# Table of Contents

## Keynote Speech

Directions for Web-Based Learning ............................................. 1  
*Won Kim*

## Session 1: Personalization in E-Learning

Courseware Recommendation in E-Learning System .......................... 10  
*Liang Ge, Weining Kong, Junzhou Luo*

A Model for Personalized Course Material Generation Based on Student Learning Abilities and Interests ........................................... 25  
*Elvis Wai Chung Leung, Qing Li*

Taking Blog as a Platform of Learning Reflective Journal ...................... 38  
*Hsien Tang Lin, Shyan Ming Yuan*

Intelligent Knowledge Recommendation System Based on Web Log and Cache Data .......................................................... 48  
*Xun Wang, Biwei Li*

Learning Patterns: A Mechanism for the Personalization of Adaptive E-Learning ......................................................... 57  
*K.P. Hewagamage*

Using a User-Interactive QA System to Capture Student’s Interest and Authority About Course Content ........................................ 66  
*Liu Wenyin, Qingtian Zeng, Wei Chen, Feng Min, Wan Zhang*

## Session 2: Designs, Model and Framework of E-Learning Systems

Designing Learning Styles Application of E-Learning System Using Learning Objects .......................................................... 81  
*Siti Hafizah Ab Hamid, Tan Hock Chuan*

A Semantics Based Information Distribution Framework for Large Web-Based Course Forum System ........................................ 93  
*Hung Chim, Min Jiang, Xiaotie Deng*
An Efficient Illumination Framework for Web-Based Lighting Engineering Education ................................................. 105
  Hui Xiao, Rynson W.H. Lau, Gary Tam

The Database Model and the System Architecture of a National Learning Objects Repository for Cyprus ........................................ 114
  Philippos Pouyioutas, Maria Poveda, Dmitri Apraksin

Collaboratively Shared Information Retrieval Model for e-Learning ................................. 123
  Shermann S.M. Chan, Qun Jin

Session 3: Implementation and Evaluations of E-Learning Systems

<e-QTI>: A Reusable Assessment Engine ..................................................... 134
  Iván Martínez-Ortiz, Pablo Moreno-Ger, José Luis Sierra,
  Baltasar Fernández-Manjón

Using VRML and JAVA to Build Virtual Game-Based Learning Environment for Addition and Subtraction Operation ........................................ 146
  Ruwei Yun, Gang Chen, Yi Li

An Easy-to-Use eLearning Web Authoring System for Educators .............................. 154
  Joseph Fong, Yin Fei Yeung

An Implementation of a Case-Based Learning System ........................................... 165
  Yintao Liu, Li Zheng, Fang Yang, Li Li

A Web-Based Chinese Handwriting Education System with Automatic Feedback and Analysis ......................................................... 176
  Kai-Tai Tang, Ka-Ki Li, Howard Leung

Session 4: Learning Resource Deployment Organization and Management

Endowing LOs with a Social Dimension .......................................................... 189
  Giuliana Dettori, Paola Forcheri, Maria Grazia Ierardi

Reusability on Learning Object Repository .................................................... 203
  Timothy K. Shih, Chin-Chen Chang, H.W. Lin

INFERS: An Infrastructure for Experience Record in Smart Spaces ........................ 215
  Weisheng He, Yuanchun Shi, Weijun Qin
Decreasing the Stratification Influence to Students’ Learning Communities by Asynchronous Learning ............................................... 227
   Sheng-Chin Yu, Fong-Ling Fu, Tsang Hsiung Lee

e-Learning Martial Arts .............................................................. 239
   Taku Komura, Beta Lam, Rynson W.H. Lau, Howard Leung

Session 5: Tools in E-Learning

Web-Based Learning with Non-linear Multimedia Stories .................. 249
   Marc Spartiol, Ralf Klamma, Nalin Sharda, Matthias Jarke

IDSVL: Intrusion Detection System Virtual Lab Based on Component in the Internet ................................................................. 264
   Jianxin Wang, Ying An, Yu Sheng, Shaohua Li

Process Control Model in Web-Based e-Learning ............................ 276
   Weining Kong, Liang Ge, Junzhou Luo

Automatic Audio Indexing and Audio Playback Speed Control as Tools for Language Learning ................................................. 290
   David Rossiter, Gibson Lam, Brian Mak

Session 6: Surveys and Invited Papers

A Survey on Using IT in Administration and Management in Hong Kong Primary Schools ......................................................... 300
   Lam-For Kwok, Kwok-Wa Lam

Facial Expression Hallucination Through Eigen-Assiociative Learning .... 313
   Yueting Zhuang, Jian Zhang

Live Multimedia System Using Peer-to-Peer Architecture for Distance Education ............................................................................. 321
   Nen-Fu Huang, Yih-Jou Tzang, Hsi-Feng Chen, Yen-Ming Chu

A Service-Based Framework for Personalized Learning Objects Retrieval and Recommendation ...................................................... 336
   Ming Che Lee, Kun Hua Tsai, Ding Yen Ye, Tzone I Wang

Internet-Enabled Tangible User Interfaces for Distance Learning .......... 352
   Wei Liu, Keng Soon Teh, Tu Huynh Duy Nguyen, Adrian David Cheok, Yin Leng Theng, Mei Ling Lim
The Realization and Evaluation of a Web-Based E-Pedagogy Approach for English Second Language (ESL) Learning in Elementary Schools..... 363

Apple W.P. Fok, Horace H.S. Ip

Author Index ................................................................. 375