

Estética virtual em Arquitetura:
Desenhar com realidades mistas.
Virtual Aesthetics in
Architecture: Designing in Mixed
Realities

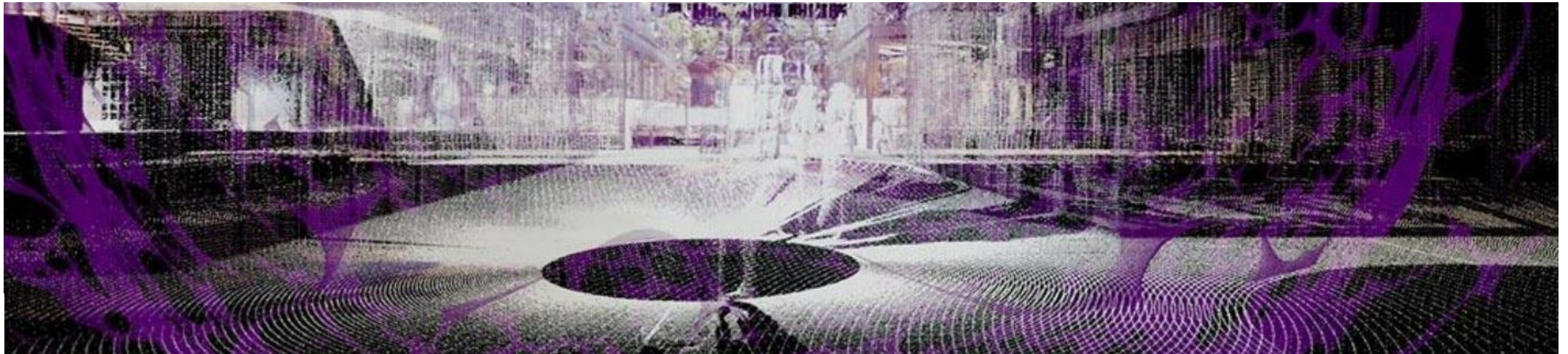
SARA ELOY

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AGÊNCIA DE CIÊNCIA, TECNOLOGIA E INOVAÇÃO

Trienal
2019

istar _iscte



Summary

THE PROJECT “ARTIFICIAL REALITIES: VIRTUAL AS AN AESTHETIC MEDIUM IN ARCHITECTURAL IDEATION”, WAS DEVELOPED IN THE SCOPE OF LISBON ARCHITECTURE TRIENNALE 2019.

“ARTIFICIAL REALITIES” IS FRAMED BY THE CONFRONTATION BETWEEN RATIONALITY AND EFFICIENCY RELATED TO VIRTUAL TECHNOLOGIES APPLIED TO THE ARCHITECTURAL DESIGN PROCESS AND THE POETICS RELATED TO THE AESTHETICS IN ARCHITECTURE. THE EXPERIENCE OF ARCHITECTURAL SPACE AND THE STATE OF CONTEMPLATION AND DELIGHT OF THE ARCHITECTONIC EXERCISE WILL HAVE A DIGITAL MATERIALIZATION.

THE PROJECT EXPLORED THE WAYS IN WHICH VIRTUAL REALITY TECHNOLOGIES CAN ENABLE DESIGNERS TO CREATE IMMERSIVE SPACES THAT DRIVE THE USERS TO ESCAPE TO OTHER REALMS IN CUTTING-EDGE AESTHETIC EXPERIENCES.

Activities

_ AN EXHIBITION HELD IN ISCTE FROM THE 14TH TO THE 18TH OF OCTOBER. THIS HAS BEEN SELECTED AS AN ASSOCIATED PROJECT OF LISBON ARCHITECTURE TRIENNALE 2019. WE SHOWCASED AN INTERNATIONAL GROUP OF PROJECTS BY LEADING PRACTITIONERS THAT HAVE A SOLID BODY OF WORK ON DIVERSE ISSUES RELATED WITH ARCHITECTURAL DESIGN PROCESSES USING VR AND AR TECHNOLOGIES.

