Dickson K.W. Chiu · Minhong Wang
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Advances in
Web-Based Learning –
ICWL 2013 Workshops

USL 2013, IWSLL 2013, KMEL 2013
IWCWL 2013, WIL 2013, and IWEEC 2013
Kenting, Taiwan, October 6–9, 2013
Revised Selected Papers

Springer
Preface to ICWL 2013 Workshops

The aim of the International Conference on Web-Based Learning (ICWL) series is to provide a leading annual international forum for researchers, professionals, and industrial practitioners to share their knowledge in this rapidly growing area. In 2013, the conference was held in Taiwan. This volume comprises papers from one collated symposium and six workshops from 2013:

1. The First International Workshop on Ubiquitous Social Learning (USL 2013)
2. The 2013 International Workshop on Smart Living and Learning (IWSLL 2013)
3. The Third International Symposium on Knowledge Management and E-Learning (KMEL 2013)
4. The 2013 International Workshop on Cloud Computing for Web-Based Learning (IWCWL 2013)
5. The 2013 International Workshop on Web Intelligence and Learning (WIL 2013)

These events were selected from a public call-for-proposals process. The event organizers put tremendous effort into soliciting and selecting research papers with a balance of high quality, novel ideas, and emerging applications. They also followed our recommended vigorous review process. A total of 29 papers from a wide range of countries were accepted.

We are grateful to the ICWL organizers for their generous support. We appreciate the hard work of all event organizers and Program Committee members in putting together the program. We also thank all the authors for their contributions.

Last but not the least, we thank Dr. Shih-Pang Tseng for helping us to compile this book.

December 2013

Timothy K. Shih
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Dickson K.W. Chiu
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The first International Workshop on Ubiquitous Social Learning was jointly held with The 12th International Conference on Web-Based Learning (http://icwl2013.tajen.edu.tw/) in Kenting, Taiwan during October 6–9, 2013. This workshop aims to provide a premier international forum for researchers and practitioners from both academia and industry to present state-of-art advances and innovations on the latest developments in USL. In particular, original ideas and research articles are solicited ranging from theoretical foundations, systems, infrastructure, tools, practical applications, new communication technologies, and experimental prototypes, in order to identify the emerging research topics and map out the directions for future developments.

With the high development of emerging computing paradigms, such as Ubiquitous Computing, Service Computing, Cloud Computing, Social Computing, and Internet of Things, we have been continuously experiencing a tremendous change in the web-based learning environment. Sharing feelings, experience, and knowledge have also become more convenient in this social networking revolution, which makes learning through interaction and collaboration in a community or across a social network become increasingly popular. Differing with the traditional e-learning paradigm, social learning, which focuses more on the learning that occurs within a social context, can be more capable to adapt the information and communication technology and service in a rapid-changing social environment, and be more flexible to deal with the delivering and exchanging of potential knowledge that is dynamically generated anytime and anywhere. We welcome contributions to advance high-quality research in methods, theories, techniques, and tools concerning the idea of enhanced social learning, in order to provide a more productive and cost-effective learning and education environment to better support both faculties and students in the next era.

After review, we selected two quality papers in USL 2013, respectively, for presentation covering various aspects of Ubiquitous Social Learning.

We appreciate the interest and support of all attendees. In particular, we thank the ICWL organizers. The great success of the workshop is indebted to the hard work of all Program Committee members. We also thank all the authors for their contributions.

December 2013

Qun Jin Waseda
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In the twenty-first century, the amount of knowledge in the world is growing more quickly than before; but the half-life of knowledge is shrinking. How to learn efficiently and effectively has become a challenge to modern people. In the past 30 years, the information and communication technology (ICT) placed more importance on modern human living and learning. It has become an important research issue to use the ICT to enrich modern human living and learning with more intelligence.

The objective of the workshop is to invite authors to submit original manuscripts that demonstrate and explore current advances in all aspects of Intelligent Life and Learning. Authors are encouraged to submit either theoretical or practical articles to this workshop. After review, we selected eight quality papers in IWSLL 2013, respectively, for presentation covering various aspects of Smart Living and Learning.

We appreciate the interest and support of all attendees. In particular, we thank the ICWL organizers. The great success of the workshop is indebted to the hard work of all Program Committee members. We also thank all the authors for their contributions.

December 2013
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Hsu-Yang Kung
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IWSLL 2013 Workshop Chairs

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Fierce competition, globalization, and dynamic economy have forced organizations to search for new ways to improve competitive advantage. In pursuance of this, knowledge is seen as the core resource and learning is viewed as the important process. It is crucial for organizations to enhance the capabilities for effective learning and knowledge management (KM), especially via using information and communication technologies in the digital economy.

