
Proceedings Paper:
Mandryk, Regan L., Mirza-Babaei, Pejman, Denisova, Alena et al. (2024) Games and Play SIG: Connecting Games Research to the Broader HCI Context. In: CHI EA '24:Extended Abstracts of the CHI Conference on Human Factors in Computing Systems. The ACM CHI conference on Human Factors in Computing Systems, 11-16 May 2024 ACM, USA.

https://doi.org/10.1145/3613905.3643986

Games and Play SIG: Connecting Games Research to the Broader HCI Context

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Research on games and play has been present at CHI since the first coonference in 1982. The community-building efforts of many volunteers has grown the games and play community within SIGCHI into a vibrant and active group of researchers, with a dedicated conference (CHI PLAY) that publishes its full papers in the GAMES track of the ACM PACMHCI journal. However, we there are members of the larger HCI community whose research and practice intersects with games and play—in topics such as emerging technologies; VR/AR/XR; theories of motivation, experience, and personality; metaverse; livestreaming; fan, and spectator communities; accessibility; and serious games—who may never have attended a games-specific conference. The purpose of this SIG is to offer a lightweight opportunity for CHI attendees to connect with the games and play research community. Our aim is to meet as a community, and to connect with HCI researchers who have not traditionally seen their work as part of games and play for networking and bi-directional idea exchange.

CCS Concepts: • **Human-centered computing → Interaction devices**; • **Information systems → Massively multiplayer online games**; • **Applied computing → Computer games**; • **Software and its engineering → Interactive games**.

Additional Key Words and Phrases: games, play, videogames, social VR, AR/XR, novel game interfaces, serious games, metaverse, theory, accessibility

ACM Reference Format:
Regan L. Mandryk, Pejman Mirza-Babaei, Alena Denisova, Guo Freeman, and Daniel Johnson. 2024. Games and Play SIG: Connecting Games Research to the Broader HCI Context. In . ACM, New York, NY, USA, 9 pages. https://doi.org/XXXXXXX.XXXXXXX

1 BACKGROUND

1.1 Games and Play Research at CHI

1.1.1 History of Games and Play Research at CHI. Games and Play research has a long history at CHI and the SIGCHI family of conferences, with the first CHI conference in 1982 featuring a full paper by Thomas W. Malone on the Heuristics for Designing Enjoyable User Interfaces: Lessons from Computer Games [37]—The 1981 precursor to CHI also featured a games-related poster [36] and panel [78]. Throughout the next 20 years, games, entertainment, and virtual worlds research were a present—but underrepresented—theme at the CHI conference. Throughout the 80s, 90s, and early 2000s, much of the game research at CHI appeared in the companion proceedings, as tutorials [46], panels [56], workshops [24], interactivity [15], or posters [43]—although there were exceptions, such as the 1999 full paper by Ishii et al. [29] on Ping Pong Plus. Furthermore, many of these early contributions related to drawing from game contexts to change HCI

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practices (e.g., [46, 56], with fewer considering 'fun' or entertainment as the outcome of interest (e.g., [15, 43]). In the early-2000s, CHI experienced growth in the game, play, and entertainment communities with a large increase in the number of extended abstract contributions and much slower increase in full papers and notes (e.g., [11, 18, 45, 70]) There was also increased interest on the experiential aspects of games and play as the research contribution (e.g., [45, 67]) and the HCI of games and virtual worlds (e.g., [12]), in addition to work considering how games could inform HCI practices (e.g., [17]) or be used to motivate human behaviour to accomplish non-game tasks (e.g., [70, 71]). In 2006, there were full papers on game-related topics at CHI in the double digits, suggesting that games research was becoming established within the mainstream of CHI, rather than as a fringe topic (e.g., [4, 5, 14, 27, 41, 53, 71–75].

