# Review

# The exploration of internet marketing strategy by search engine optimization: A critical review and comparison

Chen-Yuan Chen<sup>1,2,3</sup>, Bih-Yaw Shih<sup>1</sup>\*, Zih-Siang Chen<sup>4</sup> and Tsung-Hao Chen<sup>5</sup>

<sup>1</sup>Department and Graduate School of Computer Science, National Pingtung University of Education No. 4-18, Ming Shen Rd., Pingtung 90003, Taiwan.

<sup>2</sup>Doctoral Program in Management, National Kaohsiung First University of Science and Technology, Kaohsiung 811, Taiwan.

Global Earth Observation and Data Analysis Center, National Cheng Kung University, Tainan, Taiwan 701 R. O. C.
Department of Computer Science and Engineering National Sun Yat-sen University, Kaohsiung, 80424, Taiwan.
Department of Business Administration, Shu-Te University, Yen Chau, Kaohsiung, Taiwan 82445, Taiwan.

Accepted 20 December, 2010

With the rise of internet, internet marketing has become an important issue, for increasing internet business competitiveness. Recently, SEO (search engine optimization) techniques have become one important technique for improving website ranking. Meanwhile, social networking sites are getting more and more popular. Using keywords effectively can secure a higher ranking website, and increase site traffic and popularity. In this paper, knowing how to implement the web site SEO actions effectively and use the power of internet community to enhance the site's visibility and exposure can help the internet business marketing. Using the SEO, supported by social networking sites, can contribute to the overall site traffic and improve interaction with customers.

**Key words:** Internet marketing, search engine optimization, social networking sites, search engine, searching keywords.

#### INTRODUCTION

There has been increasing interest in computer-aided techniques and their applications in recent years (Ambe, 2010; Ding, 2010; Amini and Vahdani, 2008; Chang et al., 2008; Omurlu et al., 2008; Trabia et al., 2008; Tu et al., 2008; Yildirim et al., 2009; Zhao et al., 2009; Hsiao et al., 2005a, 2005b, 2005c, 2005d, 2005e; Chen et al., 2005a, 2005b; Hsieh et al., 2006; Chen et al., 2006a, 2006b, 2006c; Chen, 2006; Chen et al., 2007a, 2007b, 2007c, 2007d, 2007e, 2007f; Tsai et al., 2008; Yang et al., 2008a, 2008b; Chen et al., 2008a, 2008b, 2008c, 2008d, 2008e: Yeh et al., 2008; Chen, 2009a, 2009b; Chen et al., 2009a, 2009b, 2009c, 2009d, 2009e, 2009f; Lin et al., 2009a, 2009b, 2010c; Lin and Shih, 2010; Lin and Chen, 2010; Chen and Chen, 2010a, 2010b; Chen, 2010a, 2010b; Chen et al., 2010a, 2010b, 2010c, 2010d, 2010e, 2010f, 2010g, 2010h; Lee et al., 2010a, 2010b; Chiang et

al., 2010; Shih et al., 2010a, 2010b, 2010c, 2010d; Chen et al., 2011a, 2011b; Shih et al., 2011; Chen and Huang, 2011; Chen, 2011a, 2011b). Here, some introductions will be made about the advantages and disadvantages of search engine optimization and social networking sites. Also, the situation of current internet marketing and the applications of search engine marketing will be described.

#### INTERNET MARKETING

Internet marketing refers to the network that is used to carry out site or brand marketing actions. It can make use of the following ways: search engine marketing (SEM), search engine optimization (SEO), banner ads on specific websites, e-mail marketing and Web 2.0 strategies. Also, it is commonly used to study consumer behavior analysis, brand positioning, etc. Through good marketing, it can increase not only sales and traffic, but also consumer

<sup>\*</sup>Corresponding author. E-mail: byshih@mail.npue.edu.tw

interaction, in order to get good communication with consumers (John et al., 2007).

