

## Editorial

Alessandro De Gloria<sup>1</sup>

<sup>1</sup>*University of Genoa, [alessandro.degloria@unige.it](mailto:alessandro.degloria@unige.it)*

The second issue of the fifth year of the International Journal of Serious Games contains five excellent papers, that I will present in the following. In this period there is the deadline for submitting papers to the SGS-managed Games and Learning (Gala) Conf ([conf.seriousgamessociety.org](http://conf.seriousgamessociety.org)), that thus year reaches its seventh edition, and will be held in Palermo Dec. 5-7. The deadline will be later for demos, tutorials and serious game competition as well. Your contributions are welcome!

“Formative evaluation of an adaptive game for engaging learners of programming concepts in K-12”, by Lindberg and Laine, [1], presents Minerva, a multi-genre (adventure, action, puzzle) game to engage elementary school students in learning programming concepts. The game content is adapted to play and learning styles of the player. A formative mixed-method evaluation was performed in Korea, whose results indicated that, in terms of retention, learning was equally effective as in a control group using handouts.

“Training Computational Thinking through board games: The case of Crabs & Turtles”, by Tsarava et Al., [2], presents a three life-size board games – Crabs & Turtles: A Series of Computational Adventures – aimed at providing an unplugged and low-threshold introduction to computational thinking. The authors first describe the design, to explicate the development process and allow for reproducibility. Then report on a first empirical evaluation of feasibility and user experience. Results indicated overall positive game experience for all three games.

“A Reliability Game for Source Factors and Situational Awareness Experimentation”, by De Rosa et Al., [3], tackles the issue, typical in the military domain, of assessing the variety of information sources (e.g., sensors, open-source, intelligence, historical databases) and their possible lack of veracity. In order to characterise source factors impact on human belief assessment, the Reliability Game has been developed, a data exchange game in which players are requested to perform Situational Assessment tasks by mentally processing incoming information provided through cards. This paper presents the method, the design choices and shows through a qualitative analysis that the proposed approach is indeed able to capture elements of source factors impact on players’ belief development.

“Employee Profiles and Preferences towards IoT-enabled Gamification for Energy Conservation”, [4], by Kostopoulos et Al., presents and assess an Internet of Things (IoT)-enabled gamified mobile application that provides personalized energy-saving recommendation tips to employees. Insights from a survey dictate that a gamified app promoting energy saving at the workplace may become a daily habit for its users if it at least includes three game design elements: progression, levels and points. The collected insights inspired a modular, rule-based mechanism for formulating personalized energy-saving recommendation tips tailored to the users’ profiles and game design choices.

“Development of a Hardware/Software System for Proprioception Exergaming”, [5], by Kobeissi et Al., investigates how to integrate tools for proprioception (equilibrium and balance) training into a serious game combining effectiveness and enjoyment. They devel-



oped a system including a balance board, which was instrumented to act as a motion controller for an ad-hoc developed, simple 3D video game simulating downhill skiing as an equilibrium-relevant sport activity. The authors validated the system in a user test with 40 participants, in ecological settings. The results, deduced through mapping users' performance to their balance capacity, showed statistically significant improvement in players' ability to use the balance board. Users also reported a positive gameplay experience.

## *References*

---

- [1] Lindberg, R. S. N., and Laine, T. H., "Formative evaluation of an adaptive game for engaging learners of programming concepts in K-12", *The Int.l Journal of Serious Games*, Vol. 5, Nr. 2, June 2018 <http://doi.org/10.17083/ijsg.v5i2.220>
- [2] Tsarava, K., Moller, K., and Ninaus, M., "Training Computational Thinking through board games: The case of Crabs & Turtles", *The Int.l Journal of Serious Games*, Vol. 5, Nr. 2, June 2018. <http://doi.org/10.17083/ijsg.v5i2.248>
- [3] De Rosa, F., Joussetme, A.-L., and De Gloria, A., "A Reliability Game for Source Factors and Situational Awareness Experimentation", *The Int.l Journal of Serious Games*, Vol. 5, Nr. 2, June 2018. <http://doi.org/10.17083/ijsg.v5i2.243>
- [4] Kotsopoulos, D., Bardaki, C., Lounis, S., and Pramadari, K., "Employee Profiles and Preferences towards IoT-enabled Gamification for Energy Conservation", *The Int.l Journal of Serious Games*, Vol. 5, Nr. 2, June 2018, <http://doi.org/10.17083/ijsg.v5i2.225>
- [5] Kobeissi, A., Lanza, G., Berta, R., Bellotti, F., and De Gloria, A. "Development of a Hardware/Software System for Proprioception Exergaming", *The Int.l Journal of Serious Games*, Vol. 5, Nr. 2, June 2018 <http://doi.org/10.17083/ijsg.v5i2.244>