ZBW *Publikationsarchiv*

Publikationen von Beschäftigten der ZBW – Leibniz-Informationszentrum Wirtschaft *Publications by ZBW – Leibniz Information Centre for Economics staff members*

Mazarakis, Athanasios; Sailer-Frank, Sabrina; Voit, Thomas

Conference Paper — Published Version 7th International Workshop "Gam-R – Gamification Reloaded"

Suggested Citation: Mazarakis, Athanasios; Sailer-Frank, Sabrina; Voit, Thomas (2024) : 7th International Workshop "Gam-R – Gamification Reloaded", In: Mensch und Computer 2024 -Workshopband, Gesellschaft für Informatik e.V., Bonn, https://doi.org/10.18420/muc2024-mci-ws01-106

This Version is available at: http://hdl.handle.net/11108/637

Kontakt/Contact ZBW – Leibniz-Informationszentrum Wirtschaft/Leibniz Information Centre for Economics Düsternbrooker Weg 120 24105 Kiel (Germany) E-Mail: info@zbw.eu https://www.zbw.eu/de/ueber-uns/profil-der-zbw/veroeffentlichungen-zbw

Standard-Nutzungsbedingungen:

Dieses Dokument darf zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden. Sie dürfen dieses Dokument nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, aufführen, vertreiben oder anderweitig nutzen. Sofern für das Dokument eine Open-Content-Lizenz verwendet wurde, so gelten abweichend von diesen Nutzungsbedingungen die in der Lizenz gewährten Nutzungsrechte.

Terms of use:

This document may be saved and copied for your personal and scholarly purposes. You are not to copy it for public or commercial purposes, to exhibit the document in public, to perform, distribute or otherwise use the document in public. If the document is made available under a Creative Commons Licence you may exercise further usage rights as specified in the licence.





Leibniz-Informationszentrum Wirtschaft Leibniz Information Centre for Economics

7th International Workshop "Gam-R – Gamification Reloaded"*

Athanasios Mazarakis Web Science, ZBW – Leibniz Information Centre for Economics Kiel, Germany a.mazarakis@zbw.eu Sabrina Sailer-Frank Business Education and Educational Management, University of Bamberg Bamberg, Germany sabrina.sailer-frank@unibamberg.de Thomas Voit Computer Science, Nuremberg Institute of Technology Nuremberg, Germany thomas.voit@th-nuernberg.de

Abstract

The 7th International Workshop, "Gam-R - Gamification Reloaded," explores gamification and its related concepts, aiming to identify current trends and future directions in the field. Through presentations and interactive sessions, participants will discuss new research, debate emerging concepts, and foster collaborations. In addition, the workshop seeks to foster networking opportunities among researchers and practitioners interested in gamification. It will feature presentations of selected papers followed by interactive sessions designed to facilitate dialogue and knowledge exchange. Accepted papers will be published in the GI Digital Library, ensuring wide dissemination of insights. The workshop's goals include facilitating knowledge exchange, promoting interdisciplinary discussions, and advancing the application of gamification in various domains. The website for the workshop, including a full Call for Papers, can be found at https://www.gamification-reloaded.com/ or https://www.gam-r.de/.

CCS Concepts

• Human-centered computing → Empirical studies in HCI; Human computer interaction (HCI); HCI design and evaluation methods.

Keywords

Gamification, Game-based Learning, Game-Based Learning, Serious Games, Pervasive Games

*In Conjunction with the ACM In-Cooperation Mensch und Computer 2024 Conference in Karlsruhe, Germany

Mensch und Computer 2024 – Workshopband, Gesellschaft für Informatik e.V., 01.-04. September 2024, Karlsruhe, Germany

© 2024 Copyright held by the owner/author(s). Publication rights licensed to GI.

https://doi.org/10.18420/muc2024-mci-ws01-106

1 Topic and content of the workshop

The "Gam-R – Gamification Reloaded" series is a regular international workshop on gamification and related topics. Gamification as a scientific concept for using game-like elements in a non-game context [3] is here to stay [8–13]. The outcomes of previous workshops were summarized and published to identify current and future gamification trends and to serve as the foundation for the new focus of the workshop [6]. We strongly suggest and expect authors for this workshop to use the results of this publication [6] to align their submissions within the gamification field and the workshop's intention. In addition, we invite for submission of closely related manuscripts for topics about serious games, game-based learning, or games with a purpose, to name a few.

