



Core Faculty Member [Dmitriy Babichenko, PhD](#) is a Professor of Practice at the University of Pittsburgh School of Computing and Information. His research focuses on the educational, behavioral, and clinical applications of serious and transformational games. Founder of Pitt's [Learning Technologies Lab](#) and annual [Games4Health](#) game jam, Dr. Babichenko hopes to design games to address childhood obesity and improve clinician training during the upcoming year.



The [Center](#)'s Julia Holber had the opportunity to ask Dr. Babichenko about his extensive industry experience, inspiration for Games4Health, and advice for promoting collaboration.

Julia: Can you tell us about your training?

Dmitriy: I have an undergraduate degree in history, a Master's degree in informational sciences, and a PhD in computing and information.

Julia: You also have quite a bit of industry experience.

Dmitriy: Yes. Normally people get their academic credentials and then decide whether to go into industry or academia. I did the opposite. I started in the industry as a software engineer, then as an IT consultant, and then I managed large scale projects for different companies. After about 16 years in the industry, I decided to get a PhD.

Julia: What made you decide to pursue a PhD?

Dmitriy: That decision was almost accidental, actually. I finished my Master's degree about eleven years ago at the School of Information Sciences – this was before it became the [School of Computing and Information](#). The School then asked me to come back and teach a few classes based on my industry experiences. I taught for two years, and when a faculty position opened up, the Department Chair called and asked if I'd be interested in applying. As a full-time faculty, I became very interested in a particular line of research: the use of serious games and simulations for education, behavioral transformation, and clinical applications.

Julia: Tell us a bit more about this line of research. What exactly are serious and transformational games?

Dmitriy: When most people think about games, they automatically think about entertainment. Serious games are designed for purposes other than entertainment, so for education, improving communication, training. A subset of serious games is transformational games, and those are designed to transform some aspect of human behavior. Through game play or through a particular game mechanic or through learning, the idea is that if someone plays the game it will somehow shape his or her behavior.

Julia: Can you give us some examples of how these games are used?

Dmitriy: One example we commonly see in the literature is a game being used to help shift people who suffer from anxiety and panic attacks. The game is designed to shift someone's focus, break the cycle of the panic attack, and derail the train of thought. Schell Games is also working on [a project aiming to change perception of sexual activity among teenagers](#). There have been studies showing that if teenagers postpone their sexual activity by just one year it reduces the chance of accidental pregnancy by a significant percentage. These are just two examples of transformational games.

Julia: In addition to your research, teaching, and industry experience, for the last two years you've hosted [Games4Health](#), a "game jam" for creating projects to address critical health issues. How did this idea originate?

Dmitriy: As a faculty member, I judged several Deloitte case competitions. Deloitte (the consulting company) presents students with a complex case study, and teams had to build a solution to then present. The panel of judges was made up of faculty from the industry and clients. It's a really interesting experience. I've also participated in a number of hackathons, both as a participant and as an

organizer, where over the course of 24 hours, you have to build a technical solution to a problem. So I was familiar with similar programs and how interesting solutions often arise from multidisciplinary teams.

Like many great ideas, though, Games4Health began with alcohol. Two of my friends and collaborators are from the school of pharmacy- [Dr. Lorin Grieve](#) and [Dr. Ravi Patel](#). We've worked on a few projects together, published papers together, and we also go out drinking together. One night we were at a bar, discussing a few game related projects and trying to lay out the research trajectories. One of us said, hey why don't we do a game challenge and see if we can get a bunch of students working on this project? Maybe they could come up with a really great solution that we haven't thought of. We all loved the idea and began talking with groups all over campus. [Dr. Rollman](#) was one of the people I ended up sitting down with. A lot of people got really excited about the project, especially about creating teams of students from different disciplines.

Julia: Have you been successful in creating these multidisciplinary teams? I imagine that's harder than it might sound.

Dmitriy: It's definitely been a challenge. As a university, we're siloed. There are few situations where a psychology student is working with a computer science student- they're in very different courses and different groups. We're still struggling with this, but we've had a few successful very multidisciplinary projects come out of Games4Health. Right now we have a project where we have two English students working with two computer science students, and we're bringing in a music student to write the score for the game. We're looking to bring an anthropology student on board, as well. When people come together like this the projects end up being more creative and dynamic.

Julia: What advice do you have for other faculty who want to foster collaboration? How can more of us do this?

Dmitriy: My advice is: have patience. Seriously, it's hard work, and it won't happen overnight. The two times that we ran Games4Health, we had orientation events for students, where we served them pizza and they chose teams. The events felt like a fifth-grade school dance, where boys were standing on one side and girls were standing on the other side. Business students were in one corner, sociology students in another corner, computer science in another, and so on. To assign projects, we had to present an idea and basically take people's hands and drag them together to begin talking. You have to be very deliberate and host events like these.

Additionally, you have to be willing to meet people where they are. For example, there are a lot of hackathons on campus, and most are great events. The problem is every one of those events is primarily targeted to computing students. Computing students are used to the set-up of a hackathon- spending 24 hours together, not showering, eating crappy food, trying to produce a product. Other groups are not as used to an event like that. Moving forward, our group is discussing changing the format of the event and stretching it over two weeks, with an opening and closing event and office hours in between. This might allow for people with different schedules to find time to work together, and that's what we're striving to do!

