Preface to the Third International Workshop on Personalizing Persuasive Technologies

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1   Introduction

As Persuasive Technologies (PTs) advance in both complexity and application areas, there is an increasing need to personalize them. Personalizing Persuasive Technologies (PPT) is the act of tailoring them to the target audience to increase their relevance, motivational appeal, user experience, and hence their overall effectiveness at promoting desirable behaviours [1]. Previous research has shown that individual characteristics such as personality type [2–5], age [6, 7], gender [8, 9], gamer type [10–13], and culture [14, 15] as well as an individual's susceptibility to persuasive attempts [16, 17] can be useful dimensions for tailoring persuasive technologies. However, there are still many unexplored issues pertaining to designing, implementing, and evaluating personalized persuasive systems and the efficacy of personalized persuasive systems in different domains. Therefore, this workshop aimed to provoke discussions and advance research in this area by bringing together researchers and practitioners to discuss theoretical and practical considerations for developing and evaluating PPT.

In April 2017, we had the pleasure to organize the 3rd edition of the PPTs Workshop in Waterloo, Canada. The workshop offered researchers and practitioners from interdisciplinary backgrounds a platform to present their work and discuss their ideas on the opportunities and challenges facing the personalizing persuasive technologies research community. A total of 12 papers were accepted and presented at the workshop. The workshop also witnessed a keynote presentation from Prof. Julita Vassileva, from the University of Saskatchewan, Canada. Each submission went through a thorough peer-review process and was assessed by at least two reviewers, using the single-blind peer-review approach. The submissions were evaluated based on their scientific quality and relevance to the PPTs workshop.

The accepted contributions covered three broad areas of Personalizing Persuasive Technologies: Personalization Theories, Tools, and Methods; Personalized Applications: eHealth, eCommerce, eLearning, Mobility and Social Network; and Personalized Games and Gamification.

2   Personalization Methods, Tools, and Theories

In this area, current research issues of interest include how to achieve personalization in the context of persuasive technologies; who to personalize for, and whether there is a need to personalize are. Many submissions to the PPT'18 contributed to this direction:

Ralph et al. [18], in their paper "*Personalizing Virtual Experiences: Metrics for Persuasive Prototypes*", proposed a hybrid approach for evaluating the persuasiveness of personalized virtual reality.

Oyibo et al. [19], in their paper "*The Susceptibility of Africans to Persuasive Strategies : A Case Study of Nigeria*", investigated how persuasive technologies could be tailored to Africans by exploring the susceptibility of Nigerians to the six persuasive principles by Cialdini – *Reciprocity, Scarcity, Authority, Consensus,* and *Liking*.

Abdullahi et al. [20], in their work titled "*The Influence of Cognitive Ability on the Susceptibility to Persuasive Strategies*", explored how PT can be personalized to individual users based on their cognitive level.

Similarly, Adaji et al., in their paper "*Understanding Low Review Ratings in Online Communities. A Personality Based Approach*", explored the relation between review quality, reviewers' personality and the persuasiveness of reward for reviewers of various personalities.

3   Personalized Persuasive Applications: eHealth, eCommerce, and Other Domains

Many submissions to this workshop explored the domain dependency of the efficacy of personalized persuasive technologies by analyzing, designing, and evaluating PPT targeted at various behavior domains including Health and E-commerce.

Haque et al. [21], in their work "*Measuring the Influence of a Persuasive Application to Promote Physical Activity*", investigated the efficacy of a theory-driven persuasive application for motivating physical activity in an office environment.

Adaji et al. [22], in their work "*Shopper Types and The Influence of Persuasive Strategies in E-Commerce*", investigated the relationship between the six persuasive principles by Cialdini – *Reciprocity, Scarcity, Authority, Consensus,* and *Liking* and shopper's personality type.

Nkwo et al. [23] analysed two popular African eCommerce sites and deconstructed the personalization approaches employed to attract customers and promote sales

among African audience in their work titled "*E-Commerce Personalization in Africa : A Comparative Analysis of Jumia and Konga.*"

Orji et al. [24], in their paper "*Personalized Persuasion for Promoting Students' Engagement and Learning*", designed a personalized persuasive system to engage learners and promote learning among university students using social influence strategies.

Anagnostopoulou et al. [25], in their paper "*How to not be Annoying: Adjusting Persuasive Interventions Intensity when Nudging for Sustainable Travel Choices*", proposed an approach for personalizing persuasive technologies by adjusting the intensity of persuasive messages.

Arya et al. [26], in their work "*User Trust Graph : A Model to Measure Trustworthiness*", explored how to evaluate the trustworthiness of users of tweet graphs in the context of persuasive recommender systems.

4   Personalized Games and Gamification

Ndulue C. and Orji R [27], in their work "*STD PONG : A Personalized Persuasive Game for Risky Sexual Behaviour Change in Africa*", described the design of a personalized persuasive game for motivating risky sexual behaviour change among African youths.

Tondello G. and Nacke L. E. [28], in their paper "*Towards Customizing Gameful Systems by Gameful Design Elements*", described an approach for personalizing gameful systems by allowing users to select their preferred design element.

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