From a scientific standpoint, gamification can boost motivation for education, interact with health-related issues, encourage sustainable consumption, and improve consumer loyalty, among other things [2, 6]. Furthermore, additional domains of application have recently been introduced, which, among other things, are now coming into focus and will be explored at this workshop as well, e.g., artificial intelligence (AI) and machine learning (ML) [5, 17] augmented reality (AR) [4], virtual reality (VR) [16], mixed reality (MR) [14], or Internet of Things (IoT) [1].

Researchers and practitioners are invited to present and discuss new research ideas during the workshop. Additionally, applications or studies on gamification that fulfill high scientific standards are valued. Experts can then discuss the accepted papers during the workshop. This allows the community to provide feedback to the authors for future projects.

We accept submissions on the following topics, although this is not an exhaustive list:

- Artificial Intelligence (AI) and Machine Learning (ML)
- Open Science and Citizen Science
- Augmented (AR), Virtual (VR), and Mixed Reality (MR)
- Educational, Psychological, or Didactic Aspects of Gamification
- Internet of Things (IoT)
- Analog and Hybrid Gamification
- · Gamification for Individuals with Disabilities
- Ethical Aspects of Gamification
- Sustainability

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for third-party components of this work must be honored. For all other uses, contact the owner/author(s).

Mazarakis, Sailer-Frank and Voit

This list represents emerging gamification application fields. Of course, other topics such as adaptive and personalized gamification, gamification definitions and theories, serious games and gamebased learning, and many other topics are welcome. As a result, we also seek contributions about previously identified research gaps, such as the ones listed below:

- Focusing on the research area, particularly definitions and theories for gamification and beyond.
- Analyzing game design elements, particularly the individual-, joint- and user-related effects.
- How to replace PBL (points, badges, and leaderboards) with other game design elements.
- Identifying long-term effects in empirical studies and how to conduct experiments.

Accepted papers will be published in the open-access GI Digital Library and are indexed by Google Scholar and others. At least one author of each accepted submission must attend the workshop in-person and on-site and register for at least one day of the conference. The website for the workshop can be found at https: //www.gamification-reloaded.com/ or https://www.gam-r.de/.

2 Objectives, planned activities, and target audience of the workshop

This scientific workshop intends to accomplish the following two objectives for researchers and practitioners interested in gamification:

- Presentation and debate of fresh concepts, solutions, and research studies on gamification.
- To meet and network with gamification researchers for future collaboration.

The workshop consists of two parts. Both of them will be in-person events and will conducted on-site with no hybrid options. The first part includes the presentation and in-depth discussion of selected papers, which will also be included in the workshop proceedings of the Mensch und Computer 2024 conference. The organizing team will select the papers according to a preceding peer review, whereby at least three reviewers will evaluate each submission. In previous years, between two and four submissions were selected for presentation, which is also the intention for 2024. This first part will last between one and a half and three hours and thus last the morning.

Like in previous years, in the second part of the workshop, a hands-on workshop on a topic yet to be determined will occur. One possible idea would be to discuss how to critically examine and evaluate existing gamification implementations, including ethical aspects. Participants will discuss together in a World-Café style manner. The active exchange between the community has proven to be a success factor of the workshop and will therefore be maintained. Although we have an open-end session, we expect this second part to last two or three hours.

2.1 Accepted submissions

Three out of seven submissions (acceptance rate: 43%) have been accepted for presentation at the workshop. The accepted submissions are briefly presented here:

