# Information and Systems in Education Vol. 1, No. 1, 2002

# Contents

Foreword (Keynote Article)

3 Toshio Okamoto (President of JSiSE)

#### **Opening Article**

4 Yukuo Isomoto (Editor-in-chief of JSiSE International Journal)

#### **Invited Papers**

- 5 Takashi Sakamoto
- Development of Information and Communication Technology use in School Education in Japan 15 Setsuko Otsuki
  - A study on support paradigms and applications to e-learning

#### Special Papers

- 22 Kinshuku, Taiyu Lin
  - User Exploration Based Adaptation in Adaptive Learning Systems
- 32 Chee-Kit Looi
  - Cultural Issues and the Design of e-Learning
- 38 Owen Conlan, Cord Hockemeyer, Vincent Wade, Dietrich Albert
- Metadata Driven Approaches to Facilitate Adaptivity in Personalized eLearning Systems 45 Haruki Ueno
  - Internet-Based Distance Learning for Lifelong Engineering Education A personal view and Issues -
- 53 Koji Itoh, Takuma Watanabe, Nobuhiro Takano, Makoto Itami Learning by Problem-Solving Assisted of Planning Solution with Repertories of Problem Types and Plan-Indexed Sample Problems with Solutions

## Translation of Awarded Paper

60 Katsuhiro Mouri, Masao Suzuki, Takami Yasuda, Shigeki Yokoi Production and Practical Use of Teaching Materials based on 3-dimensional Computer-graphics Technology with Collaboration in Education of Astronomy

Regular Papers (Original Paper)

- 70 Yukari Kato, Toshio Okamoto, Tatsunori Matsui A Relevant Learning Framework for Nonnative Speakers: A Proposal for Integrating Textual and Graphical Information in Japanese Academic Reading
- 80 Yusuke Hayashi, Hiroyuki Tsumoto, Mitsuru Ikeda, Riichiro Mizoguchi Kfarm: An Ontology-aware Support Environment for Learning-Oriented Knowledge Management

## Regular Papers (Practical Paper)

90 Yaeko Nakanishi, Lumi Tatsuta

- Web-based Japanese Listening Program: Development, Implementation and Results
- 98 Duminda Nisahntha, Yukuo Hayashida, Toshihiro Hayashi, Takeshi Katsuki, Masaaki Goto, Koichiro Ihara, N.A. De S. Amaratunga, Jayantha Weerasinghe, Nobuyuki Tokurea Multimedia Medical Collaboration over the Internet between Sri Lanka and Japan
- 109 Hiroyuki Mitsuhara, Youji Ochi, Kazuhide Kanenishi, Yoneo Yano An Adaptive Web-based Learning System with a Free-hyperlink Environment for Circumventing an Exploration Impasse Caused by a Hyperlink Shortage