In the last 20 years of games and play research at CHI, we have seen massive growth. In 2011, *Games and Entertainment* became a "featured community" at CHI conferences [34], lasting throughout the duration of the featured community program. Led initially by Regina Bernhaupt and Katherine Isbister, this effort helped to gather the disparate threads of HCI-related gaming research into a more cohesive unit, supporting the community building that was needed to bring these researchers together and establish games and play as a core domain within CHI. In 2014, the first CHI PLAY conference was held, chaired by Lennart Nacke, with Technical Program chairs T.C. Nicholas Graham, and paper chairs Regan Mandryk and Floyd Mueller [32]. In 2016, Games & Play became a subcommittee for full paper reviews at CHI (and also the first CHI papers subcommittee to meet virtually), chaired by Regan Mandryk, Floyd Mueller, and Kathrin Gerling [77]. In 2021, the CHI PLAY conference moved their publications into the PACMHCI journal as the GAMES track, with Regan Mandryk in the role of PACMHCI GAMES Supervisory Track Chair, and Kathrin Gerling and Elisa Mekler as paper chairs [40].

1.1.2 The Current SIGCHI Games and Play Research Community. The games and play community within SIGCHI is vibrant and still growing—in 2023, the CHI Games & Play subcommittee handled 131 full paper submissions [8], in 2024, they handled 149 full submissions [ibid], and CHI PLAY 2023 handled 178 complete full paper submissions [38]. At CHI PLAY, we ask authors to identify their contribution type; in 2023 our distribution was 23.7% empirical contributions that employed mixed methods, 20.3% qualitative contributions, 15.3% quantitative, 14.1% design artifacts, 13.6% technical artifacts, 6.2% theoretical, 5.6% meta-research, and 1.1% methodological [38] (see [39] for descriptions of the contribution types). Most recently, ACM *Interactions* magazine, the flagship magazine for the ACM's SIGCHI, has launched a new forum on games and play named *Play Time*, with Pejman Mirza-Babaei as the forum Editor, beginning with the November/December 2023 volume. The *Play Time* forum serves as a platform for discussions at the intersection of HCI and play, examining these dynamics through the perspectives of technology and the underlying infrastructure of games that influence our gaming experiences.

1.2 Beyond our SIGCHI Borders

Outside of CHI PLAY and CHI, there exists a thriving conference research community for games research that intersects with our own communities.

The Foundations of Digital Games (FDG) conference (in-cooperation with ACM, involving SIGCHI, SIGGRAPH, and SIGAI) publishes work on the HCI of games (i.e., Game Design, Studio Practices, and Novel Player Experiences; Game Analytics and Visualization; Games Beyond Entertainment), along with contributions within tracks of Technical Game Development, Game Artificial Intelligence, Game Criticism and Analysis, and Games Pedagogy.

IEEE has several conference venues related to games research. In particular, there is overlap between our community and their conference on Games, Entertainment, and Media (GEM), and the IEEE Conference on Games (COG).

The Digital Games Research Association (DiGRA) has a long-standing community focused on games research, that has been running a conference since 2002. Grounded in the humanities and social sciences, DiGRA welcomes submissions related to Philosophy and Theory of Play & Games; Game Analyses, Criticism, and Interpretation; Game History and Cultural Context; Play and Players; Game Design, Production, and Distribution; and Serious Games and Education. They also publish a quarterly open-access journal.

The International Communications Association (ICA) has been publishing work related to games through their Games Studies Division and their pre/post conference structures.

Although these academic research conferences are active and vibrant communities, the largest games conference is the annual game developer's conference (GDC) held in San Francisco each year. This conference attracts more than 25,000 attendees annually, and many members of our games and play community members have presented at or attended GDC. There are also specific smaller industry conferences, of which the most relevant to HCI is the GamesURSummit, sponsored by the Games Research & User Experience (GRUX) SIG of the International Game Developer's Association.

