Welcome to the second 2012 issue of the IEEE Transactions on Learning Technologies (TLT). As we enter our fifth year of publication, there is important news to share.

First of all, we are pleased to announce that Thomson Reuters (ISI) has completed the evaluation of our journal and has accepted it for inclusion in the Web of Science, covered under Science Citation Index Expanded (SCIE), Social Sciences Citation Index (SSCI), Current Content Computer Science & Engineering, and Current Content/Social and Behavioral Sciences. The 2011 data will be released by Thomson Reuters in June 2012, so TLT will begin to appear in the reports at that time. Because the journal was accepted within its first few years of publication, ISI will back-index all articles from all previous publication years.

The second important news is the extension of our Editorial Board. We are excited to welcome several new Board members who represent several critical areas in the field of Learning Technologies.

Rafael Calvo from the University of Sydney, Australia, represents the area of Engineering Education. His special areas of expertise are affective computing and writing-centered learning.

Sara de Freitas is the Director of Research at the Serious Games Institute, a Professor of Virtual Environments, and a Fellow of the Royal Society of Arts. She leads the applied research team at the Serious Games Institute and the Serious Games and Virtual Worlds Applied Research Group at Coventry University, United Kingdom.

Erik Duval chairs the research unit on human-computer interaction in the Computer Science Department of the Katholieke Universiteit Leuven, Belgium. His research focuses on massive hyper-personalization (“The Snowflake Effect”), learning analytics, openness and abundance, relating research in information visualization, mobile information devices, multitouch displays, and personal informatics.

Sven K. Esche from the Stevens Institute of Technology, United States, is a recognized researcher in the field of Engineering Education with special expertise in the area of Virtual Labs. Following a special issue on this topic published in 2009, our journal has received an increasing volume of submissions in this area and we are glad to have another expert in this field on board.

Stefanie Lindstaedt leads the Knowledge Management Institute (KMI) at the Graz University of Technology (TUG), Austria. Her research includes the analysis of knowledge work, the development of innovative knowledge services, and the evaluation of such services within real-world work environments.

Marcelo Milrad is a Professor of Media Technology in the Department of Computer Science, Linnaeus University, Sweden, and also the director of the Center for Learning and Knowledge Technologies (CeLeKT). His current research interests include the design of learning environments to support learning about complex domains, collaborative discovery learning, and the development of mobile and wireless applications to support collaborative learning.

Christoph Rensing is the head of the Knowledge Media Research Group at the Multimedia Communications Lab, TU Darmstadt, doing research on semantic tagging, process-oriented metadata, and authoring support in e-learning.

Julita Vassileva from the University of Saskatchewan, Canada, came from the area of Intelligent Tutoring Systems, but she is most known for her more recent work on social learning. Her paper on this topic in the special vision issue of the journal emerged as one of the most popular TLT papers. Social learning is another popular area among TLT authors, as recognized by a recently published special issue on the topic.

Getting back to the current issue, we are also pleased to introduce a Special Section on Semantic Technologies for Learning and Teaching Support in Higher Education. The guest editors of this special section, Thanassis Tiropoulos, David Millard, and Hugh C. Davis are well known for their own research in this interesting new field. They worked hard to assemble and manage this section and we hope that it will be of interest to many readers of the journal. The guest editors provided a separate introduction to this special section that follows this editorial.

In addition, this issue features three regular papers. The paper “nQuire: Technological Support for Personal Inquiry Learning” by Paul Mulholland from the Open University, United Kingdom, and his colleagues describes the development of nQuire, a software application to guide personal inquiry learning. nQuire can be used to support inquiry activities across individual, group, and class levels at different parts of the inquiry and offers a flexible, web-based approach that can incorporate different devices (smart phone, netbook, PC) and does not rely on constant connectivity.

Kanubhai K. Patel and Sanjaykumar Vij investigate in their paper “Spatial Learning Using Locomotion Interface to Virtual Environment” how locomotion interfaces can help visually impaired people to create cognitive maps of their environment.

For information on obtaining reprints of this article, please send e-mail to:
lt@computer.org.

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Finally, Mohamed Amine Chatti, Ulrik Schroeder, and Matthias Jarke in “LaaN: Convergence of Knowledge Management and Technology-Enhanced Learning” present their vision for future KM/TEL approaches which aim to fulfill the needs of the new knowledge landscape. They do this by introducing the Learning as a Network (LaaN) theory as a new learning theory characterized by the convergence of KM and TEL within a learner-centric knowledge environment.

Enjoy this issue!