- Sandra Birnstiel (University of Erlangen-Nuremberg) offers an inspiring composition about "Social Gamification in Team Sports - Design Concept and Preliminary Evaluation". Birnstiel examines the potential of gamification in team sports by designing and evaluating social gamification features tailored to support team unity in sports teams. A within-subjects field experiment was conducted with an amateur women's soccer team over four weeks, showing a significant increase in social identity despite the moderate participation of the team members.
- Leonie Lindemann, Philipp Goldbach, and Nicole Jochems (all from the University of Lübeck) have written a submission called "Leveling Up Gamification: Personalized Progress Indicators for Young Adults in Social Contexts - A Pre-Study". The authors explored how the individual needs of young adults within a socio-spatial context can be designed to indicate progress via gamification. A player-type analysis forms the basis for the design of a mobile app, which is readily available for future studies.
- Philip Weber, Torsten Schneider, Thomas Ludwig (all from the University of Hagen), and Benjamin Linz (University of Siegen) will present a paper called "Too Hidden for Research? - The Quest to Understand the Potential of Hidden Game Mechanics for Gamification Research". They investigate less visible or hidden game mechanics, in particular, often invisible to players. The authors define Hidden Game Mechanics and situate them within existing gamification and game design terminology to propose a first iteration of a framework for understanding them.

7th International Workshop "Gam-R - Gamification Reloaded"

MuC'24, 01.-04. September 2024, Karlsruhe, Germany

3 Call for Papers

* CALL FOR PAPERS

* 7th International Workshop Gam-R – Gamification Reloaded * in conjunction with ACM In-Cooperation Mensch und Computer

conference (MuC 2024) * Karlsruhe, Germany

*

.

* Important dates

* June 14, 2024 – this is the final deadline; there will not be any extension!

* June 28, 2024 - notification about acceptance

* July 19, 2024 - submission of the final paper

*

* September 01 - workshop takes place in Karlsruhe, Germany * https://gamification-reloaded.com/

* TOPICS

* We accept submissions on the following topics, although the list is not exhaustive:

* Artificial Intelligence (AI) and Machine Learning (ML)

* Open Science and Citizen Science

* Augmented (AR), Virtual (VR), and Mixed Reality (MR)

* Educational, Psychological, or Didactic Aspects of Gamification

* Internet of Things (IoT)

* Analog and Hybrid Gamification

* Gamification for Individuals with Disabilities

* Ethical Aspects of Gamification

* Sustainability

* PUBLICATION/PROCEEDINGS

* Accepted papers will be published in the open access GI Digital Library and are

* indexed by Google Scholar and others.

* Please read the full Call for Paper here: https://www.gamification-reloaded.de/call-for-papers-2/

4 Future of the workshop (point of view by Athanasios Mazarakis)

The regular and continuous organization of a workshop on gamification over seven consecutive years, including the challenges of the COVID-19 pandemic, is unprecedented in the German-speaking area. At the same time, the workshop is currently one of the longestrunning workshops at the Mensch und Computer conference¹. There is already a publication with the results of the Gam-R workshop series [6], and another with this year's results is being planned. Nevertheless, it is time to consider whether a workshop in this form should be continued or if alternative venues and events are more enjoyable for the community.

In the past, there have been attempts to take a scientific and sustainable approach to establish a workshop about gamification [15], whereby Athanasios Mazarakis was able to meet Jörg Niesenhaus, one of the organizers of the Press Play² workshop, presumably already in 2009. At that time, I (Athanasios) was not really convinced by the benefits of gamification, which later, thankfully, changed fundamentally. Other attempts to raise gamification to the level of an academic conference series include the Startplay conference², which has been held twice so far, and the GamiFIN conference³. While the continuation of the former is unclear, the GamiFIN conference will enter its ninth round in 2025 and is, therefore, only one year older than the Gam-R workshop. The established Gam-R workshop is particularly respected for the extensive discussion of peer-reviewed contributions. While other workshops and conferences virtually eliminate discussion time, it is an integral part of the Gam-R workshop to reserve 2/3 of the time to discuss the papers.

The first Gam-R workshop was held in 2018 in Dresden, Germany [8], to establish gamification in the scientific HCI community. At the same time, gamification was subsequently identified at the Mensch und Computer conference in Regensburg 2017⁴ as a field of application for HCI. This has been maintained for the coming years, meaning that gamification is indeed here to stay. Gamification is considered a standard in research and practice and is also making its way into the field of human-centered AI [7].

Gamification as a research topic is still making considerable advancements in German-speaking countries, especially for practitioners. A gamification working group was founded in the German UPA in 2024, which is currently very active⁵. Unfortunately, a similar attempt was unsuccessful a few years ago regarding a possible cannibalization effect with an existing specialist group⁶. Although there are certainly similarities to the field of research in Entertainment Computing, sadly, little has happened in this specialist group in the last decade. One might want to state that a scientific discipline has fallen victim to practice. However, the opposite is probably the case. The German UPA recognized the opportunity because gamification had established itself in practice without losing its scientific claim. At the same time, there are still many open research questions, as this workshop has already shown [6].