The creation, operation, and evolution of such research and practice raise concerns that vary from high-level requirements and policy modeling through to the deployment of specific implementation technologies and paradigms, and involve a wide and ever-growing range of methods, tools, and technologies. They also cover a broad spectrum of vertical domains, industry segments, and even government sectors. We intentionally seek educators, researchers, scientists, engineers, industry people, policy makers, decision makers, and others who have insight, vision, and understanding of the big challenges in knowledge management and e-learning (KM&EL). After review, we selected two quality papers in KMEL 2013, respectively, for presentation covering various aspects of KM&EL.

We appreciate the interest and support of all attendees. In particular, we thank the ICWL organizers, the International Journal of Systems and Service-Oriented Engineering (IJSSOE), and the Knowledge Management & E-Learning: An International Journal (KM&EL) for their generous support. The great success of the symposium is indebted to the hard work of all Program Committee members. We also thank all the authors for their contributions.

December 2013
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The 2013 International Workshop on Cloud Computing for Web-Based Learning (IWCWL 2013) Chairs’ Message

Cloud computing is an active research area on computing and communication technology in recent years. The unprecedented amount of computing and storage resources on cloud systems can be provided to us via the Internet with traditional computers or smart appliances. With these unlimited computing and storage resources, a large number of researches have been focused on applying the traditional Internet services to the cloud computing environments. This workshop concerns the recent developments and applications of web-based learning, as an important Internet service, in the modern cloud-computing environments. The objective of this workshop is to invite authors to submit original research articles that demonstrate and explore current advances in all aspects of cloud computing for web-based learning. Authors are encouraged to submit either theoretical or practical articles to this workshop. After review, we selected six quality papers in IWCWL 2013, respectively, for presentation covering various aspects of cloud computing for web-based learning.

We appreciate the interest and support of all attendees. In particular, we thank the ICWL organizers. The great success of the workshop is indebted to the hard work of all Program Committee members. We also thank all the authors for their contributions.

December 2013

Chu-Sing Yang
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Shih-Pang Tseng  Tajen University, Taiwan
The 2013 International Workshop on Web Intelligence and Learning (WIL2013) Chairs’ Message

The Internet gathers more and more human activities in the twenty-first century. An abundant amount of data and knowledge is generated by several kinds of Web applications. The Web had become a very important learning tool for formal and informal education. Web intelligence applied artificial intelligence and information technology on the web in order to enrich products and services on the Internet. The web intelligence technology can effectively abstract the valuable information from the Internet for learning. In addition, the web intelligence technology can also analyze the data generated by learning activities in order to improve the adaptivity of learning.

The objective of the workshop is to invite authors to submit original manuscripts that demonstrate and explore current advances in all aspects of Web Intelligence and Learning. Authors are encouraged to submit either theoretical or practical articles to this workshop. After review, we selected six quality papers in WIL 2013, respectively, for presentation covering various aspects of Web Intelligence and Learning.

We appreciate the interest and support of all attendees. In particular, we thank the ICWL organizers. The great success of the workshop is indebted to the hard work of all Program Committee members. We also thank all the authors for their contributions.

December 2013

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The International Workshop on E-book and Education Cloud is aimed at bringing together professionals and researchers who are interested in recent trends in E-books and their connection to Education Clouds. The research papers on exploring the system effectiveness and learning performance of using E-book with teaching and learning strategies on diverse web-based learning environments are particularly welcome.

With the advance of networking, a variety of web applications have emerged on the education field, such as web 2.0, mobile learning, ubiquitous learning, and cloud learning. In response to the prevalence of cloud applications, mobile learning with cloud services has created a new era of e-learning. This new type of mobile learning has further been fueled by diversified handheld devices, which provides a platform for a variety of courseware or e-books. The emergence of cloud services improves the accessibility to information, of which, learning contents can be downloaded through various E-book platforms. This new e-learning infrastructure could impact current e-learning environments. Although some studies have revealed the possibility of coupling e-book learning environments with education clouds, more intensive investigations on the feasibility and evaluations are required. This workshop aims to provide researchers an interactive discussion and hopefully open a new window for the future development of web-based learning. After review, we selected five quality papers in IWEEC 2013, respectively, for presentation covering various aspects of E-book and Education Cloud.

We appreciate the interest and support of all attendees. In particular, we thank the ICWL organizers. The great success of the workshop is indebted to the hard work of all Program Committee members. We also thank all the authors for their contributions.

December 2013

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International Workshop on Cloud Computing for Web-Based Learning

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Sheng-Tzong Cheng, Hsi-Chuan Wang, Yin-Jun Chen, and Chen-Fei Chen

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