URBAN ASSEMBLAGE: THE CITY AS ARCHITECTURE, MEDIA, AI AND BIG DATA.

• Paper / Proposal Title:
Mediated Participatory Urban Planning and Design: An Interdisciplinary Framework

• Author(s) Name:
Dr Frauke Zeller, Dr David Harris Smith, Dr Emily Eyles, Dr John Eyles, Débora Silva de Jesus, Calvin Hillis

• University or Company Affiliation:
Ryerson University, Toronto, Ontario, Canada
McMaster University, Hamilton, Ontario, Canada

• Abstract (300 words):
This paper describes a theoretical, interdisciplinary framework for mediated participatory urban planning and design. More specifically, the framework aims to provide a theoretical background and overview for participatory urban planning that integrates digital and virtual city technologies, such as virtual world simulators and augmented reality. The input of urban stakeholders’ sense of place and its positive contribution to participatory planning can be leveraged through an approach to participatory urban planning using social media and multi-user virtual world environments. Moreover, given that many of our urban experiences are already connected to mediated experiences, a stronger media and audience focus should be integrated to help us understand better how city dwellers – and thus potential participants in urban planning – already use and appropriate these connected media and technologies with respect to physical urban space. Thus, an audience research approach can be integrated in the practices of participatory urban planning, on a theoretical level, instrumental level, and measurement level. We propose a novel sense of place engagement that utilizes audience studies methods in the context of interactive media technologies. Virtual environments supplemented by social media, offer diverse interaction opportunities in
participatory urban planning, and may function as data collection and archival repositories. The communication and memory affordances of these media contribute to a sense of place in the urban setting, and by extension, the careful design and inclusion of these technologies in contemporary urban planning processes can be used to enhance analog planning methods and materials. Stakeholders can visualize, meaningfully interact with, and shape multiple iterative planning scenarios via the digitised virtual environment as a prelude to decisive commitment. This application of audience research methods to urban visualization can be described as mediated participatory urban planning and design.

• Author(s) Biography (200 words each):

**Dr. Frauke Zeller** is Associate Professor in the School of Professional Communication at Ryerson University in Toronto (ON), Canada. She received her PhD (Dr. phil.) from Kassel University, Germany, in 2005 in English Linguistics and Computational Philology for her research in Human-Robot Interaction. From 2005 to 2011, she was a researcher and lecturer at Ilmenau University of Technology, Germany, working in the Institute of Media and Communication Studies. She finished her Habilitation (highest academic degree in Germany) in 2011, working on computational methods to analyze online communities. Frauke Zeller was awarded with a range of major research grants, among them a Marie Curie Fellowship (2011-2013), which is one of Europe’s most distinguished individual research grants. It enabled her to conduct research on big data and multimodal communication analyses tools. She worked as a Marie Curie Fellow at the renowned Centre for Digital Humanities at University College London (Great Britain). She is also involved in several international research projects. Her research interests include Big Data, Human-Computer Interaction/Human-Robot Interaction, and method development for digital research analyses.

**Dr David Harris Smith** is an Associate Professor in the Department of Communication Studies and Multimedia at McMaster University. A humanist perspective on technology, the arts, and culture, frames his research. Dr Smith’s primary area of research is media and information arts – the intersection of arts, technology and science – including avatar virtual worlds, augmented and mixed reality environments, assistive media technologies for persons with disabilities, education and knowledge translation using virtual worlds, new media interaction and interface design, biometric and brain-computer interfaces, cognitive science of media, social robotics, and artificial intelligence. His cultural robotics project *hitchBOT: The Hitchhiking Robot* received extensive international media coverage. David teaches courses in coding, design, and new media arts.

**Dr. John Eyles** is a Distinguished University Professor at McMaster. After receiving his PhD in Science and working in the University of London, he came to McMaster in 1988. Based
in Geography and Earth Sciences, he holds appointments in Clinical Epidemiology and Biostatistics, Sociology and the Centre for Health Economics and Policy analysis. His main research interests lie in environmental influences on human health and access to health care resources. He has published widely in these areas. He has served on several advisory committees at the local, provincial and national levels, primarily with the role of science in public policy. He has recently begun (again) working internationally in South Africa and India.

**Dr Emily Eyles**, School of Geographical Sciences, University of Bristol is a Research Associate at Bristol medical school engaged in quantitative analysis on several ARC West projects, including those relating to risk factors for hospital admissions for people with dementia, and hospital bed demand.

**Debora Silva de Jesus** is a Marketing and Communications professional with a background in multimedia development. She holds a master’s degree in Communication and New Media from McMaster University. Throughout her career, Debora supported the integration of immigrants and refugees into Canadian society at Skills for Change as their Marketing and Communications Supervisor; managed all marketing and communications initiatives at the Legal Innovation Zone at Ryerson University; and now supports those facing severe mental health challenges at LOFT Community Services as their Marketing and Communications Specialist. Debora is a communicator and a connector. By leveraging technology, she links people to the resources and tools that will empower their success.

**Calvin Hillis** is a Master of Arts in Communication and New Media candidate at McMaster University. Calvin’s MA research is concerned with the role of personal content algorithms in social construction and identity development on social media. Calvin graduated from Ryerson University in 2019 with a B.A. in Sociology. Calvin has worked in the public and non-profit sectors in a variety of roles including project development and implementation, program management, digital marketing, branding, and recruitment. Calvin’s work as an artist is concerned with creativity of the everyday, smartphone creativity for mental wellbeing, minimalist music production, and disc jockeying.