CIT. Journal of Computing and Information Technology, Vol. 29, No. 1, March 2021, i–ii
doi: 10.20532/cit.2021.1005371

Editorial

With this first issue (March 2021), *CIT. Journal of Computing and Information Technology* enters its 29th year of continuous publishing. In this respect, I would like to thank all the people that have supported our publishing endeavor since, and especially those who are leaving the Editorial Team within its periodical restructuring, namely Gordan Ježić, Shifeng Liu, Aniket Mahanti, Siniša Šegvić, Domen Verber and Runtong Zhang. To them goes our deep appreciation for the time and effort invested into helping keep CIT to achieve its mission.

I also take the occasion to introduce the new members of the Editorial Team: these are Mincong Tang joining the Editorial Board, along with Petra Bago, Aswani Kumar Cherukuri, Marko Đurasević, Anna Formica, Nikolina Frid and Marko Horvat as Associate Editors. We wish all of them success in performing the editorial duties.

This March 2021 issue (Vol. 29, No. 1) of *CIT. Journal of Computing and Information Technology* brings four papers from the areas of security and privacy, interactive learning environments, modeling and simulation, and natural language processing.

Present-day mobile devices, like smartphones, PDAs, or in-vehicle infotainment systems, provide location-based services thus enabling their users to orient themselves. In doing so such devices generate a large amount of spatio-temporal data, which in a continuous time period form a trajectory. While on the one hand publishing such data can support optimization of urban traffic lines, or even urban planning, they can also allow for privacy intrusion, hence requesting proper privacy protection. The authors of the first paper of the present issue, Huo-wen Jiang and Ke-kun Hu, thus address a novel privacy preserving approach based on *k*-anonymity. Since present clustering anonymity methods use either distance- or direction-based similarities, leading to a high information loss, the paper *A Clustering-Anonymity Approach for Trajectory Data Publishing Considering both Distance and Direction* presents a clustering-anonymity approach which bases on both trajectory distance and direction, hence avoiding information loss, while striking a balance between privacy preservation and data availability through trajectory publishing. Presented experimental results demonstrate that the proposed algorithm effectively preserves privacy with little information loss.

The paper *Design of Self-Balancing Tracing Bicycle for Smart Car Competition Under Engineering Education* by Jinxue Sui, Chunyang Wang, Minghong Chen, Ping Zuo and Siqing Shen, reports on a student smart car competition – China University Student Smart Car Competition, targeting the improvement of college students' practical ability, innovation, and team spirit, as well as the promotion of higher engineering education reform in China. The authors describe their experience when designing and realizing a "smart car" in the form of a self-balancing tracking mobile bicycle, as an example of the CDIO (Conceive, Design, Implement, Operate) educational model, which aims at achieving a balance between theoretical knowledge taught to students and their practical ability to develop a completed product. The process included a selection of key components, design of hardware and circuit boards, sensor processing and real platform control. Specifically, the self-balancing bicycle was designed with a gyroscope sensor, where PID and LQR controllers were developed for attitude control. The authors conclude by stressing the importance of such competitions which, combined with university courses' curricula, promote teaching and learning along with ability training, eventually stimulating students' independent consciousness, enthusiasm, and innovation in learning, and promoting teachers' passion and enthusiasm for the teaching reform.

Being a major worldwide iron ore consumer, China has a strong incentive to forecast its price on the global market, as fluctuation of iron prices seriously affects Chinese iron ore manufacturers, consumer companies, and the country itself. The paper *Prediction of Spot Price of Iron Ore Based on PSR-WA-LSSVM Combined Model* by Xiangjun Cai and Shihua Luo thus focuses on devising an improved forecasting model that uses Ningbo Zhoushan Port – the port with the largest cargo throughput in the world – spot iron ore price to grasp the fluctuation trend of iron ore. The authors note that the existing single time series model is not accurate and robust enough for the above prediction, while the traditional Least Square Support Vector Model (LSSVM) is difficult to determine, either. Therefore, they developed a novel model, named PSR-WA-LSSVM, which combines Phase Space Reconstruction (PSR), wavelet transform and LSSVM. Simulation results show that compared with a number of single models, namely Autoregressive Integrated Moving Average (ARIMA), Long Short-Term Memory (LSTM), and PSR-LSSVM, the introduced combined model obtains a better prediction effect, with a dramatically increased prediction hit rate.

Machine translation between languages belonging to different language families, and especially showing syntactic divergences, is the focus of the paper by Tran Hong-Viet, Nguyen Van-Vinh, and Nguyen Hoang-Quan, titled *Improving Machine Translation Quality with Denoising Autoencoder and Pre-Ordering*. The authors investigate the impact of multiple methods of differing word orders during translation, and further experiment in assimilating the source languages syntax to the target word order using pre-ordering, while focusing on the field of extremely low-resource scenarios, the target being improvement of the quality of machine translation using either denoising autoencoders or pre-ordering. Specifically, they contribute to the area of machine translation by investigating phenomena occurring in translation between English and Vietnamese. Within such a framework, the authors devised several methods to improve translation quality using denoising autoencoders in Neural Machine Translation (NMT) and pre-ordering in Phrase-Based Statistical Machine Translation (PBSMT). Experimental results show that improvements in translation accuracy for low-resource domains using a simple process of adding noise to synthesize training data can be achieved.

Vlado Glavinić
Editor-in-Chief