『問題解決之「研究方法(Research Methods for Problems- Solving)」』「台北大學」冬令營

各位老師、同學們大家好!

　　為提昇台北大學之研究能量與畢業學生工作能力，本校校友講座教授曾國雄親自開授『問題解決之「研究方法」(Research Methods for Problems- Solving)』冬令營(曾國雄講座教授亦為交通大學終身講座教授，第四屆國家講座、國科會傑出獎三次、國科會特約研究員兩次、暨國科會傑出特約研究員，MCDM Edgeworth-Pareto Award 等獎)；參加對象為開放校內外有意願「奠定研究基礎」之教師與碩博士班研究生(含大學部三四年級特優培育學生)為原則。課程之初會將『「問題解決(Problems-Solving)」之傳統至最新及未來可能發展的「研究方法(Research Methods)」』以及『如何投稿 SSCI/SCI 論文之技巧與要點』加以深入淺出的介紹，及其他相關基礎課程之教學分享，爾後本研究室團隊教師及助理群協助【個案討論】或【計算方法】或【軟體操作】等方式，針對各研究方法進行深入探討與實例操作，並以實例說明(如以曾國雄教授實際在 SSCI/SCI 期刊刊出之論文為例)，以帶動台灣學術研究風氣與提昇研究能量。新觀念與新趨勢(New concepts and new trends)之研究方法一開始可能不能馬上聽得懂，不必擔心，不用怕，還是聽下去，多聽幾次！自然就會了!本研究群會在課堂中分享新的議題，而課堂中所分享的議題可以做為文章撰寫的「故事」，找題目實作(邊作邊學，個案分析為以【「故事個案(Story Case)」+「解決問題之研究方法」→ 結果表達(含「寫作的技巧(Writing Skill)」與「講的技巧(Speech Skill)」)，重點在於基本邏輯之思考與推理】)，並實作，試著投稿，就會有 SSCI/SCI 的研究成果產出，且可提昇工作與就業之能力；如果欲達到此研究能量之成果，「天下沒有白吃的午餐」，只要耐心學習，一步一步的達成，相信成果必能「事半功百倍」。有了成果，科技部(原國科會)計畫申請案之通過，就順理其章。

「台北大學」冬令營
◎『問題解決之「研究方法」』開課地點：台北大學公共事務學院六樓 630 教室
◎『問題解決之「研究方法」』課程開課時間如下：

時間	1月19日 (星期一)	1月21日 (星期三)	1月26日 (星期一)	1月29日 (星期四)	2月2日 (星期一)	2月5日 (星期四)	2月9日 (星期一)	2月12日 (星期四)
下午	13:00~16:00	13:00~16:00	13:00~16:00	13:00~16:00	13:00~16:00	13:00~16:00	13:00~16:00	13:00~16:00

◎『問題解決之「研究方法」』開課時間與地點：
星期一下午 13:00pm~16:00pm
開課地點：台北大學公共事務學院六樓 630 教室，新北市三峽區大學路 151 號
協助教師：劉建浩教授，黃啟祐教授，沈高毅博士，盧明滄博士，莊彥清博士研究生，黃三麟博士研究生，陳建宇博士候選人，黃冠維博士候選人，王榮葳碩士研究生
助教

姓名	系所	年級	電話	E-mail
黃三麟	台北大學都市計畫研究所	博一	0922334176	samlin0668@gmail.com

聯絡人

姓名	系所	年級	電話	E-mail
王榮葳	台北大學都市計畫研究所	碩二	0972199186	sandyfujiyayei@yahoo.com.tw

　　欲參加者請在 2014 年 1 月 16 日(五)前只需回傳下列報名表即可，以便統計，感謝您的協助。

報名表	
姓名	
級職	
聯絡電話	
學校及系所 或公司(機關)	
E-Mail	

Google Scholar

Gwo-Hshiung Tzeng
Distinguished Chair Professor
Research methods for problems-solving: Data Analysis (crisp sets, fuzzy set theory, rough set theory) -> statistics and multivariate analysis, evolutionary computation, soft computing, etc.), multiple criteria decision making (MADM and MODM), and so on for applications in the real world problems

Citation indices	All	Since 2010
Citations	14091	10218
h-index	63	53
i10-index	180	158

http://scholar.google.com/citations?user=ZRXOrvQAAAAJ&hl=en

Citations per year

http://scholar.google.com/citations?user=ZRXOrvQAAAAJ&hl=en, http://ghtzeng.weebly.com/
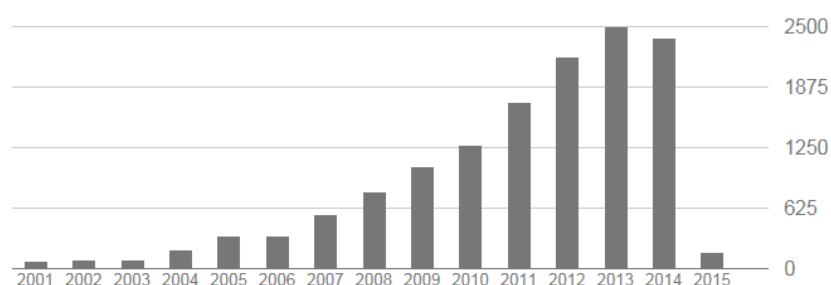
Two New Books, Gwo-Hshiung Tzeng