With the development in the network, internet marketing has become increasingly important, and as an alternative to traditional marketing, but there are few articles with strategic topic to analyze and guide the companies or web site on how to conduct marketing with the internet (Song and Zahedi, 2006). This can be seen in the comparison with the two types of traditional and internet marketing channels. Through this article, we did not only rely on research, but also on internet marketing, and it is noted that traditional marketing can get a balance between the two channels. Ren et al. (2010) obtain a series of conditions in which small sites can obtain competitive advantages by using the market segmentation strategy, (C) 2010, published by Elsevier. They present a model to describe the competitive dynamics of web sites, the WWW marker, and analyze the stability of the model (Ren et al., 2010).

Revere et al. (2010) publish an exploratory study that investigates how hospitals use the internet as a tool to market the quality of their services, because the increasingly competitive environment is having a strong bearing on the strategic marketing practices of hospitals. The internet is a fairly new marketing tool, and it has the potential to dramatically influence healthcare consumers (Revere and Robinson, 2010). In summary, internet marketing has been widely applied to various fields on how to use the internet to conduct marketing, but the meaning of traditional marketing is still an important topic.

## **SEO (SEARCH ENGINE OPTIMIZATION)**

It is a kind of method that uses data observation and marketing research to identify the most suitable "keyword" for the site, which is also called "keyword advertisement" (Malaga, 2007), but which implies a lot of knowledge, such as how to choose keywords, how to use keywords to make our website to be quickly found by search engines such as Google and Yahoo, and enhance the website's ranking in search engines. Through this way, the study's website variable was not made to be highly visible only, but also have the opportunity to improve sales of its products. So how to find out the best keywords, through the survey and summaries results, and get good ranking of those keywords are both important subjects.

In SEO (search engine optimization), there are many skills that we need to pay attention to, because they are used by the search engine manager as an offense and defense mechanism. If everybody should know how to increase access to high-ranking, the probability that users who really want to find what they wanted would be reduced, would imply a lot of spam. Therefore, search engine manager will be timing in updating their technology, and many of the rules would be set out to punish those

who intentionally deceive the search engines. After all, making sure that users could find the most useful information is their highest law (Lee, 2010; Lee, Chen and Wu, 2010; Lee and Lin, 2010).. Therefore, how to stand out in the search engine "honestly" would be inevitable (Kent, 2008). Kisiel (2010) brought up an article which focused on the significance of search engine optimization (SEO). It is stated in the article that to increase the volume of traffic to individual company sites from search engines, dealerships should use this process (Kisiel, 2010).

Summarily, SEO skill is a developed method that can be used in search engines. So, if one wants his/her website to get a good ranking, he/she should pay attention to SEO. On the other hand, it also means that one should always pay attention to search engines, because if one loses some updates from the search engines, their ranking might drop down.

## WHAT IS SEO AND PPC (PAY-PER-CLICK)?

Aspects of search engine marketing in general are known as SEM (search engine marketing) (Beer, 2008), which generally includes both SEO and PPC. PPC, also known as a non-natural website ranking, is what we paid a common type of keyword advertisement to, and the locations of their occurrence are right, above and left at the site. Quite to the contrary, SEO is known as a natural website ranking. PPC, as the name suggests, is a marketing approach that one have to pay advertising costs to after the consumer clicks.

According to different keywords, there will be different spreads, and the more popular keyword cost per click would be higher. Both of them are compared as shown in Table 1. After comparing SEO and PPC, we decided to use SEO as our main skill, because the use of SEO can cut down the cost, even though it might take a long time to get a good rank. However, after a good rank is obtained on the search engine, it would be affected and could work for longer times. So, in this paper, we chose SEO as the suitable skill.

#### **SEO APPLICATIONS**

SEO (search engine optimization) can be used in many different ways. One of those ways is how a business, offering technical communication services, used search engine optimization techniques to attract prospective clients to their business web sites. It is through the survey, by 240 principals of these businesses, that their websites were analyzed in order to find out the prospective clients and, in a way, increase traffic (Killoran, 2010).

