#### Tzong-Ru Tsai (蔡宗儒)

Professor Department of Statistics Tamkang University Tamsui District, New Taipei City 251 Taiwan. Tel: +886-2-26215656 ext. 2632 E-mail: <u>tzongru@gms.tku.edu.tw</u> http://<u>mail.tku.edu.tw/078031</u>

### Education

- 1992 to 1996 Ph.D., Statistics
   <u>National Chengchi University</u> (Taiwan)
- 1990 to 1992 M.B.A., Statistics
   <u>National Chengchi University</u> (Taiwan)
- 1983 to 1987 B.B., Statistics <u>Tamkang University</u> (Taiwan)

#### Academic Experience

- Aug. 2018 to Present
   Dean, College of Business and Management, Tamkang University
- Aug. 2001 to Present
   Professor, Department of Statistics, Tamkang University
- Aug. 2004 to Jul. 2010
   Chairman, Department of Statistics, Tamkang University
- Feb. 1996 to Jul. 2001
   Associate Professor, Department of Statistics, Tamkang University
- Aug. 1992 to Jan. 1996
   Instructor, Department of Statistics, Tamkang University
- Aug. 1989 to Jul. 1990
   Teaching Assistant, Department of Statistics, Tamkang University

#### • Associate Editor, Journal of Statistical Computation and Simulation (SCI)

- Associate Editor, Mathematics (SCI)
- Served as

- Executive Editor, International Journal of Intelligence Technologies and Applied Statistics
- Managing Editor, Journal of Taiwan Intelligent and Applied Statistics (in Chinese)
- Associate Editor of the Editorial Board: Probability and Statistics, The Scientific World Journal (SCI)
- Associate Editor, Journal of the Chinese Institute of Industrial Engineers (EI)
- Associate Editor, Journal of Industrial Engineering
- Visiting Scholar
- Southwestern University of Finance and Economics (China) Xiamen University (China) Kansas State University (USA) Vanderbilt University (USA) University of Louisiana at Lafayette (USA) University of South Dakota (USA) Academia Sinica (Taiwan)
- Acted as Referee for the following Journals
   Journal of the Chinese Institute of Industrial Engineers
   European Journal of Operation Research
   Computers & Industrial Engineering
   Journal of Statistical Computation and Simulation
   Computational Statistics and Data Analysis
   Journal of Applied Statistics
   Journal of Advanced Manufacturing Technology
   Risk Analysis
   International Journal of Reliability, Quality and Safe Engineering
   Communications in Statistics-Theory & Methods
   IEEE Transaction on Reliability
   Information Science
   Communication Science
  - information Ser
- Consulting
  - 2019 Consultant of Sheng Hsiang Alliance Group
    2016 to 2017 Foxconn, Taiwan
    2010 Industrial Technology Research Institute, Taiwan
    2009 to 2010 U-Tech, Taiwan
- Books
   Statistical Quality Technologies: Theory and Practice (YL Lio, HK Tong Ng, T-R

Tsai, D-G Chen), Spring, 2019

Statistical Modeling for Degradation Data (D-G Chen, YL Lio, HK Tong Ng, T-R

Tsai), Spring, 2017

Statistics 3rd, Hawtai (in Chinese)

- Breeze, Tunghua (in Chinese)
- Projects

# MOST grant projects

- System reliability evaluation in multicomponent stress-strength model based on model selection methods 2021/08-2023/07
- Generalized auxiliary-information based control charts for process control 2019/08-2021/07
- Reliability analysis based on complex interval-censored data under dual component suppliers, 2017/08-2019/07
- The study of evolutionary computation method and two-variable accelerated degradation tests with heterogeneity, 2015/08-2017/07
- The study of EM algorithm on the parameter estimation of accelerated degradation tests and planning accelerated degradation tests(I), 2014/08-2015/07

## NSC grant projects

- Planning accelerated degradation tests with a warranty policy, 2013/08-2014/07
- A research on accelerated degradation test with a cumulative damage process, 2011/08-2012/07
- A research on accelerated degradation test with a cumulative damage process (I), 2010/08-2011/07
- Design of screening procedure and adaptive control chart with surrogate variables, 2009/08-2010/07
- Bayesian and generalized acceptance sampling plans under progressive censoring, 2008/08-2009/07
- Reliability sampling plans under progressive censoring data, 2007/08-2008/07
- Bayesian progressive censoring plans with items sold under warranty policy, 2006/08-2007/07
- A new R control chart for skewed distribution, 2005/08-2006/07
- Conditional maximum likelihood estimation for control charts in the presence of correlation, 2004/08-2005/07

- An alternative control chart approach based on small number of subgroups, 2003/08-2004/07.
- Improved square root transformation to adjust control limits on attribute charts, 2002/08-2003/07
- A New Criterion for Probability Sampling Short-run CSP-1 Plan, 2000/08-2001/07
- An Application of Fuzzy Analysis Method on Ridge Regression Model, 1999/08-2000/07
- Limited Failure-Censored Life Test for the Weibull Distribution, 1998/08-1999/07
- Application of Fuzzy Weights in Quasi-likelihood Estimation, 1997/08-1998/07

## Other projects

- A Study for Regional Additional Pay (collaborator), 2013, Executive Yuan, Taiwan.
- Survey for 2013 New Taipei City International Environment Art Festival (collaborator), 2012, New Taipei City Government.
- Survey for 2012 New Taipei City International Environment Art Festival (collaborator), 2012, New Taipei City Government.
- Six Sigma Project on Curing Process, 2011, hosted by Prof. S. Chang in the Dept. of Industrial and Manufacturing, Kansas State University, USA.
- 2010-2011 The reliability assessment of LEDs based on accelerated degradation test data, Industrial Technology Research Institute, Taiwan.
- Quality Improvement on Hot Embossing Process for Plastic Microstructures, 2010, Utec Inc.
- Survey for the Demand of Social Education Institutions in Taiwan, 1999, Taiwan Institute of Economic Research.
- Water Market Survey in Matsu, Taiwan, 1998, Environmental & Infrastructural Technologies, Inc.

### Awards

- MOST Competitive Award for Excellent Faculty in Universities 2013-2021
- Tamkang University Competitive Research Award 2003-2021.
- Excellent Paper Award of IMIP 2012 (International Symposium on Innovative Management, Information and Production)

- NSC Competitive Award for Excellent Faculty in Universities 2011-2012
- Honorary member of the Phi Tau Phi Scholastic Honor Society

# **Research Interest**

- Quality Control
- Reliability Analysis
- Data Science

## Certificate

• AZ-900 Microsoft Azure Fundamentals