



Course program and reading list

Semester 0 Year 2023

School: Sammy Ofer School of Communications B.A

Persuasive Technology: Analysis and Design

Lecturer:

Dr. Beatrice Hasler hbeatrice@runi.ac.il

Course No.:	Course Type :	Weekly Hours :	Credit:
7608	Seminar	4	6

Course Requirements :	Group Code :	Language:
Final Paper	230760801	English

Prerequisites

Prerequisite:

4048 - Preparatory Course: Practicing Academic Writing
7046 - Qualitative Research Methods

 Course Description

This seminar provides an introduction to persuasive technology – a new interdisciplinary field of research and practice. It deals with the question of how interactive media can be designed to change people’s attitudes and behavior. It draws on theories and methods from multiple disciplines including communication, behavioral economics, psychology, and human-computer interaction to inform the design and evaluation of persuasive experiences delivered through different interactive media and applications. The seminar covers a broad range of interactive media, including social media, persuasive games and gamification, smart objects and environments, social robotics, and virtual and augmented reality. Applications of persuasive technologies will be discussed in a variety of domains,

including health and well-being, environmental sustainability, and (e)commerce.

In this year's Persuasive Technology seminar, a particular focus will be placed on the persuasive power of virtual and augmented reality (VR/AR) and the new opportunities that emerge for creating persuasive user experiences in the Metaverse.

In Semester A, students will learn the theory of persuasive design and analyze examples of persuasive technology applications in order to identify their underlying persuasion strategies and potential ethical issues. Building on this theoretical knowledge, students will conduct a seminar research project in Semester B in which they empirically test a research question related how these persuasive design principles can be applied in the Metaverse in an innovative, effective, and responsible way.

Assignments and Requirements:

- Class attendance and constructive participation in class discussion
- Reading the bibliographical material as preparation for class meetings
- Submission of (bi-)weekly assignments (Semester A)
- Submission of a Literature Review as a Mid-term Assignment (Semester A)
- Mandatory participation in VR/AR experiments (collecting 6 'research credits' = 90 minutes in total)
- Final presentation of the seminar research project (Semester B)
- Submission of a final seminar paper (research report) (individually or in pairs)

Course Subjects:

Semester A:

Week 1: Introduction to persuasive technology (key terms and concepts)

Reading assignment: Interview with BJ Fogg (Fogg & Euchner, 2019)

Week 2: Design principles of persuasive technology ("persuasive tools")

Reading assignment: Fogg, 2003 (chapter 3)

Week 3: Design principles of persuasive technology ("persuasive media")

Reading assignment: Fogg, 2003 (chapter 4)

Week 4: Design principles of persuasive technology ("persuasive social actors")

Reading assignment: Fogg, 2003 (chapter 5)

Week 5: Mobile persuasion

Reading assignment: Fogg, 2003 (chapter 8, pp. 185-194); Lathia et al., 2013

Week 6: Web persuasion

Viewing assignment: Nahai, N. (2014). How to use psychology to make people click. Talk at the Royal Institution, UK. <https://vimeo.com/103258566>

Week 7: Persuasion in online social networks

Reading assignment: Fogg, 2003 (chapter 8, pp. 195-207); Lee, 2011

Week 8: Persuasive games and gamification

Viewing assignment: Schüll, N. D. (2014). The dark side of habit. Talk at the Habit Summit, April 11th, 2014, San Francisco. <http://shorturl.at/cgkt0>

Week 9: Virtual reality for social change

Reading assignment: Farmer & Maister, 2017

Viewing assignment: Slater, M. (2020). Transforming the self through virtual reality. Frontiers in Virtual Reality Online Lecture Series, May 11, 2020. <http://shorturl.at/sAS16>

Week 10: How to conduct a literature review

Week 11: Persuasion in the Metaverse

Literature review assignment & Class discussion on the topic

This class meeting will be conducted in the metaverse...

Week 12: Ethics of persuasive technology

Reading assignment: Berdichevsky & Neuenschwander, 1999; de Oliveira & Carrascal, 2014

Week 13: Seminar research projects: Topics & Team building

Semester B:

Most of the meetings in Semester B will be individual meetings with the project teams to guide them through the process of conducting an empirical research project – starting with finding a research question, designing an experiment or survey/interview study, collecting and analyzing data. Occasional full class meetings will be scheduled for general instructions and peer feedback on the research progress. The seminar research projects will be presented in the final class meeting.



Course Goals

Students will be able to identify the persuasive strategies of existing behavior change technologies, apply principles of persuasive design to new emerging interactive media, and learn how to empirically study the effectiveness of persuasive technologies.



Grading

The final grade is composed of the mid-term assignment (literature review) (30%), and the final seminar paper (research report) (70%). Assignments in Semester A will be graded as

pass or fail. Failed assignments can be re-submitted. For missing each research credit (for participation in VR/AR experiments) and each missing assignments or failed assignment that is not resubmitted, one point will be deducted from the final grade. Bonus points for the final grade can be earned through special assignments (on demand/request).