New Concepts and Trends of MCDM for Tomorrow in Solving Actual Problems

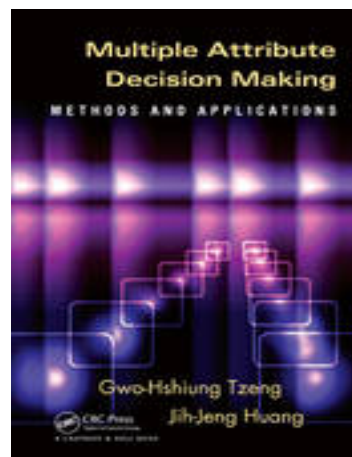## Multiple Attribute Decision Making: Methods and Applications

By Gwo-Hshiung Tzeng & Jih-Jeng Huang (2011), CRC Press, Taylor & Francis Group, A Chapman & Hall Book.

Part I Concepts and Theory of MADM
Analytic Hierarchy Process; Analytic Network Process and Fuzzy Analytic Network Process; Simple Additive Weighting Method; TOPSIS and VIKOR; ELECTRE Method; PROMETHEE Method; Gray Relational Model; Fuzzy Integral Technique; Rough Sets; Structural Model (Interpretive Structural Modeling (ISM) Method, DEMATEL Method, Fuzzy Cognition Maps).

Part II Applications of MADM
AHP: An Application; VIKOR Technique with Applications Based on DEMATEL and ANP; TOPSIS and VIKOR: An Application; ELECTRE: An Application; PROMETHEE: An Application; Fuzzy Integral and Gray Relation: An Application; Fuzzy Integral: An Application; Rough Sets: An Application.

Fuzzy Multiple Objective Decision Making

By Gwo-Hshiung Tzeng & Jih-Jeng Huang (2013), CRC Press, Taylor & Francis Group, A Chapman & Hall Book.

Section I Concepts and Theory of Multi-Objective Decision Making
Multi-Objective Evolutionary Algorithms; Goal Programming; Compromise Solution and TOPSIS; De Novo Programming and Changeable Parameters (including Decision Space and Objective Space, called Changeable Spaces); Multi-Stage Programming; Multi-Level Multi-Objective Programming; Data Envelopment Analysis.

Section II Applications of Multi-Objective Decision Making
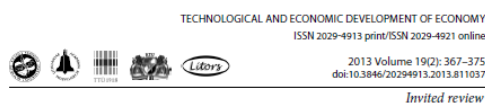Motivation and Resource Allocation for Strategic Alliances; Choosing Best
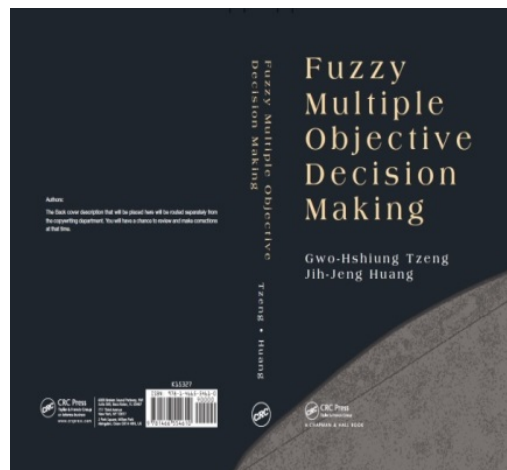
Alliance Partners and Allocating Optimal Alliance Resources Using Fuzzy Multi-Objective Dummy Programming Model; Multi-Objective Planning for Supply Chain Production and Distribution Mode: Bicycle Manufacturer; Fuzzy interdependent Multi-Objective Programming; Novel Algorithm for Uncertain Portfolio Selection; Multi-objective Optimal Planning for Designing Relief Delivery Systems; Comparative Productivity Efficiency for Global Telecoms; Fuzzy Multiple Objective Programming in Interval Piecewise Regression Model.

Liou, James J.H. and Tzeng, G.H. (Corresponding author) (2012), Comments on "Multiple criteria decision making (MCDM) methods in economics: An overview", *Technological and Economic Development of Economy*, **18(4)**, 672-695.

