

VIRUS

28

THE DIGITAL AND THE SOUTH: QUESTIONINGS VOL. 1

PORUGUÊS-ESPAÑOL | ENGLISH
REVISTA . JOURNAL
ISSN 2175-974X
CC-BY-NC-SA

UNIVERSITY OF SAO PAULO
INSTITUT OF ARCHITECTURE AND URBANISM
NOMADS.USP
REVISTAS.USP.BR/VIRUS
DECEMBER 2024



VI28

THE DIGITAL AND THE SOUTH: QUESTIONINGS VOL. 1

O DIGITAL E O SUL: TENSIONAMENTOS VOL. 1

LO DIGITAL Y EL SUR: QUESTIONAMIENTOS VOL. 1

EDITORIAL

001 THE DIGITAL AND THE SOUTH: QUESTIONINGS VOL. 1

O DIGITAL E O SUL: TENSIONAMENTOS VOL. 1

LO DIGITAL Y EL SUR: CUESTIONAMIENTOS VOL. 1

MARCELO TRAMONTANO, JULIANO PITA, PEDRO TEIXEIRA, CAIO NUNES, ISABELLA CAVALCANTI, RENAN TEIXEIRA, ALINE LOPES

INTERVIEW

004 THE DIGITAL AS A COLLECTIVE PRACTICE

O DIGITAL COMO PRÁTICA COLETIVA

GABRIELA CELANI, MARCELO TRAMONTANO

AGORA

013 MACHINIC EUGENICS OF THE GAZE: COMPUTER VISION, AGEISM, AND GENDER

EUGENIA MAQUÍNICA DO OLHAR: VISÃO COMPUTACIONAL, ETARISMO E GÊNERO

GISELLE BEIGUELMAN

028 FROM CELLULAR AUTOMATA TO AI AND FABRICATION

DESDE AUTÓMATAS CELULARES HACIA IA Y FABRICACIÓN

ALBERTO FERNÁNDEZ GONZÁLEZ

041 WHAT HAPPENS WHEN THE SMART CITY CRASHES?

E QUANDO A SMART CITY TRAVA?

VINÍCIUS LOPACINSKI

052 COLLABORATIVE PLATFORMS IN THE GLOBAL SOUTH: THE CASE OF ARQUIGRAFIA

PLATAFORMAS COLABORATIVAS NO SUL GLOBAL: O CASO DO ARQUIGRAFIA

SAYED ABDUL BASIR SAMIMI, ANA RIBEIRO FERREIRA DA COSTA, HENRIQUE SANTA CATHARINA JUNGES, ARTUR SIMÕES ROZESTRATEN

067 FROM COMPUTATION TO FABRICATION: THEMES AND (MIS)PATHS IN SOUTH AMERICA
DO COMPUTACIONAL À FABRICAÇÃO: TEMAS E (DES)CAMINHOS NA AMÉRICA DO SUL
RODRIGO SCHEEREN

076 FROM A BIRD'S FLIGHT TO AN OVERLOOKING GAZE: VIRTUALITY AS A METHOD
DO VOO DO PÁSSARO AO OLHAR DEBRUÇADO: O VIRTUAL COMO MÉTODO
PEDRO HENRIQUE VALE CARVALHO

087 URBAN-DIGITAL LAYERS: FROM GLOBAL INTERNET INFRASTRUCTURE TO DARK KITCHENS
CAMADAS URBANO-DIGITAIS: DA INFRAESTRUTURA GLOBAL DA INTERNET ÀS DARK KITCHENS
ALINE CRISTINA FORTUNATO CRUVINEL, LUISA DA CUNHA TEIXEIRA

PROJECT

097 BRIDGING THE GAP: EMPIRICAL VS. SIMULATION IN GREEN FAÇADE MODELING
REDUZINDO A BRECHA: EMPÍRICO VS. SIMULAÇÃO NA MODELAGEM DE FACHADAS VERDES
CAMILA DA ROCHA HENDZEL, CLAUDIO VÁSQUEZ ZALDÍVAR

THE DIGITAL AND THE SOUTH: QUESTIONINGS VOL. 1

O DIGITAL E O SUL: TENSIONAMENTOS VOL. 1

LO DIGITAL Y EL SUR: CUESTIONAMIENTOS VOL. 1.