⁶https://fg-enc.gi.de/

¹https://muc2024.mensch-und-computer.de/en/program/workshops/

²https://startplay-conference.com/

³https://gamifinconference.com/

⁴https://muc2017.mensch-und-computer.de/cfp/mensch-computer-interaktion/

⁵https://germanupa.de/arbeitskreise/arbeitskreis-gamification

Therefore, the offer to anyone concerned: If you are interested in co-organizing the Gam-R workshop, please contact the main organizer Athanasios Mazarakis at gamr@mazarakis.de. We welcome anyone enthusiastic about gamification and its adjacent fields, regardless of their background in science or practice. It would be great to continue this proven workshop in established venues as well as in new venues.

5 Organizing team

Three researchers organize the workshop:



Athanasios Mazarakis is a former computer science postdoc at Kiel University, Germany, now working as a project manager and senior researcher at ZBW - Leibniz Information Centre for Economics on gamification and incentives in the interdisciplinary field between computer science, economics, and psychology for more than a decade. He is currently working on the project "Connect & Collect: AI-based Cloud for Interdisciplinary Networked Research and Innovation for Future Work (CoCo)," a project founded by the Federal Ministry of Education and Research in Germany. Numerous publications on gamification and successful workshop organizations (also at the Mensch und Computer conference series) complete his competence profile.



Sailer-Frank Sabrina studied business education and holds a M.Sc. in business education and educational management from the University of Bamberg. Her main research fields are gamification in business education, higher education development, digitisation of business education (vocational schools), and recognition of qualification. Since 2020, she has been a research associate at the University of Bamberg (Professorship of Business Education and Educational Management, Prof. Silvia Annen) while pursuing a Ph.D. about the usage of player types in higher education to address individual preferences and increase motivation.



Thomas Voit has been teaching and researching as a professor on gamification as a business informatics specialist at the Nuremberg University of Applied Sciences since 2014. Before joining the university, he was employed in the automotive industry, where he initiated and led a gamification project to motivate managers to adopt new leadership roles. Since the end of 2016, he has led the gamification research project EMPAMOS in cooperation with the German Games Archive Nuremberg.

Acknowledgments

The CoCo project is funded by the Federal Ministry of Education and Research (02L19C001). We would also like to thank Sophie Jent, Alexander Bartel, and Monique Janneck, who were part of this journey at the beginning (2018-2020/2021) and supported the organization of the workshop. 7th International Workshop "Gam-R - Gamification Reloaded"

References

- Abdelhadi Alla and Khalid Nafil. 2019. Gamification in IoT Application: A Systematic Mapping Study. Procedia Computer Science 151 (2019), 455–462. https://doi.org/10.1016/j.procs.2019.04.062
- [2] Daniel Cermak-Sassenrath. 2019. Current Challenges in Gamification Identified in Empirical Studies. In Proceedings of the 18th European Conference on e-Learning (ECEL), Rikke Ørngreen, Mie Buhl, and Bente Meyer (Eds.). Academic Conferences and Publishing International Limited, Reading, UK, 119–127.
- [3] Sebastian Deterding, Dan Dixon, Rilla Khaled, and Lennart Nacke. 2011. From Game Design Elements to Gamefulness: Defining Gamification. In Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments - MindTrek '11. ACM, New York, New York, USA, 9–15.
- [4] Ramy Hammady, Minhua Ma, and Nicholas Temple. 2016. Augmented Reality and Gamification in Heritage Museums. In Serious Games (Lecture Notes in Computer Science), Tim Marsh, Minhua Ma, Manuel Fradinho Oliveira, Jannicke Baalsrud Hauge, and Stefan Göbel (Eds.). Springer International Publishing, Cham, 181–187. https://doi.org/10.1007/978-3-319-45841-0_17
- [5] Alireza Khakpour and Ricardo Colomo-Palacios. 2021. Convergence of Gamification and Machine Learning: A Systematic Literature Review. *Technology, Knowledge and Learning* 26, 3 (2021), 597–636. https://doi.org/10.1007/s10758-020-09456-4
- [6] Athanasios Mazarakis. 2021. Gamification Reloaded: Current and Future Trends in Gamification Science. *i-com* 20, 3 (Nov. 2021), 279–294. https://doi.org/10. 1515/icom-2021-0025 Publisher: Oldenbourg Wissenschaftsverlag.
- [7] Athanasios Mazarakis, Christian Bernhard-Skala, Martin Braun, and Isabella Peters. 2023. What Is Critical for Human-Centered AI at Work? – Toward an Interdisciplinary Theory. Frontiers in Artificial Intelligence 6 (2023), 62–79. https://doi.org/10.3389/frai.2023.1257057
- [8] Athanasios Mazarakis, Sophie Jent, Alexander Bartel, and Monique Janneck. 2018. Gam-R – Gamification Reloaded. In Mensch und Computer 2018 - Workshopband. Gesellschaft für Informatik e.V., Bonn, Germany, 1–2. https://doi.org/10.18420/ muc2018-ws03-0132
- [9] Athanasios Mazarakis, Sophie Jent, Alexander Bartel, and Monique Janneck. 2019. Gam-R – Gamification Reloaded. In Mensch und Computer 2019 - Workshopband.