Abstract. This paper offers comments on a previously published paper, titled "Multiple criteria decision making (MCDM) methods in economics: an overview," by Zavadskas and Turskis (2011). The paper's authors made great efforts to summarize MCDM methods but may have failed to consider several important new concepts and trends in the MCDM field for solving actual problems. **First**, the traditional model assumes the criteria are independently and hierarchically structured; however, in reality, problems are often characterized by interdependent criteria and dimensions and may even exhibit feedback-like effects. **Second**, relatively good solutions from the existing alternatives are replaced by aspiration levels to fit today's competitive markets. **Third,** the emphasis in the field has shifted from ranking and selection when determining the most preferable approaches to performance improvement of existing methods. **Fourth,** information fusion techniques, including the fuzzy integral method, have been developed to aggregate the performances. **Finally**, the original fixed resources in multi-objective programming are divided such that both decision and objective spaces are changeable. In this paper, we add new concepts and provide comments that could be thought of as an attempt to complete the original paper.

Basic New Concepts and Trends of Two New Books for Tomorrow

The basic concept of changeable spaces for achieving aspiration level
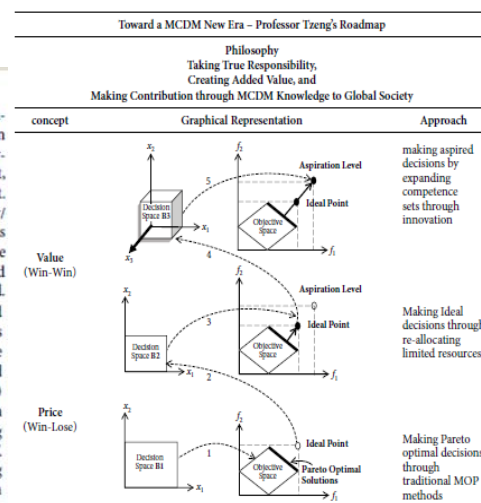
Some listing important papers

- **Liou, James J.H. and Tzeng, G.H. (2012), Comments on "Multiple criteria decision making (MCDM) methods in economics: An overview",** *Technological and Economic Development of Economy*, **18(4), 672-695 (SSCI, IF: 5.605, 2011; IF: 3.235, 2012). **

- **Peng, K.H., Tzeng, G.H. (2013), A hybrid dynamic MADM model for problems-improvement in economics and business, *Technological and Economic Development of Economy*, 19(4), 638–660 (SSCI, IF: 5.605, 2011; IF: 3.235, 2012).**
- **Liou, James J.H., Chuang, Y.C., Tzeng, G.H. (2013), "A fuzzy integral-based model for supplier evaluation and improvement, *Information Sciences*, 266, 199–217 (Impact factor: 3.643, 5-Year Impact Factor: 3.676, 2012).**
- **Huang, J.J., Tzeng, G.H. (2014), New thinking of multi-objective programming with changeable space - In search of excellence, *Technological and Economic Development of Economy*, 20(2), 242-261. (SSCI, IF: 5.605, 2011; IF: 3.235, 2012). Doi:10.3846/20294913.2013.860931**
- **Liou, James J.H. (2013), New concepts and trends of MCDM for tomorrow – in honor of Professor Gwo-Hshiung Tzeng on the occasion of his 70th birthday, *Technological and Economic Development of Economy*, 19(2), 367–375 (SSCI, IF: 5.605, 2011; IF: 3.235, 2012).**

曾國雄講座教授近年來對"**New Concepts and Trends of New Hybrid MCDM model for Tomorrow**"研究成果之貢獻與特色可歸納如下六項：

(1) 為避免『**經濟與統計脫離現實(Economics and Statistics are unrealistic in the real world)**』之問題，曾國雄教授帶領該研究團隊，走向以邏輯思考與推理之「約略集合理論(Rough Set Theory, RST)為基礎，建構大數據(Big data)之核心屬性(Core attributes)的 If-then 規則，進而更以「支配性為基礎之約略集合法(dominance-based rough set approach, DRSA)之 Flow graph 結合本研究團隊強項之 DEMATEL technique 建構因果影響關係之 If-then 規則」，此能使決策者或使用者易於瞭解與掌握問題的因果影響關係；又可結合「新混合式多屬性決策模型(New Hybrid MADM model)，更可以有效提供決策者處理解決「實際問題之改善(real problem improvement)」；

(2) 傳統的模型假設評估之面向與準則皆為**獨立性階層結構**(independence and hierarchy in structure)，但在實際問題上評估面向與準則時常存在是關聯性(interdependence)並非獨立性，因為現今之「**統計學與經濟學有一些假設(如獨立性或線性)是不符合實際問題(unrealistic in the real world)**」。DEMATEL (Decision Making Trial and Evaluation Laboratory)技法可找出影響關聯性矩陣(influence relation matrix)，以建構「**影響網路關聯圖(influential network relation map, called "INRM")**」的有效工具，並可利用影響關聯性矩陣藉用 Saaty ANP 的基本觀念求出「**影響權重(influential weights)**」，此吾人將此稱之為 **DANP (DEMATEL-based ANP)**，並可以此之影響權重作各評估準則績效值之整合；