The other is used for brand positioning (Dou et al., 2010), with a good "page ranking" or good ranking in Google or Yahoo, which might create a good impression

Table 1. A comparison of SEO and PPC.

	SEO	PPC
Cost	SEO, on the other hand could be regarded as a free search engine marketing, so the cost will be lower.	PPC, have to pay per click cost of the keyword, the cost will be higher.
Stay of rankings	Use SEO rankings, in general use of formal behavior and without of foul under, the resulting ranking is more permanent, and will not easily change.	In advance, using the PPC's website the exposure is relatively high, but after not using the attached fee still return to the nature sort.
Risk of invalid clicks	Do not have to bear the risk of invalid clicks.	Have to bear the risk of invalid clicks.
Time	Longer	Shorter
Uncertainty of ranking	Because of the popularity of each keyword and the first few pages of the website PR value is different, so to ensure that each keyword appear in the high rankings, will be more uncertainty factors.	Although each keyword's cost are different, but after paying, can be seen in the keyword search, belong to the unnatural order and the relatively high certainty.
Be diversionary	Because search engine algorithms are not static, so it is easier to contain by the search engine algorithms.	Paid to obtain the ranking is not easy to contain by the search engine algorithms

about the website or brand on consumers. Also, SEO provides opportunities for accounting firms (Eric, 2008), in that they can use search engine to find out a lot of related information that can be used for their cases. Jöran et al. (2010) propose an article that introduces and discusses the concept of academic search engine optimization (ASEO). It provided ways on how to optimize scholarly literature for academic search engines in general and for Google Scholar in particular. In addition, it briefly discusses the risk of researchers illegitimately "over-optimizing" their articles (Jöran et al., 2010).

Also, some articles that propose the SEO methods which stay within the guidelines laid out by the major search engines are generally termed "white hat", while those that violate the guidelines are called "black hat". However, black hat may be punished by search engine, and thus, will increase competition in the white hat (Malaga, 2010).

#### SOCIAL NETWORKING SITES (FACEBOOK)

According to the Institute for Information Industry and e-Marketer, "facebook" jumped to the first place in the top ten ranking of the most search sites, while the others remained stagnant, nor was the ninth place promoted to the third. Moreover, in the years 2006 and 2007, the number of users have had an astonishing 118% growth, so that "Facebook" has become rather more than the

current use of a community website (Dumon, 2008), and many of the enterprises (for example: Nike, Acer and Amazon) have all set up their fan page to communicate and interact with their consumers. Thus, achieving the promotion and marketing of the company's product, on how to establish and implement products or the brand's fan page, is also a very important issue (Boyd and Ellison, 2007).

The rise of micro-blog is also one of the current marketing channels that should not be underestimated. According to the Association of National Advertisers' statistics in August 2009, there are 66% of U.S. companies that use micro-blogging (Facebook, Twitter, YouTube and LinkedIn) as a marketing tool; and the survey in 2009 by the Institute for information industry indicated that around 22% use text blog, 20.3% use audio and video blogs and 12% use micro-blogging sites. It is estimated that 174 million people use micro-blogging, and about 490 million people use it when the blogs increase. Hence, companies use micro-blog so that consumers could understand their products, and thus set a good brand image to promote their brand or product reliability (Boyd and Ellison, 2007).

### **CONCLUSIONS**

In the course of the experiment, the marketing strategy in this experiment is very desirable, and it also complements the real online shopping stores that are said to be the results of learning and production in combination. However, there is a promotion of not only marketing, but also marketing cost. So, how to suit the current issues and news is the direction that will be researched in the future. Above the enterprise management, the emphasis is on the concept of sustainability. Nonetheless, how to make the best of the goods that can be obtained by the study's website is what we need to work on harder.

