Suk Joo Bae

Research on Sample Size Determination to Estimate Fatigue Life in Reliability Test of Mechanical Products ................................................................. 399
Weimin Cui; Jiaoyang Wang; Tianxiang Yu; Bifeng Song

Accelerated Life Testings(ALTs) and Acceleration Modeling of Battery Disconnecting Systems(BDS) ..................................................................................... 403
Sung-Min Kim; Kwang-Min Lee; Jeong-Hwan Cho

Reliability and Durability Analysis for Fuel Cell Vehicle Based On Road Test ..................... 408
Songlin Zheng; Tie Chen; Shuying Wang; Xintian Lin

Efficient and Practical Reliability Engineering .................................................................. 413
Jiajun Shao; Junxian Han

A Dual Stochastic Process Model with Applications to Security Systems .............................. 418
Yao Zhang; Hoang Pham

An Approach for the Fast Calculation Method of Pareto Solutions of a Two-Objective Network ..................................................................................................... 423
Tomoaki Akiba; Natsumi Takahashi; Shuhei Nomura; Hisashi Yamamoto

Statistical Modeling for Low Cycle Fatigue ....................................................................... 428
D. Gary Harlow
A Multi-Decision Makers Approach to Select the Maintenance Plan for a Multi-Component System ........................................................... 434
  Antonella Certa; Mario Enea; Giacomo Galante; Toni Lupo

Selective Maintenance for a Multi-Component System with Two Types of Failure Modes under Age-Based Imperfect Maintenance ........................................ 439
  Mayank Pandey; Ming J. Zuo; Dao Duc Cuong

A Methodology for Maintenance Time Prediction in Virtual Maintenance Environment ................................................................. 444
  Geng Jie; Zhou Dong; Lv Chuan

Periodic Inspection Optimization for Infrastructure Systems Subject to Hidden Failures .............................................................. 448
  Dzung T. Phan; Yada Zhu

Lifetime Estimation of Ceramic Package Light-Emitting Diodes using Complex-Stress and Real-Time Monitoring .................................................. 453
  Byungjin Ma; Jemin Kim; Sungsun Choi; Kwanhoon Lee

Application of Standard FMECA and FMECA with Grey Relation Analysis, in a Wall-Hung Boiler Case Study ......................................................... 457
  M. Bevilacqua; F. E. Ciarapica; L. Postacchini; G. Mazzuto

Measurement System Analysis Applied to AISI 12L14 Steel Turning .............................................................. 462
  R.S. Peruchi; P.P. Balestrassi; A.P. Paiva; R. Sawhney; E.M. Anda; S.A. Niknam

A Distribution of Quick Chargers Used by Electric Vehicles on an Expressway Considering with the Type of Charging Place ........................................ 470
  Junji Koyanagi

Research on Mechanism Wear Reliability Analysis Methods Based on Theory of Operational State ................................................................. 474
  Cheng-ming He; Qing-hua Liang; Qing-jun Meng

Reliability Modeling for k-out-of-n Surveillance Systems Subject to Two Stochastic Processes .............................................................. 478
  Yao Zhang; Hoang Pham

Statistical Process Control for the Fairness of Network Resource Distribution .............................................................. 483
  Zhenmin Chen; Qingyun Liu

Reliability for Fluid Bearings Design .............................................................. 487
  K. Diop; A. Charki; S. Champmartin; A. Ambari

Authors Index ........................................................................................................... 493