(3) 由「渴望水準(aspiration levels)」來替代傳統以現有方案中的相對最佳解(max-min)作為評估方案排序與選擇的基準，即可避免如同「**由一堆爛蘋果中找出一個相對最好的蘋果(Pick the best apple among a barrel of rotten apples)**」(Simon incorporated the basic concept of the **"aspiration level"** in his work, 在 1978 年獲得「經濟學諾貝爾獎 (Nobel Prize in Economics))；

(4) 基於 Simon「渴望水準(aspiration levels)」的觀念，在吾人 MADM 之評估面，決策者或經營者最關心之問題，如何有系統性地根據 INRM「**改善(improvement)**」解決他的方案問題(即找出執行時可達到「**渴望水準(aspiration levels)**」的可行方案)，比起在許多爛方案中作排序與選擇(Ranking and Section)，由此些爛方案中選出相對最好的方案作為執行更為重要(根據 INRM 之有系統之**改善**可避免「**腳痛醫頭，頭痛頭**」的問題解決方式)；

(5) Kahneman and Tversky (Kahneman 在 2002 年獲得「經濟學諾貝爾獎(Nobel Prize in Economics)，他們在 1960 年代消費者對產品多屬性價值偏好選擇與傳統加法型多屬性效用模式的許多研究終，結果幾乎都與實際問題不一致，當時他們誤以為人的偏好選擇有問題；直至 1974 年 Sugeno 在日本東京工業大學完成「模糊積分之理論與其應用(Theory of fuzzy integrals and its applications)」之博士論文(Sugeno M. (1974). Theory of fuzzy integrals and its applications. Doctoral thesis, Tokyo Institute of Technology, Japan)，此即為「**非加法型(Non-additive)**」或稱之為「**超加法型(Super-additive)**」之多屬性價值函數(value function)整合的模型；於是 Kahneman 於 1978 年提出「展望理論(Prospect theory)」；

(6) 吾人可由前五項有系統地整體性找到達到「渴望水準(aspiration levels)」之問題解決的思考方式及其執行的策略，可如何執行呢？古典 MODM (Multiple Objectives Decision Making)規劃方法的思考方式，設定基於當時的固定條件或資源(fixed conditions or resources，此稱之為「決策空間(Decision Space)下，如何在固定可行空間(fixed feasible region，此稱之為「決策空間(Objective Space)」)找到 Pareto 最適解(Pareto optimal solutions)。此吾人提出一種「**可變間 MODM 規劃模型**」的新思考方式(A new thinking of **"MODM models with changeable**

spaces”)，此能協助決策者獲取贏贏之規劃或設計，並能達到比傳統追求 Pareto 最適解或 De Novo 的理想解還要更好 (Changeable spaces programming can help decision-makers reach a win-win for planning/designing and achieve the desired point (aspiration level), which is better than pursuing the Pareto optimal solutions or ideal point)。

A. Two New Books

2011
Tzeng, G.H., and Huang, J.J. (2011). **Multiple Attribute Decision Making: Methods and Applications**, CRC Press, Taylor & Francis Group, Chapman & Hall Book.

2013
Tzeng, G.H., and Huang, J.J. (2013). **Fuzzy Multiple Objective Decision Making**, CRC Press, Taylor & Francis Group, Chapman & Hall Book.

B. Referred Papers (3 years: 2012, 2013, 2014)

2015
Betty Chang, Chin Kuo, Chih-Hung Wu, **Gwo-Hshiung Tzeng** (2015). Using fuzzy analytic network process to assess the risks in enterprise resource planning system implementation, *Applied Soft Computing*, 28 (2015) 196–207 (SCI, **IF: 2.679**, **5-Year Impact Factor: 2.970**).

Liou, James J.H.; Tamosaitiene, Jolanta; Zavadskas, Edmundas; **Tzeng, Gwo-Hshiung** (2015). A new hybrid COPRAS-G MADM model for improving and selecting suppliers in green supply chain management, *International Journal of Production Research*, Acceptance of revised paper ID TPRS-2014-IJPR-1730.R1. (**SCI/SSCI**, **2013 Impact Factor: 1.323**)

C.W. Tsui, **G.H. Tzeng**, U.P. Wen (2015). A hybrid MCDM approach for improving the performance of green suppliers in the TFT-LCD industry, International Journal of Production Research, 1-19, in press. **DOI:** 10.1080/00207543.2014.935829 (**SCI/SSCI**, **2013 Impact Factor: 1.323**)

Kao-Yi Shen, and **Gwo-Hshiung Tzeng** (**2015**). Fuzzy Inference Enhanced VC-DRSA Model for Technical Analysis: Investment Decision Aid, **International Journal of Fuzzy Systems** (iFUZZY 2014 special session issue), **Accepted**, December 13, 2014 (**SCI**, **2013 Impact factor: 1.51**, **5-year impact: 1.19).**

