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

• Paper / Proposal Title:
Insta-Turin. Revising the notion of proximity and mapping communities of venues in cities through Instagram social urban data.

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• Abstract (300 words):
This paper introduces the use of Instagram geotagged posts as a proxy to understand and map urban dynamics and phenomena as well as a tool to detect the underlying connections between venues in the city beyond the physical dimension.

A method was developed and applied in the city of Turin (Italy) in order to collect and process a dataset of over 350 thousand Instagram geotagged posts insisting on a solar year with reference to 1071 venues in the city.

Quantitative evaluations concerning the distribution of posts among space and time allowed the development of insights on the city in line with established knowledge and other researches, validating our data source as reliable.

Subsequently, the recurrence of users among different venues permitted to evaluate and quantify the social affinity of them, constructing a weighted graph of 228 selected venues, in which 12 communities were detected with the Louvain method of modularity.
optimization. The spatialization of the resulting subgraphs offered a scientific depiction of urban phenomena before only empirically perceivable, crossing the traditional borders of neighborhoods and locating centralities in peripheral areas.

This paper challenges the idea advanced by some scholars for which the data derivable by Instagram are intrinsically biased by the selection of the contents to share operated by the users.

We claim that these biases – and particularly the selection of frames from the everyday urban experience – are what makes Instagram geotagged posts relevant for urban studies, establishing a bridge between the use of the social media and the theories presented in the works of Lynch, de Certau, Lefebvre, Bourdieu, and Halbwachs.

The work offers an image of the city as a dynamic and heterogeneous organism describable with the Baumanian metaphor of the swarm and understood with the paradigm of the network and it opens to further developments.

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

Adriano Aimar is an architect and a research fellow at the Future Urban Legacy Lab of the Politecnico di Torino. He graduated in 2020 with a MSc thesis on this research topic.

Marco Brambilla is full professor at Politecnico di Milano. His research interests include data science, software modeling languages and design patterns, crowdsourcing, social media monitoring, and big data analysis. He has been visiting researcher at CISCO, San Josè, and University of California, San Diego. He has been visiting professor at Dauphine University, Paris. He is founder of various startups and spinoffs, focusing on social media analysis, software modeling, Mobile and Business Process based software applications, and data science projects. He is author of various international books. He also authored more than 250 research articles in top research journals and conferences. He was awarded various best paper awards and gave keynotes and speeches at many conferences and organizations. He is the main author of the OMG standard IFML. He participated in several European and international research projects. He has been reviewer of FP7 projects and evaluator of EU FP7 proposals, as well as of national and local government funding programmes throughout Europe. He has been PC chair of ICWE 2008 and ICWE 2021, as well as co-chair of various tracks, conferences and workshops. He is associate editor of various journals and PC member of several conferences and workshops.

Elena Guidetti is an architect a PhD candidate in Architecture, History and Project at Politecnico di Torino. She is a PhD fellow at the Future Urban Legacy Lab of the Politecnico
di Torino. Her research focuses on defining, decoding, and assessing the concept of ‘transformative potential’ in the existing buildings through a post-functional perspective.

Matteo Robiglio is an architect and urban designer. He is a full professor at Politecnico di Torino. After 20 years of practice in community architecture and urban regeneration with Avventura Urbana, he founded in 2011 with Isabelle Toussaint the office TRA (lit.: in-between). In 2014 TRA and the community foundation Benvenuti in Italia jointly founded the non-profit social innovation start-up HOMERS, recognized as Polito spin-off, promoting bottom-up cohousing projects for the reuse of abandoned buildings. He was a member of the Scientific Committee of the Centre for African Studies, of Rebuild and of the recovery project of Giancarlo De Carlo’s University Colleges in Urbino of the Getty Foundation. He is a German Marshall Fellow in Urban and Regional Studies. He has also been a visiting lecturer in many universities such as the Carnegie Mellon of Pittsburgh, the Xi’an Jiaotong-Liverpool University in Suzhou, the Technion of Haifa, and the MIT in Boston.