Outside of conferences, there are also a number of game-specific journals through various publishers that consider work from the perspective of technical games research (e.g., *IEEE Transactions on Games*), media and communications (e.g., *Journal of Media Communications*, *New Media & Society*), serious games (e.g., *Games for Health*, *JMIR Serious Games*), or cultural studies and ethnographies of game contexts (e.g., Games and Culture: A Journal of Interactive Media). Within the ACM family, there is *Games: Research and Practice*, a journal launched in March 2023 that welcomes contributions from both academic and industry.

1.3 Why Research Games and Play in HCI?

Playing games on computers, consoles, or mobile devices (i.e., playing digital games) is a leading leisure activity, with consumers spending almost US $190 billion on gaming in 2023 [52]. An estimated 79% of the global online population play videogames and Millennials, GenZ, and Gen Alpha spend more time engaging with games and virtual worlds than they do watching TV [52]. Players engage casually, competitively, and even professionally through esports leagues and tournaments [19]. Players report a variety of motivations for engaging with games (e.g., [76]—there is also a significant amount of research that has explored what drives people to game (e.g., [62]), what keeps them engaged [ibid], and why different players choose different games (e.g., [58]).

Regardless of a player's motivation, playing digital games can benefit players by helping them recover from daily stressors [10], cope with life's challenges [28], improve executive function [25], build reading skills [3], and socially interact [57]—combating loneliness [13] and improving wellbeing [42]. Games help assess and treat mental and physical health (e.g., [1, 7]), help students learn [33], and can shift perspectives or promote behaviour change [51]. However, this same beloved activity can, in certain circumstances, lead to harms, including problematic gaming [69]—i.e., harmful play at the expense of healthy behaviours [30]—and exposure to discrimination, harassment, and toxicity [2] that can undermine gaming's benefits [22]. Through their contributions, researchers within HCI have massively informed society's understanding of the reasons why players engage, the ways in which they game, the experiences that they have during gaming, and the impact that gaming has on their relationships, wellbeing, and life. However, the player is not the only important user to consider—games research within SIGCHI also contributes to the gaming industry and to the development of public policy.

As supporting technology production and innovation is commonly seen as a key economic driver in modern societies, insights from studying games and play, which often reflect creative, artistic, and cultural values of technology, may also potentially lead to broader impacts beyond HCI and games research. For example, existing research on understanding

and mitigating indie game developers' challenges to innovate game production helps shed light on the shift of power and labor relations in technology workforce [16, 20, 21, 23, 54, 61] and increases the opportunities for and retention of previously underrepresented groups in technology production (e.g., women, minorities, and queer individuals) [16, 26]. The highlights of various legal and policy-driven barriers to indie game development across different countries and cultures may also inform effective decision/policy making at the regional and national levels to better support our creativity industry in the future. Beyond the effects on game development, SIGCHI-related research in games and play can inform policy makers, who are concerned with topics such as screen addiction, child wellbeing, content rating systems, and the influence of games on learning in schools. Members of our research community have provided expert input to councils of various world governments, not-for-profit organizations, game rating organizations, and health and welfare organizations who draft policies related to the social and health effects of digital gaming.

1.4 Summary of Context

The games research community is thriving both within and beyond our HCI community, with rich connections to the games industry, to public policy makers, and to researchers within cognate disciplines (e.g., health, education). Within HCI, there are numerous points of connection between the games and play community and the broader HCI landscape, with many researchers contributing equally to both contexts. It is these connections that we hope to identify and strengthen through this SIG.