Shu-Kung Hu, **Gwo-Hshiung Tzeng**, Ming-Tsang Lu (**2015**). **I**mproving mobile commerce adoption using a new hybrid fuzzy MADM model, **International Journal of Fuzzy Systems** (iFUZZY 2014 special session issue), **Accepted**, December 13, 2014 (**SCI**, **2013 Impact factor: 1.51**, **5-year impact: 1.19).**

2014
Kao-Yi Shen and **Gwo-Hshiung Tzeng** (**Corresponding author**) (**2014**). Combining DRSA decision-rules with FCA-based DANP evaluation for financial performance improvements, *Technological and Economic Development of Economy*, **Accepted,** Nov. 15, 2014 (SSCI, **IF: 5.605, 2011; IF: 3.235, 2012; IF: 2.818, 2013).**

Shu-Kung Hu, Ming-Tsang Lu, **Gwo-Hshiung Tzeng** (**Corresponding author**) (**2014**) Exploring smart phone improvements based on a hybrid MCDM model, *Expert Systems With Applications*, *Volume 41, Issue 9*, *July 2014*, *Pages 4401-4413* (**SCI**, **IF: 1.854**, 2.339 (5-years, **2012**)).

Chih-Hung Wu*, Yi-Lin Tzeng, Bor-Chen Kuo, **Gwo-Hshiung Tzeng** (2014), **Affective Computing Techniques for Developing a Human Affective Norm Recognition System for U-learning Systems**, *International Journal of Mobile Learning and Organisation* (IJMLO), **8(1): 50-66.**

Jih-Jeng Huang, Gwo-Hshiung Tzeng (**2014**), New thinking of multi-objective programming with changeable spaces - In search of excellence, *Technological and Economic Development of Economy*, 20(2): 242–261 (**SSCI, IF: 5.605, 2011; IF: 3.235, 2012).**

Kao-Yi Shen, Min-Ren Yan, and **Gwo-Hshiung Tzeng** (**Corresponding author**) (**2014), Combining VIKOR-DANP model for glamor stock selection and stock performance improvement**, *Knowledge-Based Systems*, *Volume 58, March 2014*, *Pages 86-97* (**SCI**, **IF: 4.104**, 3.371 (5-years, **2012**).

James J.H. Liou, Yen-Ching Chuang, **Gwo-Hshiung Tzeng** (**Corresponding author**) (**2014) A fuzzy integral-based**

[model for supplier evaluation and improvement](), *Information Sciences*, [Volume 266](), 10 May 2014, Pages 199–217 (**SCI**, Impact factor: **3.643**, 5-Year Impact Factor: **3.676, 2012; SNIP: 3.425, 2013**).

Yu-Chien Ko, Hamido Fujita, Gwo-Hshiung Tzeng (**2014**), [A simple utility function with the rules-verified weights for analyzing the top competitiveness of WCY 2012](), *Knowledge-Based Systems*, *Volume 58*, *March 2014*, *Pages 58-65* (**SCI**, IF: **4.104**, 3.371 (5-years, 2012).

Wan-Yu Chiu, **Gwo-Hshiung Tzeng**, Han-Lin Li (**2014**). Developing e-store marketing strategies to satisfy customers' needs using a new hybrid grey relational model, *International Journal of Information Technology & Decision Making*, Vol. 13, No. 2 (2014) 231–261 (**SCI**, **2013 Impact Factor: 1.890**).

Fu-Kwun Wang, Chen-Hsoung Hsu, and **Gwo-Hshiung Tzeng** (2014). Applying a Hybrid MCDM Model for Six Sigma Project Selection, *Mathematical Problems in Engineering* (Accepted, **SCI,** impact factor: 1.383).

Fu-Hsiang Chen, Gwo-Hshiung Tzeng (2015). Probing Organization Performance Using a new Hybrid Dynamic MCDM Method Based on the Balanced Scorecard Approach, *Journal of Testing and Evaluation*, **43(4): 1-14** (**SSCI**, **IF: 0.384**, 2013).

Hu, Kuang-Hua; Chen, Fu; **Tzeng, Gwo-Hshiung**; Lee, Jinn-De (2015). Improving Corporate Governance Effects on an Enterprise Crisis Based on a New Hybrid DEMATEL with the MADM Model, *Journal of Testing and Evaluation* (**Accepted Forthcoming, SSCI**, **IF: 0.384**, 2013).

Kao-Yi Shen, and **Gwo-Hshiung Tzeng** (**2014**). DRSA-based Neuro-Fuzzy Inference Systems for the Financial Performance Prediction of Commercial Bank, *International Journal of Fuzzy Systems*, **16(2), 173-183** (**SCI, IF: 1.506, 2012**).

