

# Editorial

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As the Covid-19 pandemic spread around the world in the past two years, researchers are working hard on the work-family balance [1]. The IEEE Technical Committee on Learning Technology (TCLT) hopes that the bulletin can be the platform for researchers presenting their works, looking for collaborators, and delivering the academic activities information during the pandemic. There are eight articles published in this issue after the rigorous review process. The articles include one in Emerging Learning Technologies section, one in Equity, Diversity & Inclusion section, one in Book & Report Reviews section, and five in Event Info & Call for Event Host section.

The first article entitled “Neural-symbolic computing: A step toward interpretable AI in Education” written by Hooshyar and Yang discusses an innovative application of neural-symbolic computing (NSC) in education. The research team aims to propose a general framework that embeds the NSC paradigm into the educational context, offering a valuable starting point for interpretable AI in education. The proposed framework addressed the challenges of machine learning and AI about explainability and a lack of training data, by combining symbolic reasoning and neural learning models. The novel approach of NSC can provide better transparency in learning, leading to nurturing educators, practitioners, and learners’ trust in data-based decisions.

In Equity, Diversity & Inclusion section, the article “The Women in Computer Science Program in New Mexico Tech” written by Knowles summarizes the four-year work in the Women in Computer Science (WiCS) program in a STEM focused university – New Mexico Tech. The program changes the introductory programming course with two parallel sections for students with and without programming experience before attending the college. To engage students’ interests in learning computer science, the program also integrates game design topics in the courses. Last but not least, the program got the funding from the National Center for Women & Information Technology for developing content for outreach and bridging the knowledge gap for transfer students and incoming freshmen. The program will keep working with the local public schools to encourage more students enrolling computer science majors.

The article “Comparative Analysis of Object Visualization Tools with Respect to Their Use in Education” written by Dennis and Ramyaa is published in the Book & Report Reviews section. This work presents a comparative analysis of object visualization tools regarding their use in Education. Dimensions that authors used to compare the tools include detailed graphics, object class graphics, single instance view, data structure view, additional diagram generation, and usability in introducing object-oriented programming (OOP) concepts. Findings of this research shows that while the existing tools provide sufficient support for the named dimensions, they ignore underlying ideas of OOP like object design.

There are five articles published in the Event Info & Call for Event Host section; three of the events are in the technology enhanced language learning area. The Annual Symposium of the Computer-Assisted Language Instruction Consortium (CALICO) will take place from May 31st to June 4th, 2022 in Seattle, Washington in the Seattle Renaissance Hotel. The five-day conference gathers scholars around the globe features workshops, presentations, panels, technology

showcases, poster presentations, special interest group meetings, and social events that engage scholars in an in-depth discussion on topics related to technology and language learning.

The 1st International Conference on Future Language Learning (ICFULL) will be held online from July 1st to 3rd, 2022, with the theme of “Future Language Learning”. With diverse issues and topics included in keynotes, paper presentations, and panel discussions, ICFULL 2022 offers a channel through which scholars, practitioners, and researchers could share and exchange research findings regarding the potentials of cutting-edge technologies for language pedagogical practices.

The 5th Pedagogy and Practice in Technology Enhanced Language Learning (PPTTELL) will take place from July 1st to 3rd, 2022 as an online conference by Shaanxi Normal University and the PPTTELL Association. Through oral presentations and poster presentations, the attendees gain a better understanding of “Developing learner agency through smart technology”, aiming to help language learners become autonomous learning agents with the use of smart technology.

The last two articles in the Event Info & Call for Event Host are from two conferences in Romania. The Intelligent Tutoring Systems (ITS) Conference directs researchers and academics, the industry, and end-users to fields of computer and cognitive sciences, artificial intelligence and deep learning in tutoring the education from June 27th to July 1st, 2022 at University Politehnica of Bucharest, Romania. To enhance learning through interdisciplinary intelligent systems, ITS 2022 leads the attendees to the evaluation of the use of Intelligent Systems in education, modeling innovative applications of technologies and the adaptation of systems to specific groups of learners.

The University Politehnica of Bucharest also hosts the 22nd IEEE International Conference on Advanced Learning Technologies (ICALT) which will be held from July 1st to 4th, 2022 as a hybrid event. As ranked the second (2nd) by saliency in Educational Technology area in Microsoft Academic from 2000 to 2020, ICALT 2022 provides an academic platform featuring 15 tracks, engaging researchers in sharing and discussion related to design, development, use, and evaluation of technologies in learning. Because there is one-day overlapping between ITS 2022 and ICALT 2022 in the same venue, both ITS and ICALT participants can attend extra keynote and activities, from ITS’s last day and ICALT’s first day, for free.

The current submission statistics in the Bulletin of TCLT show that authors receive the first decision notification in average 20.66 days, and for the accepted articles the authors get the acceptance notification in average 43.59 days. The accepted articles are published online in average 88.01 days after they were submitted. The Editorial Board of TCLT wishes the learning technology community stay healthy and has a productive year in 2022.

## REFERENCES

- [1] Landolfi, A., Barattucci, M., De Rosa, A., & Lo Presti, A. (2021). The Association of Job and Family Resources and Demands with Life Satisfaction through Work-Family Balance: A Longitudinal Study among Italian Schoolteachers during the COVID-19 Pandemic. *Behavioral Sciences, 11*(10), 136.