Wolfgang Nejdl, Editor-in-Chief
Peter Brusilovsky, Associate Editor-in-Chief

Rafael Calvo received the PhD degree in artificial intelligence applied to automatic document classification (e.g., website classification). He is now an associate professor at the University of Sydney. He has taught at several universities, high schools, and professional training institutions. He worked at the Language Technology Institute at Carnegie Mellon University, Universidad Nacional de Rosario (Argentina), and on sabbaticals at The University of Cambridge and the University of Memphis. He has also worked as an Internet consultant for projects in Australia, Brazil, the United States, and Argentina. He has been the recipient of five teaching awards and the author of two books and many publications in the fields of learning technologies, affective computing, and computational intelligence. He is an associate editor for the IEEE Transactions on Affective Computing and a senior member of the IEEE.

Sara de Freitas is the director of research at the Serious Games Institute at the University of Coventry, where she leads an applied research team working closely with industry. An appointed professor of virtual environments, she holds a visiting senior research fellowship at the London Knowledge Lab, is an adjunct professor at the University of Malta, and is a fellow of the Royal Society of Arts. Voted the Most Influential Woman in Technology 2009 and 2010 by US Fast Company, she chairs the IEEE Serious Games and Virtual Worlds conferences (VS-Games) and is a regular speaker at international conferences. She has chaired six international conferences and is on the programme committees of 31 international conferences and workshops, as well as having given more than 80 national and international presentations and lectures. She is the scientific coordinator of GALA - the EU Network of Excellence in Serious Games and currently holds 19 research projects with funding from Advantage West Midlands, Erasmus Scheme, the European Regional Development Fund, and the European Union. She is also on the steering group of the largest Knowledge Transfer Network (Creative Industries). Her current lines of research are in examining innovative e-learning methods, multimodal interfaces, experience design, and perceptual modeling in games and virtual worlds towards developing the next generation of intelligent tutoring environments. She publishes widely in the areas of pedagogy and e-learning, change management and strategy development for implementing e-learning systems, and serious games and virtual worlds for supporting training and learning. She has more than 90 publications including reports, book chapters, journal articles, and conference papers. Her most recent books are Rethinking Learning for a Digital Age (edited with R. Sharpe and H. Beetham, published by Routledge in 2010) and Digital Games and Learning (edited with P. Maharg, published by Continuum Press in 2011). Her other books include Interdisciplinary Advancements in Gaming, Simulations and Virtual Environments: Emerging Trends (edited with R. Ferdig, published by IGI Global), the e-Learning Reader (edited with J. Jameson, forthcoming in 2012), a 10-book series Digital Games and Learning (edited with P. Maharg, to be published by Routledge in 2012), and New Pedagogical Approaches in Game Enhanced Learning: Curriculum Integration (coedited with M. Ott, M. Popescu and I. Stanescu, delivered to IGI Global in 2012).

Erik Duval is a professor in the Research Unit on Human-Computer Interaction in the Computer Science Department at Katholieke Universiteit Leuven. His research focuses on management of and access to structured and unstructured data. In practical terms, he researches repositories, federated search, harvesting, and content management, but also more end-user-oriented aspects like information visualization, mobile information devices, multitouch displays, and mash-ups. He typically applies his results to technology-enhanced learning, access to music, and “research2.0.” His current obsessions include massive hyper-personalization (“The Snowflake Effect”), learning analytics, openness, and abundance—topics on which he regularly keynotes. He serves as the chair of the IEEE LTSC working group on Learning Object Metadata, on the executive committee of the Society for Learning Analytics Research (SoLAR), on the editorial review board and the executive advisory board of the International Journal on E-Learning, on the board of editors of the Journal of Universal Computer Science, and as a member of the informatics section of the Academia Europeae. He cofounded two spin-offs that apply research results for access to music and scientific output, as well as the not-for-profit ARIADNE Foundation that promotes share and reuse of learning material. He is a fellow of the AACE and a member of the IEEE Computer Society and the ACM.
Sven K. Esche  received an undergraduate degree in applied mechanics from the Chemnitz University of Technology, Germany, in 1989. After working for three years as a design engineer at the Mercedes Benz AG in Stuttgart, Germany, he received the MS and PhD degrees in mechanical engineering from The Ohio State University in Columbus in 1994 and 1997, respectively. He currently holds a position as an associate professor of mechanical engineering at Stevens Institute of Technology in Hoboken, New Jersey. Dr. Esche’s research interests are in remote sensing and control of distributed devices with a special focus on hardware and software technologies for developing and operating educational online laboratories, including remotely accessible experimental setups, virtual experiments based on pure software simulations, and interactive virtual laboratory environments implemented using multiplayer computer game engines. In addition, he is working on multiscale modeling techniques for thermo-mechanical processing of metals using the Finite Element and Monte Carlo methods.