Ming-Tsang Lu, **Gwo-Hshiung Tzeng**, Hilary Cheng, Chih-Cheng Hsu (**2014**). Exploring Mobile Banking Services for User Behavior in Intention Adoption: Using New Hybrid MADM Model, *Service Business* (Accepted, **SSCI**, **IF: 0.878, 2013**). DOI: 10.1007/s11628-014-0239-9

Ming-Tsang Lu, **Gwo-Hshiung Tzeng**, Shu-Kung Hu (2014). **Evaluating the implementation of business-to-business m-commerce by SMEs based on a new hybrid MADM model, Management Decision** (Accepted, **SSCI**, **IF:** 3.787**, 2012**).

Kuang-Hua Hu, Fu-Hsiang Chen, **Gwo-Hshiung Tzeng,** Jinn-De Lee (2014). Improving Corporate Governance Effects on an Enterprise Crisis Based on a New Hybrid DEMATEL with the MADM Model, **Journal of Testing and Evaluation** (Accepted, **SSCI**, IF: 0.384, 2013).

Kao-Yi Shen and **Gwo-Hshiung Tzeng** (2014). A decision rule-based soft computing model for diagnosing financial performance-improvement of commercial banks, **Soft Computing, Accepted Forthcoming (SCI, 2012 Impact Factor; 1.124**). DOI: 10.1007/s00500-014-1413-7

Andy, L., Lee, R.Y., and **Tzeng, G.H.** (2014). Characteristic of professional SCUBA dive guide. **Tourism in Marine Environments, 10(1/2), 85-100.**

2013

Yu-Chien Ko, Hamido Fujita, **Gwo-Hshiung Tzeng** (**Corresponding author**) **(2013)**, [An extended fuzzy measure on competitiveness correlation based on WCY 2011](), *Knowledge-Based Systems*, *Volume 37, January 2013, Pages 86-93* (SCI, IF: **4.104**, 3.371 (5-years, 2012).

Wan-Yu Chiu, **Gwo-Hshiung Tzeng** (**Corresponding author**), Han-Lin Li (**2013**), [A new hybrid MCDM model combining DANP with VIKOR to improve e-store business](), *Knowledge-Based Systems*, *Volume 37, January 2013, Pages 48-61* (**SCI, IF: 4.104**, 3.371 (5-years, 2012)).

Jen-Wei Cheng, Wei-La Chiu, **Gwo-Hshiung Tzeng** (**Corresponding author**) (2013). [Do impression management tactics and/or supervisor–subordinate guanxi matter?]() *Knowledge-Based Systems*, *Volume 40, March 2013, Pages 123-133* (SCI, IF: **4.104**, 3.371 (5-years, 2012)).

Chui-Hua Liu, **Gwo-Hshiung Tzeng**, Ming-Huei Lee, Po-Yen Lee (2013). [Improving metro–airport connection service for tourism development: Using hybrid MCDM models](), *Tourism Management Perspectives*, *Volume 6, April 2013,*

Pages 95-107.

Kua-Hsin Peng, Gwo-Hshiung Tzeng (**Corresponding author**) (**2013**), A hybrid dynamic MADM model for problems-improvement in economics and business, ***Technological and Economic Development of Economy***, **Volume 19(4): 638–660** (SSCI, **IF: 5.605**, 2011; **IF: 3.235**, 2012**).**

Hsuan-Shih Lee, Gwo-Hshiung Tzeng, Weichung Yeih, Yu-Jie Wang, Shing-Chih Yang (2013). [Revised DEMATEL: Resolving the Infeasibility of DEMATEL](#), ***Applied Mathematical Modelling***, *Volume 37, Issues 10–11, 1 June 2013, Pages 6746-6757* (SCI, **IF: 1.706**, 1.674 (5-years, 2012).

Liu, C.H., Tzeng , G.H. **(Corresponding author)**, Lee, M.H. (2013). Strategies for improving cruise product sales in the travel agency- using hybrid MCDM models, The Service Industry Journal, [Volume 33](#), [Issue 5](#), pages 542-563. **(2010 Impact Factor: 1.071)**. **DOI:**10.1080/02642069.2011.614342

Yu-Chien Ko, Hamido Fujita, Gwo-Hshiung Tzeng (**Corresponding author**) **(2013),** A fuzzy integral fusion approach in analyzing competitiveness patterns from WCY2010, ***Knowledge-Based Systems***, *Volume 49, September 2013, Pages 1-9* (SCI, **IF: 4.104**, 3.371 (5-years, 2012)).

Ming-Tsang Lu, Shi-Woei Lin, Gwo-Hshiung Tzeng (**Corresponding author**) **(2013),** Improving RFID adoption in Taiwan's healthcare industry based on a DEMATEL technique with a hybrid MCDM model, ***Decision Support Systems***,*Volume 56, December 2013, Pages 259-269* (Impact factor: **2.201**, 5-Year Impact Factor: **3.037**).