#### **ACKNOWLEDGEMENT**

The authors are appreciative of the financial support in the form of research grants to Dr. Chen-Yuan Chen from the National Science Council, Republic of China under Grant Nos. NSC 98-2221-E-153-004, NSC 99-2628-E-153-001 and NSC 100-2628-E-153-001. The authors are also most grateful for the constructive suggestions of three anonymous reviewers all of which has led to the making of several corrections and suggestions that have greatly aided us in the presentation of this paper. Meanwhile, the authors would like to thank Mr. Cheng-Hsuan Tsai and Chen-Ping Chiu, of the Department and Graduate School of Computer Science at the National Pingtung University of Education for the help with the literature corrections.

#### **REFERENCES**

- Ambe IM, Weiss JAB (2010)."Strategic supply chain framework for the automotive industry". Afr. J. Bus. Manage., 4(10): 2110-2120.
- Amini F, Vahdani R (2008). "Fuzzy optimal control of uncertain dynamic characteristics in tall buildings subjected to seismic excitation." J. Vib. Control, 14: 1843–1867.
- Beer D (2008). Researching a confessional society. Int. J. Market Res., 50(5): 619–629.
- Boyd DM, Ellison NB (2007). Social Network Sites: Definition, History, and Scholarship. J. Comput. Mediated Comm., 13(1): 11.
- Cegarra J, Hoc JM (2008). The Role of Algorithm and Result Comprehensibility of Automated Scheduling on Complacency. Hum. Factors Ergonom. Manufact., 18(6): 603-620.
- Chang CY, Hsu KC, Chiang KH, Huang GE (2008). "Modified fuzzy variable structure control method to the crane system with control deadzone problem." J. Vib. Control, 14: 953–969.
- Chen CW (2006). "Stability Conditions of Fuzzy Systems and Its Application to Structural and Mechanical Systems." Adv. Eng. Softw., 37: 624-629.
- Chen CW (2009a). "Modeling and control for nonlinear structural systems via a NN-based approach." Expert Syst. Appl., 36: 4765-4772.
- Chen CW (2009b). "The stability of an oceanic structure with T-S fuzzy models." Math. Comput. Simulat., 80: 402-426.
- Chen CW (2010a). Modeling and fuzzy PDC control and its application to an oscillatory TLP structure. Math. Probl. Eng. An Open Access J., DOI: 10.1155/2010/120403.
- Chen CW (2010b). "Application of fuzzy-model-based control to nonlinear structural systems with time delay: an LMI method." J. Vib. Control, 16: 1651-1672.
- Chen CW, Chen CY, Yang HC, Chen TH (2007a). Analysis of Experimental Data on Internal Waves with Statistical Method. Engineering Computations—Int. J. Comput-Aid. Eng. Softw., 24: 116–150.