Stefanie Lindstaedt received the MS and PhD degrees in computer science from the University of Colorado at Boulder and the habilitation degree in computer science from the Graz University of Technology (TU-Graz), Austria. She has been teaching undergraduate and graduate courses at TU-Graz since 2002 and is also the head of the Institute for Knowledge Technologies and the scientific director of the Know-Center in Graz, Austria’s competence center for knowledge-based systems. This makes her the first female professor to lead a TU-Graz institute as well as a competence center. Her research focuses on context-aware knowledge services that combine the power of Web 2.0 approaches with machine learning methods to augment semantic technologies in order to support individual, community, and organizational learning. Before coming to Graz, she held various responsible positions such as research project manager at Daimler(Chrysler) Research in Ulm, Germany, and product manager for web-globalization services at GlobalSight in Boulder, Colorado. Over the last 10 years, she has been a key player in establishing the Know-Center as a scientifically renowned organization within a rapidly growing international network of more than 90 scientific organizations and 23 industry partners. She has extensive experience in acquisition and management of applied research and technology transfer projects. Her track record proves her ability to obtain EU and national funding and to lead large interdisciplinary research projects and groups. She is a scientific coordinator of the MIRROR IP, has scientifically coordinated and successfully concluded the APOSDLE IP, and is a partner in numerous other EU-funded projects such as the MATURE IP, the STELLAR NoE, and Organic Lingua. She has published more than 100 scientific papers in conferences and journals and supervised 12 PhD theses. She is chair of the I-Know conference series and program chair of the EC-TEL 2012 conference.

Marcelo Milrad  is a full professor of media technology in the Department of Computer Science, School of Computer Science, Physics, and Mathematics, Linnaeus University (LNU) in Sweden. He is also the director of the Center for Learning and Knowledge Technologies (CeLeKT). His current research interests include the design of learning environments to support learning about complex domains, collaborative discovery learning, and the development of mobile and wireless applications to support collaborative learning. He teaches undergraduate courses in media technology and computer science with a special focus on XML, web 2.0, and mobile technologies. He also teaches doctoral courses in the field of technology-enhanced learning. He has published more than 130 articles in international journals, refereed conferences, books, and technical reports. He has also presented and given lectures about his work in more than 35 countries worldwide. During the few last years, he has served as a program committee member in a number of international scientific conferences such as CSCL, ICALT, WMTE, IRIS, and CELDA. He is also an editorial board member for five scientific journals in the field of technology-enhanced learning. He has acted as an executive member of the IEEE Computer Society Technical Committee on Learning Technology (LTTC) and is one of the initiators of the IEEE International Conference on Wireless and Mobile Technologies in Education (WMTE). During 2007, he was one of the steering committee members of the Mobile Learning SIG, a research activity that was part of the European Network of Excellence on Technology-Enhanced Learning Kaleidoscope. Prior to entering LNU, he worked at Växjö University, the Research Corporation for Media and Communication Technologies, the Institute for Media Technology (IMT), the Center for Human-Computer Studies (CMD) at Uppsala University, Sweden, and the Weizmann Institute of Science, Israel. During the last 15 years, he has been directly involved in the design and development of multimedia-based learning environments in schools, universities, and industrial settings.

Christoph Rensing  is head of the Knowledge Media Research Group at the Multimedia Communications Lab at Technische Universität Darmstadt. Besides he is head of the Telematic Learning division of htc. His research focus is on technologies for learning and knowledge management, especially on authoring, description and management of learning resources and on support of informal learning by using Web-applications. He has been principal investigator and project manager in many joint projects in Technology enhanced Learning for htc and Technische Universität Darmstadt since 2002. He holds a diploma in Information Management and has finished his PhD on Internet Security in 2003.
Julita Vassileva received the PhD degree in mathematics, cybernetics, and control theory in 1992 from the University of Sofia, Bulgaria, in the area of intelligent tutoring systems. Between 1992 and 1997, she worked as a research associate at the Federal Armed Forces University in Munich, Germany. She has been with the University of Saskatchewan, Canada, since 1997 as a professor of computer science. Her research areas involve human issues in decentralized software environments: user modeling and personalization, and designing incentive mechanisms for encouraging participation and facilitating trust in decentralized software applications such as online communities, social networks, multiagent systems, and peer-to-peer systems. She is one of the directors at large of the UM Inc. Society. She is a member of the executive committee of the AI and Education Society and serves on the editorial boards of the International Journal of User Modeling and User Adapted Interaction and the Computational Intelligence Journal. She is a member of the IEEE.