# GamifIR 2016 – SIGIR 2016 Workshop on Gamification for Information Retrieval

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#### Abstract

The third workshop on Gamification for Information Retrieval (GamifIR) took place on the 21th of July 2016 in conjunction with SIGIR 2016 in Pisa, Italy. It was the first GamifIR held in conjunction with the SIGIR, the first and second GamifIR workshops were both colocated with ECIR. The workshop program included one invited keynote presentation, seven paper presentations and a discussion session. The keynote presentation stated the necessity of proper theory for gamification design and resulting opportunities. The paper presentation covered studies on diverse areas and approaches for the application of gamification.

#### 1 Introduction

Given the enormous response to the first [4] and second GamifIR [5] workshops that were both co-located with ECIR, GamifIR'16 was accepted to be organized in conjunction with the SIGIR conference. Our main motivation as organizers of the workshop was to address a broader research community with the range of emerging challenges and opportunities associated with Information Retrieval. The engagement and participation of users is often crucial for IR challenges. Gamification is the approach to learn from often fun, creative and engaging games. In principle, it is about understanding games and applying game design elements in a non-gaming environments. In the context of Information Retrieval (IR) it is not hard to imagine that many tasks could benefit from gamification techniques. Besides several manual annotation tasks of data sets for IR research, user participation is important in order to gather implicit or even explicit feedback to feed the algorithms. Gamification, however, comes with its own challenges and its adoption in IR is still in its infancy.

## 2 Topics of Interest

In this workshop we wanted to discuss and learn from planned and already executed studies and applications that use gamification to trigger users' intrinsic motivation. Therefore we called for the submission of position papers as well as novel research papers and demos addressing problems related to gamification in IR. Topics of interest included but were not limited to:

- Gamification approaches in a variety of contexts, including document annotation and ground-truth generation; interface design; information seeking; user modelling; knowledge sharing
- Gamification in Crowdsourcing
- Gamification to IR teaching
- Gamification in recommender systems and apps
- User engagement and motivational factors of Gamification
- Player types, contests, cooperative Gamification
- Long-term engagement
- Search challenges
- Gamification design
- Applied game principles, elements and mechanics

# 3 Keynote and Paper Presentations

Continuing the tradition of inviting keynote speakers to GamifIR, we were very pleased to welcome Sebastian Deterding, who talked about *Desperately Seeking Theory: Gamification*, *Theory, and the Promise of a Data/AI-Driven New Science of Design* [2]. Sebastian is one of the leading experts in the field of gamification. In his talk, he discussed a number of challenges and opportunities for further research on gamification.

Seven full papers were selected by the programme committee from a total of 11 submissions. Each submitted paper was reviewed by three members of an international programme committee. All papers are published in the workshop proceedings [6] and were presented at the workshop. For a very detailed summary on the keynote and paper presentations we recommend our workshop report at The Informer newsletter of the BCS Information Retrieval Specialist Group<sup>1</sup>. The list of papers includes:

- Matthew Barr, Kay Munro and Frank Hopfgartner. Increasing Engagement with the Library via Gamification [1]
- Laura Guillot, Quentin Bragard, Ross Smith, Dan Bean and Anthony Ventresque. Towards a Gamified System to Improve Translation for Online Meetings [3]
- Yuan Jin, Mark Carman and Lexing Xie. A Little Competition Never Hurt Anyone's Relevance Assessments [7]
- Ioannis Karatassis and Norbert Fuhr. Gamification for WebSAIL [8]
- Andreas Leibetseder and Mathias Lux. Gamifying Fitness or Fitnessifying Games: a Comparative Study [9]
- Michael Meder, Till Plumbaum and Sahin Albayrak. Learning Gamification Design An Usability First Approach for the Enterprise Infoboard Experiment [10]

<sup>1</sup>http://irsg.bcs.org/informer/2016/08/gamification-workshop/

• Giorgio Maria Di Nunzio, Maria Maistro and Daniel Zilio. Gamification for Machine Learning: The Classification Game [11]

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#### References

- [1] M. Barr, K. Munro, and F. Hopfgartner. Increasing engagement with the library via gamification. In *Proceedings of the Third International Workshop on Gamification for Information Retrieval co-located with 39th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2016)*, Pisa, Italy, July 21, 2016., pages 2–6, 2016.
- [2] S. Deterding. Desperately seeking theory: Gamification, design, data, machine learning, and the promise of double loop learning systems. In *Proceedings of the Third International Workshop on Gamification for Information Retrieval co-located with 39th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2016), Pisa, Italy, July 21, 2016.*, page 1, 2016.
- [3] L. Guillot, Q. Bragard, R. Smith, D. Bean, and A. Ventresque. Towards a gamified system to improve translation for online meetings. In *Proceedings of the Third International Workshop on Gamification for Information Retrieval co-located with 39th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2016), Pisa, Italy, July 21, 2016.*, pages 21–28, 2016.
- [4] F. Hopfgartner, G. Kazai, U. Kruschwitz, and M. Meder, editors. *Proceedings of the First International Workshop on Gamification for Information Retrieval, GamifIR@ECIR* '14, Amsterdam, The Netherlands, April 13, 2014. ACM, 2014.
- [5] F. Hopfgartner, G. Kazai, U. Kruschwitz, and M. Meder, editors. Proceedings of the Second International Workshop on Gamification for Information Retrieval co-located with the 37th European Conference on Information Retrieval (ECIR 2015), Vienna, Austria, March 29, 2015, volume 1345 of CEUR Workshop Proceedings. CEUR-WS.org, 2015.

- [6] F. Hopfgartner, G. Kazai, U. Kruschwitz, and M. Meder, editors. Proceedings of the Third International Workshop on Gamification for Information Retrieval co-located with 39th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2016), Pisa, Italy, July 21, 2016, volume 1642 of CEUR Workshop Proceedings. CEUR-WS.org, 2016.
- [7] Y. Jin, M. J. Carman, and L. Xie. A little competition never hurt anyone's relevance assessments. In *Proceedings of the Third International Workshop on Gamification for Information Retrieval co-located with 39th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2016)*, Pisa, Italy, July 21, 2016., pages 29–36, 2016.
- [8] I. Karatassis and N. Fuhr. Gamification for websail. In Proceedings of the Third International Workshop on Gamification for Information Retrieval co-located with 39th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2016), Pisa, Italy, July 21, 2016., pages 15–20, 2016.
- [9] A. Leibetseder and M. Lux. Gamifying fitness or fitnessifying games: a comparative study. In Proceedings of the Third International Workshop on Gamification for Information Retrieval co-located with 39th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2016), Pisa, Italy, July 21, 2016., pages 37–44, 2016.
- [10] M. Meder, T. Plumbaum, and S. Albayrak. Learning gamification design an usability first approach for the enterprise infoboard experiment. In *Proceedings of the Third International Workshop on Gamification for Information Retrieval co-located with 39th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2016)*, Pisa, Italy, July 21, 2016., pages 7–14, 2016.
- [11] G. M. D. Nunzio, M. Maistro, and D. Zilio. Gamification for machine learning: The classification game. In *Proceedings of the Third International Workshop on Gamification for Information Retrieval co-located with 39th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2016)*, Pisa, Italy, July 21, 2016., pages 45–52, 2016.