- Chen CW, Chen PC (2010b). "GA-based adaptive neural network controllers for nonlinear systems." Int. J. Innov. Comput. Inf. Control, 6: 1793-1803.
- Chen CW, Chen PC, Chiang WL (2010). Stabilization of adaptive neural network controllers for nonlinear structural systems using a singular perturbation approach. J. Vib. Control DOI: 10.1177/1077546309352827.
- Chen CW, Chiang WL, Hsiao FH (2005a). "Stability Analysis of T-S Fuzzy Models for Nonlinear Multiple Time-Delay Interconnected Systems." Math. Comput. Simulat., 66: 523-537.
- Chen CW, Chiang WL, Tsai CH (2006a). "Fuzzy Lyapunov Method for Stability Conditions of Nonlinear Systems." Int. J. Artif. Intell. Tools, 15: 163-171
- Chen CW, Lin CL, Tsai CH (2007c). A Novel Delay-Dependent Criterion for Time-Delay T-S Fuzzy Systems Using Fuzzy Lyapunov Method. Int. J. Artif. Intell. T., 16: 545–552.
- Chen CW, Morris H, Wang L, Lin JW (2009). Managing target the cash balance in construction firms using a fuzzy regression approach. Int. J. Uncertain. Fuzzy, 17: 667–684.
- Chen CW, Shen CW, Chen CY, Jeng MJ (2010c). "Stability analysis of an oceanic structure using the Lyapunov method." Eng. Comput., 27: 186-204
- Chen CW, Wang HL, Liu FR, Chen TH (2010f). "Application of project cash management and control for infrastructure," J. Mar. Sci. Technol., 18: 644-651.
- Chen CW, Wang Morris HL, Lin JW (2009e). "Managing target the cash balance in construction firms using a fuzzy regression approach," Int. J. Uncertainty Fuzz. Knowl. Based Syst., 17: 667-684.
- Chen CW, Yang Peter HC, Chen CY, Chang Alex KH, Chen TH (2008b). "Evaluation of inference adequacy in cumulative logistic regression models: an empirical validation of ISW-ridge relationships," China Ocean Eng., 22: 43-56.
- Chen CW, Yeh K, Chiang WL, Chen CY, Wu DJ (2007f). Modeling, control and stability analysis for structural systems using Takagi-Sugeno Fuzzy Model. J. Vib. Control, 13: 1519–1534.
- Chen CW, Yeh K, Liu FR (2009d). "Adaptive fuzzy sliding mode control for seismically excited bridges with lead rubber bearing isolation". Int. J. Uncertainty Fuzz. Knowl. Based Syst., 17: 705-727.
- Chen CY (2010c). "Using discriminant analysis to determine the breaking criterion for an ISW propagating over a ridge." Environ. Fluid Mech., 10: 577-586,.
- Chen CY (2011a). "A critical review of internal wave dynamics. Part 2 Laboratory experiments and theoretical physics." J. Vib. Control, DOI: 10.1177/1077546310397561.
- Chen CY (2011b). "A critical review of internal wave dynamics. Part 1 Remote sensing and *in-situ* observations." J. Vib. Control, DOI: 10.1177/1077546310395971.
- Chen CY, Chen CW, Tseng IF (2007e). "Localisd mixing due to an interfacial solitary wave breaking on seabed topography in different ridge heights." J. Offshore Mech. Arctic Eng., 129: 245-250.
- Chen CY, Hsu John RC, Chen CW (2007). "Wave propagation at the interface of a two-layer fluid system in the laboratory." J. Mar. Sci. Technol., 15: 8-16.
- Chen CY, Hsu John RC, Cheng MH, Chen CW (2008c). "Experiments on mixing and dissipation in internal solitary waves over two triangular obstacles." Environ. Fluid Mech., 8: 199-214.
- Chen CY, Hsu JRC, Chen CW, Cheng MH (2006b). "Numerical model of an internal solitary wave evolution on impermeable variable seabed in a stratified two-layer fluid system." China Ocean Eng., 20(1):61-72.
- Chen CY, Hsu RC, Chen CW (2005b). "Fuzzy Logic Derivation of Neural Network Models with Time Delays in Subsystems." Int. J. Artif. Intell. Tools, 14: 967-974.
- Chen CY, Huang PH (2011). "Review of an autonomous humanoid robot and its mechanical control." J. Vib. Control, DOI: 10.1177/1077546310395974.
- Chen CY, Lee WI, Kuo HM, Chen CW, Chen KH (2010d). "The study of a forecasting sales model for fresh food." Expert Syst. Appl., 37: 7696-7702.
- Chen CY, Lin CL, Tseng IF, Chen CW (2007d). "Dynamic behavior of an internal solitary wave oscillating over variable bathymetry." Kuwait J. Sci. Eng., 34: 153-166.
- Chen CY, Lin JW, Lee WI, Chen CW (2010a). "Fuzzy control for an