_ AN INTERNATIONAL SEMINAR ON TOPICS OF COMMON INTEREST WAS ORGANISED DURING THE EXHIBITION. TALKS BY INVITED LEADING RESEARCHERS AND DESIGNERS WERE GIVEN IN THE SYMPOSIUM. A CALL FOR PAPERS GUARANTEED A WIDE SPECTRUM OF INTEREST AMONG THE FIELD.

_ RESEARCH ON USING VR AND AR IN THE IDEATION STAGES OF ARCHITECTURE DESIGN AND USING IT WITH FINAL-USER TO ENGAGE THEM IN ARCHITECTURE AND URBAN DESIGN DISCUSSIONS AS IN PARTICIPATORY DESIGN PROCESSES

_ BOOK PUBLICATION “VIRTUAL AESTHETICS IN ARCHITECTURE. DESIGNING IN MIXED REALITIES”, ROUTLEDGE

[EXHIBITION AND SYMPOSIUM]

THE EVENT WAS ATTENDED BY RESEARCHERS AND PRACTITIONERS FROM 12 COUNTRIES FROM EUROPE, NORTH AMERICA, ASIA AND OCEANIA (NORWAY, DENMARK, NETHERLANDS, BELGIUM, GERMANY, GREECE, PORTUGAL, TURKEY, SINGAPORE, AUSTRALIA, UNITED STATES OF AMERICA AND CANADA).

THE EXHIBITION WAS ATTENDED BY SEVERAL VISITORS, AMONG ARCHITECTS AND OTHER ARTISTS, ATTRACTED BY THE TRIENNALE'S DISSEMINATION, ARCHITECTURE AND COMPUTER SCIENCES' STUDENTS, AS WELL AS SECONDARY SCHOOLS CLASSES



Trienal 2019

ARTIFICIAL REALITIES

VIRTUAL AS AN AESTHETIC MEDIUM IN ARCHITECTURE IDEATION

Lisbon Architecture Triennale 2019 Associated Project

Exhibition and Symposium

Event organized by ISTAR Information Sciences, Technology and Architecture Center