Gesellschaft für Informatik e.V., Bonn, Germany, 1–2. https://doi.org/10.18420/muc2019-ws-242

- [10] Athanasios Mazarakis, Sophie Jent, Alexander Bartel, and Monique Janneck. 2020. Gam-R – Gamification Reloaded. In Mensch und Computer 2020 - Workshopband. Gesellschaft für Informatik e.V., Bonn, Germany, 1–2. https://doi.org/10.18420/ muc2020-ws103
- [11] Athanasios Mazarakis, Sophie Jent, and Thomas Voit. 2021. Gam-R Gamification Reloaded. In Mensch und Computer 2021 - Workshopband. Gesellschaft für Informatik e.V., Bonn, Germany, 1–3. https://doi.org/10.18420/muc2021-mci-ws11-120
- [12] Athanasios Mazarakis and Thomas Voit. 2022. 5th International Workshop "Gam-R – Gamification Reloaded". In Mensch und Computer 2022 - Workshopband. Gesellschaft für Informatik e.V., Bonn, Germany, 1–3. https://doi.org/10.18420/ muc2022-mci-ws08-115
- [13] Athanasios Mazarakis and Thomas Voit. 2023. 6th International Workshop "Gam-R – Gamification Reloaded". In Mensch und Computer 2023 - Workshopband. Gesellschaft für Informatik e.V., Bonn, Germany, 1–3. https://doi.org/10.18420/ muc2023-mci-ws08-111
- [14] Diego Molero, Santiago Schez-Sobrino, David Vallejo, Carlos Glez-Morcillo, and Javier Albusac. 2021. A Novel Approach to Learning Music and Piano Based on Mixed Reality and Gamification. *Multimedia Tools and Applications* 80, 1 (2021), 165–186. https://doi.org/10.1007/s11042-020-09678-9
- [15] Ralf Schmidt, Jörg Niesenhaus, and Sandra Schering. 2015. Press Play² Gamification in Wissenschaft und Praxis. In Mensch und Computer 2015 – Workshopband. De Gruyter Oldenbourg, Berlin, 353–357.
- [16] Matthias Süncksen, Henner Bendig, Michael Teistler, Markus Wagner, Oliver Johannes Bott, and Klaus Dresing. 2018. Gamification and Virtual Reality for Teaching Mobile X-Ray Imaging. In Proceedings of the IEEE 6th International Conference on Serious Games and Applications for Health (SeGAH). 1–7. https: //doi.org/10.1109/SEGAH.2018.8401364 ISSN: 2573-3060.
- [17] Thomas Voit, Alexander Schneider, and Mathias Kriegbaum. 2020. Towards an Empirically Based Gamification Pattern Language using Machine Learning Techniques. In 32nd IEEE Intl. Conference on Software Engineering Education & Training (CSEE&T). 329–332. https://doi.org/10.1109/CSEET49119.2020.9206223 ISSN: 2377-570X.