Toshimasa Ozaki, Kanna Miwa, Akihiro Itoh (Nagoya Gakuin University), Shin Sugiura, Eizo Kinoshita (Meijo University), and Gwo-Hshiung Tzeng (Kainan University) (2013). Dissolution of Dilemma by Newly Defining Criteria Matrix in ANP, **Journal of the Operations Research Society of Japan**, Vol. 56, No. 2, June 2013, pp. 93–110**.**

Ming-Tsang Lu, **Gwo-Hshiung Tzeng (Corresponding author)**, Ling-Lang Tang (2013). Environmental Strategic Orientations for Improving Green Innovation Performance in Fuzzy Environment - Using New Fuzzy Hybrid MCDM Model. **International Journal of Fuzzy Systems,** ***Vol. 15, No. 3, September 2013,*** **pp.297-316. SCI, IF: 1.506, 2012).**

Chih-Wen Ting, Jyun-Wei Huang, Ding-Shan Wang, **Gwo-Hshiung Tzeng** (2013). [To identify or not to identify: A weighted multidimensional scaling in identifying the similarities of e-shopping stores](#), African Journal of Business Management, Volume 7, Issue 22, PP. 2206-2218.

2012

James J.H. Liou, Gwo-Hshiung Tzeng (**Corresponding author**) (**2012**), Comments on "Multiple criteria decision making (MCDM) methods in economics: An overview", ***Technological and Economic Development of Economy***, **18(4)**, 672-695 **(SSCI, IF: 5.605, 2011; IF: 3.235, 2012).**

Chui-Hua Liu, **Gwo-Hshiung Tzeng** (Corresponding author), Ming-Huei Lee (2012), Improving tourism policy implementation - the use of hybrid MCDM models, **Tourism Management,** Volume **33**, Issue 2, Pages 239-488 (April 2012) **(SSCI, IF: 2.620, 3.415** (5-years), 2010)

Yung-Lan Wang, **Gwo-Hshiung Tzeng (Corresponding author)** (2012), Brand Marketing for Creating Brand Value Based on a MCDM Model Combining DEMATEL with ANP and VIKOR Methods, **Expert Systems with Applications,** *Volume 39, Issue 5, April 2012, Pages 5600-5615* (**SCI**, **IF: 2.908, 3.162** (5-years), 2009).

Ozaki, Toshimasa; Lo, Mei-Chen; Kinoshita, Eizo; Tzeng, Gwo-Hshiung (2012), Decision-making for the Best Selection of Suppliers by Using Minor ANP, Journal of Intelligent Manufacturing (JIM), December 2012, Volume 23, [Issue 6](#), pp 2171-2178. (**SCI, Impact Factor: 0.938, 2011)**.

Yu-Ping Ou Yang, How-Ming Shie**h, Gwo-Hshiung Tzeng** (2012), [A VIKOR technique based on DEMATEL and ANP for information security risk control assessment](#). *Information Sciences*, *Volume 232, 20 May 2013, Pages 482-500* (**SCI, IF= 3.643, 3.676** (5-years)**, 2012)**

Sheng-Kai Fang, Jhieh-Yu Shyng, Wen-Shiung Lee, Gwo-Hshiung Tzeng (**Corresponding author**) **(2012).** Combined Data Mining techniques for exploring the preference of customers between financial companies and agents based on TCA, **Knowledge-Based Systems**, 27, 137-151. (**SCI, IF: 4.104**, 3.371 (5-years, 2012)).

Liou, Jame J.H., **Tzeng, G.H**. **(**Corresponding author), Hsu, C.C., Yeh, W.C. (2012). Reply to "comment on using a modified grey relation method for improving airline service quality, **Tourism Management**, **33(3)**, 719-720. (**SSCI**, **IF: 2.571, 3.552** (5-years), 2012).

Hiroaki Ishii, Shogo Shiode, Hark Hwang, Gwo-Hshiung Tzeng, Hirosato Seki (2012), [Preface 'Soft computing for management systems'](#)
Computers & Industrial Engineering, Volume 62, Issue 3, April 2012, Page 687 (SCI, **IF: 1.516, 2.028** (5-years), 2012).

Don Jyh-Fu Jeng, Gwo-Hshiung Tzeng (2012), [Social Influence on the Use of Clinical Decision Support Systems: Revisiting the Unified Theory of Acceptance and Use of Technology by the Fuzzy DEMATEL Technique](#), ***Computers & Industrial Engineering***, *Volume 62, Issue 3, April 2012, Pages 819-828*. (**SCI, IF: 1.516, 2.028** (5-years), 2012).