2 GOALS OF THE SIG

Reflecting on the history and current context of the games and play community within CHI, we recognize the hundreds of researchers, students, academics, practitioners, and developers who contribute to our field. These people have benefitted by the community-building efforts outlined in section 1.1.1, but also through the various SIGs on games and play held at CHI over time by a variety of volunteer organizers (e.g., [6, 35, 47, 49, 50, 60, 65]). We also recognize that there are currently many members of the larger HCI community whose research and practice intersects with games and play. These members may never have attended a games-specific conference, and **the purpose of *this* SIG is to offer a lightweight opportunity for CHI attendees to connect with the games and play research community**. Our aim is to meet as a community, but importantly, to also reach out along the intersections to HCI researchers who have not traditionally seen their work as part of games and play for networking and bi-directional idea exchange. Together, we aim to:

(1) Gather the community of games and play academics, practitioners, and industry professionals together with HCI researchers who intersect with topics related to games and play.
(2) Identify directions for a shared research agenda and potential research collaborations to address key topics presented below.
(3) Strengthen ties between games and play research and other areas of research within the HCI context.
(4) Build the interactive games community and a structured networking opportunity to people new to the field.

2.1 Topics of the SIG

At CHI, we have gone through cycles of having games inform HCI practices or be used in service for non-game purposes, or having HCI inform how we conduct games research, or charting our own courses in parallel. The games and play community in HCI has an identity that has been shaped by our roots in the discipline, but has also adapted

to input from our games scholar colleagues in the cognate disciplines outlined in section 1.2. HCI games research has explored topics connected to HCI at large, including, but not limited to: novel interfaces (e.g., [63]), emerging technologies (e.g., [48]); VR/AR/XR (e.g., [31]); theories of motivation, experience, and personality (e.g., [58, 68]); metaverse technologies (e.g., [44]); livestreaming (e.g., [66]); fan, and spectator communities(e.g., [9]); and accessibility (e.g., [59]), inclusion (e.g., [64]), and discrimination (e.g., [55]). We currently see interesting intersections with a range of HCI topics, but would like to use the SIG to better articulate and communicate these intersections to the broader HCI community. We have a number of open questions that we plan to address, such as:

- In which ways can games and play research inform the broader HCI research context, and vice versa?
- Are there unique or similar methods to conduct games and play research vs. general HCI research methods?
- What theories prevalent in games and play versus HCI research might help understand and interpret human behaviour?
- As games and play research is well known for studying new and emerging technologies (e.g., AI in games, novel game interfaces, VR/AR/XR games), what might be the future trajectory of games and play research in the broader HCI community?
- How should games and play community position itself within the broader HCI community, considering our disciplinary roots and larger international community of game scholars?

3 ORGANIZER BIOS

Our organizers represent multiple continents, academic backgrounds, domains of research and practice, and methodological approaches, bringing a diversity of perspectives to the organizing team.

Regan Mandryk is a Professor of Computer Science at the University of Victoria, Canada. Her work focuses on how people of all ages use games and playful technologies for social, cognitive, and emotional wellbeing, how toxicity, discrimination, and harassment thwart the connection and recovery benefits provided by multiplayer games, and how we can design games and play technologies that benefit—not harm—player wellbeing.

Pejman Mirza-Babaei is an Associate Professor at Ontario Tech University. He is a co-editor of the Games User Research (2018) book and a co-author of The Game Designer's Playbook: An Introduction to Game Interaction Design (2022). His research and professional work is carried out in collaboration with more than 25 companies spanning different sectors.

Alena Denisova is a Lecturer (Assistant Professor) at The University of York. Her research is on conceptualising and measuring the user experience of video games, with a particular focus on player's perceived challenge and uncertainty, and more recently, emotionally impactful player experiences – understanding how these experiences are shaped with the view to inform the design of games that promote such experiences.

Guo Freeman is an Associate Professor of Human-Centered Computing at Clemson University. Her work focuses on how interactive technologies such as multiplayer online games, esports, live streaming, and social VR shape interpersonal relationships and group behavior; and how to design safe, inclusive, and supportive social VR spaces to combat emergent harassment risks especially for marginalized users.

Daniel Johnson is a Professor of Computer Science at Queensland University of Technology. His work focuses on how videogames influence wellbeing, often through the lenses of Self-Determination Theory and the Dualistic Model of Passion. His current focus includes better understanding and minimising toxic and disruptive behaviour in online settings, including with children.

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