MARCELO TRAMONTANO, JULIANO PITA, PEDRO TEIXEIRA, ISABELLA CAVALCANTI,
CAIO NUNES, RENAN TEIXEIRA, ALINE LOPES

Marcelo Tramontano is an Architect, holds a Master's degree, Ph.D., and Livre-Docente degree in Architecture and Urbanism, with a Postdoctorate in Architecture and Digital Media. He is an Associate Professor at the Institute of Architecture and Urbanism of the University of São Paulo, Brazil, and the Graduate Program in Architecture and Urbanism of the same institution. He directs Nomads.usp - Center for Interactive Living Studies and is the Editor-in-Chief of V!RUS Journal. tramont@sc.usp.br
<http://lattes.cnpq.br/1999154589439118>

Juliano Veraldo da Costa Pita is an Architect and holds a Master's and Doctor degrees in Architecture and Urbanism. He is a professor at the Federal Institute of São Paulo, Brazil, an Associate Researcher at Nomads.usp, and the V!RUS Journal's Adjunct Editor. He conducts research on digital architectural design processes in the context of public orders, the inclusion of digital technologies, especially BIM, in participatory decision-making processes, and the teaching of computation in Architecture and Urbanism courses. juliano.pita@ifsp.edu.br
<http://lattes.cnpq.br/9979407166601746>

Pedro Plácido Teixeira is an Architect, holds a Master's degree in Architecture and Urbanism and is a Ph.D. candidate in the Postgraduate Program in Architecture and Urbanism at the Institute of Architecture and Urbanism of the University of São Paulo, Brazil. He is a researcher at Nomads.usp and studies the use of documentary film for urban readings, based on participatory and collaborative processes of audiovisual production, focusing mainly on Latin America. pedrot@usp.br
<http://lattes.cnpq.br/1433595073264998>

Isabella Eloy Cavalcanti is an Architect with a Master's degree in Urban Development and is a Ph.D. candidate in the Postgraduate Program in Architecture and Urbanism at the Institute of Architecture and Urbanism of the University of São Paulo, Brazil. She is a researcher at Nomads.usp and studies the relationship between technology, social justice, and gender through urban design and digital data. isabellaeloy@usp.br
<http://lattes.cnpq.br/0165490242445275>

Caio Muniz Nunes is an Architect and a Master's degree candidate in the Postgraduate Program in Architecture and Urbanism at the Institute of Architecture and Urbanism of the University of São Paulo, Brazil. He is a researcher at Nomads.usp and studies temporary public equipment systems and architectural design processes, focusing on parametric design and digital fabrication. caiomn@usp.br
<http://lattes.cnpq.br/7072847821985842>

Renan Teixeira Santos is an Architect and a Master's degree candidate in the Postgraduate Program in Architecture and Urbanism at the Institute of Architecture and Urbanism of the University of São Paulo, Brazil. He is a researcher at Nomads.usp and studies digital design processes, Artificial Intelligence and Complex Systems. renansantoste@usp.br
<http://lattes.cnpq.br/4176810123609338>

Aline Lopes de Oliveira is an Architect and a Master's degree candidate in the Postgraduate Program in Architecture and Urbanism at the Institute of Architecture and Urbanism of the University of São Paulo, Brazil. She is a researcher at Nomads.usp and studies the production of space in Innovation ecosystems. alinelopes.o@usp.br
<http://lattes.cnpq.br/9986754939235791>

The theme of issues 28 and 29 of V!RUS journal, "The Digital and the South: Questionings," aims to critically explore the connections between digital media and the peoples of the Global South in various dimensions in this second decade of the 21st century. While recognizing digital culture's benefits to many aspects of human life, we also seek to highlight the inherent tensions in these connections.