Meng-Jong Kuan, Gwo-Hshiung Tzeng and Chia-Chun Hsiang **(2012),** Exploring the Quality Assessment System for

New Product Development Process by combining DANP with MCDM Model, **International Journal of Innovative Computing, Information and Control (special issue), Vol. 8, No. 8, 5745-5762 (**SCI**, Impact Factor=2.932, Rank=14/102 Category: Computer Science, Artificial Intelligence, 2011).**

Chi-Yo Huang, **Gwo-Hshiung Tzeng,** Yun-Ting Chen and Hueiling Chen **(2012)**, Performance Evaluation of Leading Fabless Integrated Circuit Design Houses by Using a Multiple Objective Programming Based Data Envelopment Analysis Approach, **International Journal of Innovative Computing Information and Control, Vol. 8, No. 8, 5899-5916 (**SCI**, Impact Factor=2.932, Rank=14/102 Category: Computer Science, Artificial Intelligence, 2011).**

Hsu, C.H., Wang, F.K. and **Tzeng, G.H.,** 2012. The best vendor selection for conducting the recycled material based on a hybrid MCDM model combining DANP with VIKOR. **Resources, Conservation & Recycling, Vol. 66, pp. 95-111**. **(SCI**, **IF: 2.319, 2.889** (5-years), 2010).

Ying-Hsun Hung, Tsong-Liang Huang, Jing-Chzi Hsieh, Hung-Jia Tsuei, Chun-Chuan Cheng, **Gwo-Hshiung Tzeng** (2012), [Online reputation management for improving marketing by using a hybrid MCDM model](), *Knowledge-Based Systems*, *Volume 35*, *November 2012*, *Pages 87-93* (**SCI**, **IF: 4.104**, 3.371 (5-years, 2012)).

Yung-Chi Shen, Grace T.R. Lin, **Gwo-Hshiung Tzeng** (2012), "A novel multi-criteria decision-making combining Decision Making Trial and Evaluation Laboratory technique for technology evaluation", Foresight, Vol. 14 Iss: 2, pp.139 – 153.

Chi-Yo Huang, Po-Yen Wang, and Gwo-Hshiung Tzeng (2012), Evaluating Top Information Technology Firms in Standard and Poor   500 index by Using a Multiple Objective Programming Based Data Envelopment Analysis, Lecture Notes in Computer Science, IEA/AIE 2012, LNAI 7345, pp. 720—730, Springer, Heidelberg. (EI)

Yu-Chien Ko, Hamido Fujita, and Gwo-Hshiung Tzeng (2012), Using DRSA and Fuzzy Measure to Enlighten Policy Making for Enhancing National Competitiveness by WCY 2011, in H. Jiang et al. (Eds.): Lecture Notes in Science, IEA/AIE 2012, LNAI 7345, pp. 709—719, Springer, Heidelberg (2012). (EI)

Chi-Yo Huang, Ming-Jenn Wu, Yu-Wei Liu, and Gwo-Hshiung Tzeng (2012), **Using the DEMATEL Based Network Process and Structural Equation Modeling Methods for Deriving Factors Influencing the Acceptance of Smart Phone Operation Systems,** in H. Jiang et al. (Eds.): Lecture Notes in Computer Science, IEA/AIE 2012, LNAI 7345, pp. 731—741, Springer, Heidelberg (2012). (EI)

Shu-kung Hu, Yen-Ching Chuang, Ya-Fan Yeh, **Gwo-Hshiung Tzeng (2012),** Hybrid MADM with Fuzzy Integral for Exploring the Smart Phone Improvement in M-Generation, **International Journal of Fuzzy Systems, 14(2),** 204-214. **(SCI, IF= 1.16, 2010; EI).**

Gwo-Hshiung Tzeng (Corresponding author**),** Chi-Yo Huang (2012), Combined DEMATEL technique with hybrid MCDM methods for creating the aspired intelligent global manufacturing & logistics systems, **Annals of Operations Research: Volume 197, Issue 1 (2012), Page 159-190** (SCI, **IF: 1.029**, 2012)

Krzysztof Targiel, Tadeusz Trzaskalik, Małgorzata Trzaskalik-Wyrwa, **Gwo Hsiung Tzeng** (2012): DEMATEL, ANP and VIKOR Based Hybrid Method Application to Restoration of Historical Organs, in Tadeusz Trzaskalik and Tomasz Wachowicz (Eds.), Multiple Criteria Decision making '12, Scientific Publications, the University of Economics in Katowice.

[Chui-Hua Liu](), **[Gwo-Hshiung Tzeng]()**, [Ming-Huei Lee](), [Hao-Lin Tseng](), [Po-Yan Lee]() (2012), Using a Hybrid MCDM Model Combining Fuzzy DEMATEL Technique to Examine the Job Stress of Coach Driver, [Intelligent Decision Technologies]() ([Smart Innovation, Systems and Technologies]()) Volume 16, 2012, pp 149-156