- oceanic structure: A case study in time-delay TLP system." J. Vib. Control, 16: 147-160.
- Chen CY, Liu KC, Liu YW, Huang WC (2010h). "A case study of reinforced concrete short column under earthquake using experimental and theoretical investigations." Structural Eng. Mech., 36: 197-206.
- Chen CY, Shen CW, Chen CW, Liu KFR, Jeng MJ (2009a). "A Stability Criterion for Time-Delay Tension Leg Platform Systems Subjected to External Force." China Ocean Eng., 23: 49-57.
- Chen CY, Shih BY, Chou WC (2011a). "The development of autonomous low cost biped mobile surveillance robot by intelligent bricks," J. Vib. Control, DOI: 10.1177/1077546310371349.
- Chen CY, Shih BY, Chou WC (2011b). "The development of autonomous low cost biped mobile surveillance robot by intelligent bricks," J. Vib. Control, DOI: 10.1177/1077546310381101.
- Chen CY, Shyue SW, Chang CJ (2010g). "Association rule mining for evaluation of regional environments: Case study of Dapeng Bay, Taiwan." Int. J. Innov. Comput. Inf. Control, 6: 3425-3436.
- Chen CY, Tseng IF, Yang HC, Chen CW, Chen TH (2006c). "Profile Evolution and Energy Dissipation for Internal Soliton Transmitting over Different Submarine Ridges," China Ocean Eng., 20: 585-594.
- Chen CY, Yang HC, Chen CW, Chen TH (2008a). "Diagnosing and revising logistic regression models: effect on internal solitary wave propagation," Eng. Computations, 25: 121-139.
- Chen CY, Yang YF, Chen CW, Chen LT, Chen TH (2010e). "Linking the balanced scorecard (BSC) to business management performance: A preliminary concept of fit theory for navigation science and management." Int. J. Phys. Sci., 5, 1296-1305.
- Chen LT, Chen CW, Chen CY (2010b). "Are educational background and gender moderator variables for leadership, satisfaction and organizational commitment?" Afr. J. Bus. Manage., 4: 248-261.
- Chen PC, Chen CW, Chiang WL (2008d). "GA-Based Fuzzy Sliding Mode Controller for Nonlinear Systems," Math. Probl. Eng.,- An Open Access Journal DOI: 10.1155/2008/325859.
- Chen PC, Chen CW, Chiang WL (2009b). "GA-based modified adaptive fuzzy sliding mode controller for nonlinear systems." Expert Syst. Appl., 36: 5872-5879.
- Chen PC, Chen CW, Chiang WL, Yeh K (2009f). "A novel stability condition and its application to GA-based fuzzy control for nonlinear systems with uncertainty." J. Mar. Sci. Technol., 17: 293-299
- Chen TH, Chen CW (2010). "Application of data mining to the spatial heterogeneity of foreclosed mortgages," Expert Syst. Appl., 37: 993-997
- Chen TH, Chen CY, Yang CH, Chen CW (2008e). "A Mathematical Tool for Inference in Logistic Regression with Small-Sized Data Sets - A Practical Application on ISW-Ridge Relationships," Math. Probl. Eng.-An Open Access Journal DOI: 10.1155/2008/186372.
- Chen TH, Yang HC, Chen CY, Chen CW (2009c). "Application of Logistic Regression Model: Propagation Effect on Internal Soliton," J. Chung Cheng Institute Technol., 37: 1-10.
- Chen CY, Hsu JRC, Chen CW (2007b). "Generation of internal solitary wave by gravity collapse." J. Mar. Sci. Technol., 15: 1-7.
- Chiang WL, Chiou DJ, Tang JP, Hsu WK, Liu TY (2010). "Detecting the sensitivity of structural damage based on the Hilbert-Huang transforms approach" Eng. Comput., 27: 799-818.
- Ding JF (2010). "Critical factors influencing customer value for global shipping carrier-based logistics service providers using Fuzzy AHP approach". Afr. J. Bus. Manage., 4(7): 1299-1307.
- Dou W, Lim KH, Su C, Zhou N, Cui N (2010). Brand Positioning Strategy Using Search Engine Marketing. MIS Quart., 34(2): 261-279. Dumon P (2008). Facebook Groter Dan MySpace. De Morgen 24: 25.
- Eric M (2008). Search Engine Optimization (SEO): A Clear Perspective on a Complicated Process. Cpa Practice Management Forum.
- Hsiao FH, Chen CW, Liang YW, Xu SD, Chiang WL (2005e). "T-S Fuzzy Controllers for Nonlinear Interconnected Systems with Multiple Time Delays, "IEEE Trans. Circuits & Systems-I:Regular Papers, 52: 1883-
- Hsiao FH, Chen CW, Wu YH, Chiang WL (2005a). "Fuzzy Controllers for Nonlinear Interconnected TMD Systems with External Force," J. Chin. Inst. Eng., 28: 175-181.
- Hsiao FH, Chiang WL, Chen CW (2005d). "Fuzzy Control for Nonlinear Systems via Neural-Network-Based Approach," Int. J. Computational

