

## Preface

The Fourth European Games for Health Conference 2014 (GFHEU 2014) brings together researchers, medical professionals and game developers to share information about the impact of games, playful interaction and game technologies on health, health care and health policy. Over two days, more than 500 attendees will participate, in over 13 sessions provided by an international array of more than 50 speakers, cutting across a wide range of activities in health and well-being. Conference topics include exergaming, physical therapy, disease management, health behaviour change, biofeedback, scientific validation, rehab, epidemiology, training, cognitive health, nutrition and education.

As we are aiming for innovation and further integration of research and game development in health care, this year we continued to add an extra academic track to the conference. These proceedings are the outcome of that integration and contain 20 full papers presented at the conference in the form of oral presentations or posters. In this volume we have opted for not breaking down the papers into separate chapters. Our previous experience has taught us that such divisions are always a bit artificial, and so much more when dealing with health games. The academic track is interwoven into the conference's broader structure to further promote dialogue between academics and practitioners working within the fields of Game & Play Studies, Design Research, Game Development and the Medical Community, exploring and innovating within the greater area of health. This track is labelled 'Share your Research' in your conference program.

Yet, looking over the works submitted to this volume, few interesting trends are discerned.

### **Social relatedness and empowerment of the (end) user**

Not always following the predominately-paternalistic approach, health games aim to facilitate self-efficacy and allow people to take charge of their own health and wellbeing. Designers and doctors join together to empower the patients like never before. Games are not only regarded as products (applications) but also as services for a longstanding relationship between patients, doctors, relatives and care providers or between medical doctors and students, to learn the practice of medicine. Several papers in these proceedings address motivational issues and meaningful (adaptive) feedback to facilitate these longstanding relationships. Moreover it becomes practice to integrate the game, app or applied toy in already existing forms of therapy, educational practices or other application domains. Using the gaming's affinity with social play and the rising spreadability of media over social networking sites, the focus shifts from top-down to bottom-up and more participatory healthcare.

### **Theory and educational practice.**

The theory of games for health in health care settings is also gaining traction, such as modelling patients behaviour in clinical immersive environments targeting at medical education or the theoretical underpinning of exergames. Perhaps even more

important is to study the public acceptance of these applications, allowing the game designer to anticipate in the design of even better appreciated games and play experiences. A clear trend, happily supported by the Games4Health conference, is the increase of number of games used in professional education of medical doctors.

**Game mechanics, architecture and data.**

Digital games allow players to use advanced computational power, (haptic) devices, consoles, wearable's, visualization, persuasive technology and create immersive environments. Using the Oculus Rift in games for pain management is a good example, but also adaptive games that take into account the abilities of the individual players. As health games become further embedded in the toolsets of caretakers and patients alike, a call for standardization and new architectures arises. Whether in the form of building rigid data structures to share between platforms, or more particular recommendations for world-builders, the call for agreed frameworks is out there.

**Validation.**

As always, validation is a hot topic, but perhaps an interesting trend is emerging in coupling validation with design theory. No longer based on traditional validation techniques originating purely in the medical domain, validation through design is the next thing. Which means that a therapy, cure or rehabilitation can be validated on its effect but also can be used to evaluate and deepen the design (theory of) the game mechanics.

In view of this all, the GFHEU 2014 proceedings can be considered as a timely document that provides many new results and insights in the new field of Games for Health. We would like to thank all members of the Program Committee for their most valuable and highly appreciated contribution to the conference by reading submissions, writing reviews, and participating in the discussion phase. We hope to provide you with many pleasant and fruitful reading hours.

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