Deadlines:

Submission of the final seminar paper: October 1st, 2023

Completion of the research credits collection: July 1st, 2023



Reading List

Mandatory readings:

Berdichevsky, D., & Neuenschwander, E. (1999). Toward an ethics of persuasive technology. *Communications of the ACM*, 42(5), 51-58.

de Oliveira, R., & Carrascal, J. P. (2014, April). Towards effective ethical behavior design. In *CHI'14 Extended Abstracts on Human Factors in Computing Systems* (pp. 2149-2154). ACM.

Farmer, H., & Maister, L. (2017). Putting ourselves in another's skin: Using the plasticity of self-perception to enhance empathy and decrease prejudice. *Social Justice Research*, 30(4), 323-354.

Fogg, B. J. (2003). *Persuasive technology: Using computers to change what we think and do*. Amsterdam: Morgan Kaufmann.

Fogg, B. J. & Euchner, J. (2019). Designing for behavior change – New models and moral issues. *Research-Technology Management*, 62(5), 14-19.

Lathia, N., Pejovic, V., Rachuri, K. K. et al. (2013). Smartphones for large-scale behavior change interventions. *IEEE Pervasive Computing*, 12, 2-9.

Lee, A. (2011). Social Proof is the New Marketing. *Techcrunch*, November 27, 2011. Online available at <http://shorturl.at/ceCU7>

Stibe, A., & Cugelman, B. (2016, April). Persuasive backfiring: When behavior change interventions trigger unintended negative outcomes. In *International conference on persuasive technology* (pp. 65-77). Springer, Cham.

Recommended articles/books for further reading:

Bogost, I (2007). *Persuasive games: The expressive power of videogames*. MIT Press.

Chidambaram, V., Chiang, Y. H., & Mutlu, B. (2012, March). Designing persuasive robots: how robots might persuade people using vocal and nonverbal cues. In *Proceedings of the seventh annual ACM/IEEE international conference on Human-Robot Interaction* (pp.

293-300). ACM.

Coen, S., Drumm, I., & Fantinelli, S. (2019). Promoting pro-environmental behaviour through augmented reality and persuasive informational power: A pilot study. *Human Affairs*, 29(3), 339-351.

Kekkonen, M., Agyei, E. E. Y. F., Meschtscherjakov, A., & Oinas-Kukkonen, H. Personalized Persuasive Holograms: Use Case Scenario—Running with Arnold. In *Persuasive 2020, Proceedings of the 15th Int. conference on Persuasive Technology*.

Kim, K. J., & Sundar, S. S. (2016). Mobile persuasion: Can screen size and presentation mode make a difference to trust? *Human Communication Research*, 42(1), 45-70.

Joo, Y. K., & Lee, J. E. R. (2014). Can "the voices in the car" persuade drivers to go green? Effects of benefit appeals from in-vehicle voice agents and the role of drivers' affective states on eco-driving. *Cyberpsychology, Behavior, and Social Networking*, 17(4), 255-261.

Lee, J., Jung, S., Kim, J. W., & Biocca, F. (2019). Applying Spatial Augmented Reality to Anti-Smoking Message: Focusing on Spatial Presence, Negative Emotions, and Threat Appraisal. *International Journal of Human-Computer Interaction*, 35(9), 751-760.

Lee, S. A., & Liang, Y. (2016). The role of reciprocity in verbally persuasive robots. *Cyberpsychology, Behavior, and Social Networking*, 19(8), 524-527.

Nahai, N. (2017). *Webs of influence. The psychology of online persuasion*. Harlow, UK: Pearson.

Oleksy, T., & Wnuk, A. (2017). Catch them all and increase your place attachment! The role of location-based augmented reality games in changing people-place relations. *Computers in Human Behavior*, 76, 3-8.

Orji, R., & Moffatt, K. (2018). Persuasive technology for health and wellness: State-of-the-art and emerging trends. *Health Informatics Journal*, 24(1), 66-91.

Ruijten, P. A. (2020). The similarity-attraction paradigm in persuasive technology: effects of system and user personality on evaluations and persuasiveness of an interactive system. *Behaviour & Information Technology*, 1-13.

Schüll, N. D. (2014). *Addiction by design: Machine gambling in Las Vegas*. Princeton University Press.

Song, J., & Fiore, S. M. (2017, September). VR what we eat: Guidelines for designing and assessing virtual environments as a persuasive technology to promote sustainability and health. In *Proceedings of the human factors and ergonomics society annual meeting* (Vol. 61, No. 1, pp. 1519-1523). Los Angeles, CA: SAGE Publications.

Tikka, P., & Oinas-Kukkonen, H. (2019). Tailoring persuasive technology: A systematic review of literature of self-schema theory and transformative learning theory in persuasive technology context. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 13(3), article 6.

Watson, A., Alexander, B., & Salavati, L. (2018). The impact of experiential augmented reality

applications on fashion purchase intention. *International Journal of Retail & Distribution Management*, 48(5), 433-451.

Zuckerman, O. (2015, January). Objects for change: A case study of a tangible user interface for behavior change. In *Proceedings of the 9th International Conference on Tangible, Embedded, and Embodied Interaction* (pp. 649-654). ACM