- Methods Eng. Sci. Mech., 6: 145-152.
- Hsiao FH, Chiang WL, Chen CW, Xu SD, Wu SL (2005c). "Application and Robustness Design of Fuzzy Controller for Resonant and Chaotic Systems with External Disturbance," Int. J. Uncertain. Fuzz. Knowledge-Based Syst., 13: 281-295.
- Hsiao FH, Hwang JD, Chen CW, Tsai ZR (2005b). "Robust Stabilization of Nonlinear Multiple Time-Delay Large-scale Systems via Decentralized Fuzzy Control," IEEE Trans. Fuzzy Syst., 13: 152- 163.
- Hsieh TY, Wang MHL, Chen CW (2006). "A New Viewpoint of S-Curve Regression Model and its Application to Construction Management." Int. J. Artif. Intell. Tools, 15: 131-142.
- John A, Schibrowsky JW, Peltier AN (2007). The state of internet marketing research: A review of the literature and future research directions. Eur. J. Market., 41(7/8): 722 – 733.
- Jöran B, Bela G, Erik W (2010). Academic Search Engine Optimization (ASEO): Optimizing Scholarly Literature for Google Scholar and Co. J. Scholarly Publishing. 41(2): 176-190.
- Kent P (2008). Search Engine Optimization For Dummies, 3rd Edition.
- Killoran JB (2010). Promoting the Business Web Sites of Technical Communication Companies, Consultants. and Independent Contractors. Tech. Commun., 57: 137-160.
- Killoran JB (2010). Writing for Robots: Search Engine Optimization of Technical Communication Business Web Sites. Tech. Commun., 57(2): 161-181.
- Kisiel R (2010). Dealers get on top of search engine results. Automotive News. 84(6408): 24-25.
- Lee WI (2010). The development of a qualitative dynamic attribute value model for healthcare institutes. Iran. J. Public Health, 39(4): 15-25.
- Lee WI, Chen CW, Chen TH, Chen CY (2010). "The relationship between consumer orientation, service value, medical care service quality and patient satisfaction: The case of a medical center in Southern Taiwan". Afr. J. Bus. Manage., 4 (4): 448-458.
- Lee WI, Chen CW, Chen TH, Chen CY (2010a). "The relationship between consumer orientation, service value, medical care service quality and patient satisfaction: The case of a medical center in Southern Taiwan," Afr. J. Bus. Manage., 4: 448-458.
- Lee WI, Chen CW, Wu CH (2010b). "Relationship between quality of medical treatment and customer satisfaction - a case study in dental clinic association." Int. J. Innov. Comput. Inf. Control, 6: 1805-1822.
- Lee WI, Lin CH (2011). Consumer Hierarchical Value Map Modeling in the Healthcare Service Industry. Afr. J. Bus. Manage., 5(3): 722-736.
- Lin CL, Wang JF, Chen CY, Chen CW, Yen CW (2009b). "Improving the generalization performance of RBF neural networks using a linear regression technique." Expert Syst. Appl., 36: 12049-12053. Lin KH, Shih LH (2010)." An optimization model of product line rollover:
- A case study of the notebook computer industry in Taiwan." Afr. J. Bus. Manage., 4(11): 2258-2268.
- Lin ML, Chen CW (2010). "Application of fuzzy models for the monitoring of ecologically sensitive ecosystems in a dynamic semiarid landscape from satellite imagery." Eng. Computation., 27: 5-19.
- Lin ML, Chen CW, Wang QB, Cao Y (2009a). "Fuzzy model-based assessment and monitoring of desertification using MODIS satellite imagery," Eng. Comput., 26: 745-760.
- Malaga RA (2007). The value of search engine optimization-An action research project at a new e-commerce site. Electronic Commerce in Organizations. 5(3): 68-82.
- Malaga RA (2010). Search Engine Optimization Black and White Hat Approaches. Adv. Comp., 78: 1-39.
- Omurlu VE, Engin SN, Yuksek I (2008). "Application of fuzzy PID control to cluster control of viaduct road vibration." J. Vib. Control, 14: 1201-1215.
- Ren YW, Yang DL, Diao XJ (2010). Market segmentation strategy in internet market. Physical-statistical Mechanics and Its Applications. 389(8): 1688-1698.
- Revere L, Robinson L (2010). How Healthcare Organizations Use the Shih BY, Chang CJ, Chen AW, Chen CY (2010c). "Enhanced MAC
- Channel Selection to Improve Performance of IEEE 802.15.4," Int. J. Innov. Comput. Inf. Control, 6: 5511-5526. Shih BY, Chen CY, Chou WC (2011). "Obstacle avoidance using a path
- correction method for autonomous control of a biped intelligent robot," J. Vib. Control, DOI: 10.1177/1077546310372004.
- Shih BY, Chen CY, Li CE (2010d). "The exploration of mobile mandarin