This theme arises from an ongoing reflection process at Nomads.usp - Center for Interactive Living Studies, which publishes V!RUS. The Center was established in 2000 amidst the remarkable optimism that followed the Internet's opening to public access in 1994. Distributed network communication – a network of networks – brought promising perspectives for horizontal communication and free access to information. This environment stimulated the development of numerous computer programs, devices, and systems that permeated all areas of knowledge and aspects of life. Over the past twenty-four years, we have focused on exploring the limits and potential of digital, particularly in how it relates to the conception, approach, and documentation of built spaces. We have broadened this concept to include the spatialities arising from the hybridization of physical and digital environments and their dynamics.

The theme proposed for these two issues of VIRUS arises from a growing concern—one that we share—about the direction in which the digitalization of life has taken society. This trend has scrambled values and beliefs, distorted public debate, and reinforced asymmetric power relations on a global scale.

The papers published in these two issues have been selected rigorously through close collaboration among the authors, reviewers, and the journal's editorial committee. They encompass two sets of sub-themes. The first set, presented in V!28, includes papers that analyze the applications of digital technologies and their implications for urban dynamics and architectural design and production, focusing on perspectives from the Global South. The second set, featured in V!29, includes papers that discuss the conceptual, social, political, and technopolitical aspects of the spread of digital technology worldwide, particularly among the peoples of the Global South.

Issue 28 features eight articles authored by researchers from various countries and states within Brazil. It also includes an interview with Professor *Gabriela Celani* from the School of Civil Engineering, Architecture, and Urbanism at the State University of Campinas, Brazil. At our invitation, Celani gave us the interview titled [The Digital as a Collective Practice](#), in which she explores **collective ways of doing things** in light of her career as a researcher and educator in the field of Architecture and Urbanism.

The emerging possibilities for using **Artificial Intelligence** are addressed in two contexts: in the production of images and their political implications in the field of Art, as discussed in *Giselle Beiguelman*'s article [Machinic Eugenics of the Gaze: Computer Vision, Ageism, and Gender](#), and in processes of form generation, examined in *Alberto Fernández González*'s article [From Cellular Automata to AI and Fabrication](#).

Two papers address **digital at the urban scale** in cities in the South. *Vinícius Lopacinsk* discusses the impacts arising from the use of advanced surveillance and control technologies in urban spaces in the article [What Happens when the Smart City Crashes?](#). Meanwhile, in their article [Urban-digital Layers: From Global Internet Infrastructure to Dark Kitchens](#), *Aline Cristina Fortunato Cruvinel* and *Luisa da Cunha Teixeira* examine how platform companies influence new dynamics and urban spatial typologies.

Two contributions address the **use of digital images to study built spaces**. The first is the article [Collaborative Platforms in the Global South: The Case of Arquigrafia](#), written by *Sayed Abdul Basir Samimi*, *Ana Ribeiro Ferreira da Costa*, *Henrique Santa Catharina Junges*, and *Artur Simões Rozestraten*. It discusses the collaborative construction of a collection of architectural representations. The second work, [From a Bird's Flight to an Overlooking Gaze: Virtuality as a Method](#), by *Pedro Henrique Vale Carvalho*, focuses on urban analysis guided by street view images.

Additionally, two articles concentrate specifically on **architectural design processes**. In [From Computation to Fabrication: Themes and \(Mis\)Paths in South America](#), *Rodrigo Scheeren* examines various aspects of digital fabrication within South American research centers. Meanwhile, in their article titled [Bridging the Gap: Empirical vs. Simulation in Green Facade Modeling](#), *Camila da Rocha Hendzel* and *Claudio Vásquez Zaldívar* investigate digital methods for analyzing green facades in Chilean buildings.

We are also pleased to inform you that, as of this issue, the V!RUS journal has become part of the Journal Portal of the University of Sao Paulo at www.revistas.usp.br/virus. Still, it maintains its previous website –www.nomads.usp.br/virus– as a mirror website.

We hope these two issues of V!RUS provide a qualified debate on current digital culture, especially in relation to countries in the Global South.

We wish everyone an excellent reading experience.