- learning system by the application of TRIZ theory," Comput. Appl. Eng. Educ., DOI: 10.1002/cae.20478.
- Shih BY, Chen CY, Shih CH, Tseng JY (2010a). "The development of enhancing mechanisms for improving the performance of IEEE 802.15.4." Int. J. Phys. Sci., 5: 884-897.
- Shih CH, Yamamura S, Chen CY (2010b). "Analysis of control structure for turning maneuvers," Math. Probl. Eng., DOI:10.1155/2010/481438.
- Song J, Zahedi FM (2006). Internet market strategies: Antecedents and implications. Inf. Manage., 43(2): 222-238.
- Trabia MB, Renno JM, Moustafa KAF (2008). "Generalized design of an anti-swing fuzzy logic controller for an overhead crane with hoist." J. Vib. Control, 14: 319–346.
- Tsai CH, Chen CW, Chiang WL, Lin ML (2008). "Application of Geographic Information System to the Allocation of Disaster Shelters via Fuzzy Models." Engineering Computations. Int. J. Comput. Aided Eng. Softw., 25: 86-100.
- Tu JW, Qu WL, Chen J (2008). "An experimental study on semi-active seismic response control of a large-span building on top of ship lift towers," J. Vib. Control, 14: 1055–1074.
- White DW, Harrison JC, Turner S (2010). Does Customer Engagement with Internet Based Services Influence Adoption of Other New Products? Canadian J. Adm. Sci. Revue Canadienne 27(1): 68-75.
- Yang CH, Chen TH, Chen CW, Chen CY, Liu CT (2008b). "Accuracy evaluation of a diagnostic test by detecting outliers and influential observations," China Ocean Eng., 22: 421-429.

- Yang HC, Chen CY, Chen CW, Chen TH (2008a). "Estimation on internal wave reflection in a two-layer fluid system by cumulative logistic regression model." J. Marine Sci. Technol., 16: 44-51.
- Yeh K, Chen CY, Chen CW (2008). "Robustness Design of Time-Delay Fuzzy Systems Using Fuzzy Lyapunov Method," Appl. Math. Comput., 205: 568-577.
- Yildirim S, Erkaya S, Eski I, Uzmay I (2009). "Noise and vibration analysis of car engines using proposed neural network," J. Vib. Control, 15: 133–156.
- Zhao FG, Chen J, Guo L, Li X (2009). "Neuro-fuzzy based condition prediction of bearing health," J. Vib. Control, 15: 1079–1091.