14-18 OCTOBER 2019

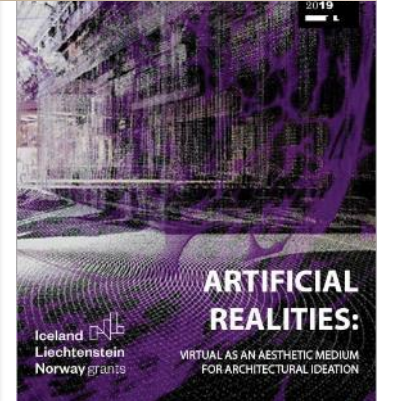
ISCTE-IUL LISBON PORTUGAL

<http://istar.iscte-iul.pt/artificialrealities>

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CLARA, NABILA LA

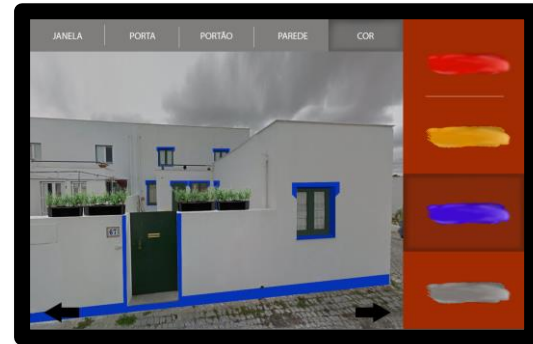


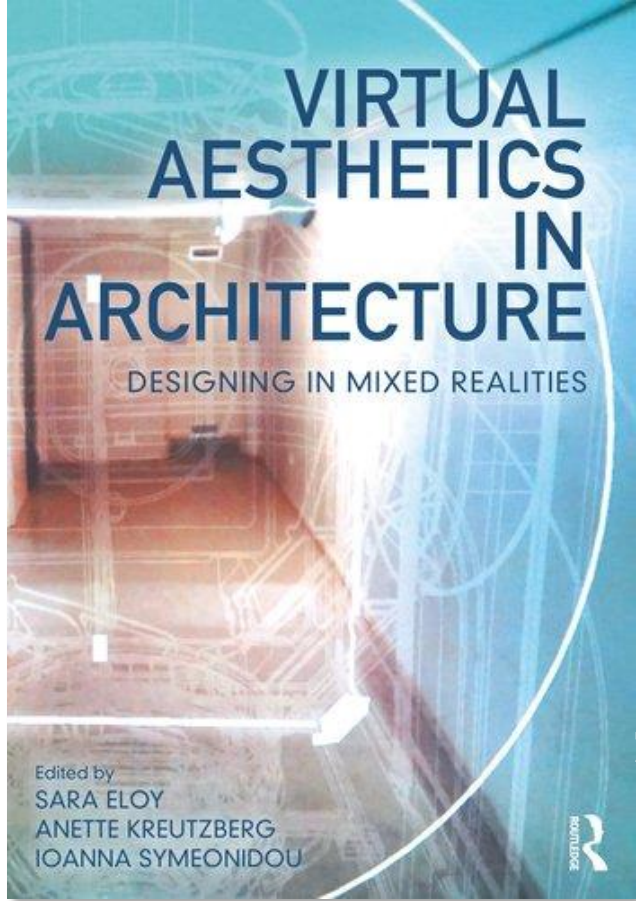
[MYCHANGES]

DEVELOPMENT OF A MOCKUP THAT ENABLES THE GENERATION OF CUSTOMIZED DESIGN SOLUTIONS FOR THE FAÇADE OF HOUSES.

TESTING THE APP AND VISUALIZATION MODES:

- **USER SATISFACTION REGARDING THE CUSTOMIZATION POSSIBILITY THAT IT OFFERS TO THE DESIGN OF THE FAÇADE OF THEIR HOUSE**
- **USER SATISFACTION REGARDING THREE MODES OF VISUALIZATION OF THE FINAL DESIGNS OF THE FAÇADE:**
 - **NON-IMMERSIVE SCREEN-BASED VISUALIZATION USING A TABLET - FINAL DESIGN IS VISUALIZED AS A STATIC IMAGE;**
 - **SEMI-IMMERSIVE VISUALIZATION USING A SMART PHONE - FINAL DESIGN CAN BE SEEN BY A 360° RENDER OF THE SITE;**
 - **FULLY IMMERSIVE VISUALIZATION USING A HMD (OCULUS RIFT) - FINAL DESIGN CAN BE FREELY NAVIGATED BY THE USER.**





EDITORIAL.....

Sara Eloy, Anette Kreuzberg, Ioanna Symeonidou

PART 1 – INTRODUCTION: THE VISUALITY OF MIXED REALITY

Chapter 1. Mixed realities in Architecture: Aesthetics of the Virtual
Henri Achten [Czech Technical University of Brno], Czech Republic

Chapter 2. Models and Fictions: The Aesthetics of the Virtual
Federico Ruberto [Form Axioms, Singapore], Singapore

Chapter 3. Cybernetic Aesthetics: The Aesthetics of the Virtual
Helmut Kinzler [Zaha Hadid VR], United States of America

Chapter 4. Wish You Were Here: The Aesthetics of the Virtual
Sean Pickersgill [University of Southampton], United Kingdom

Chapter 5. How Architects Are Using Immersive Technology Today, and Projections for the Future
Architecture Inc. [Architecture Inc., United States of America], United States of America

PART 2 – EXPERIENCING SPACE

Chapter 6. The Aesthetics of Hybrid Space
Rosana Rubio [University of Tampere], Finland

Chapter 7. The Aesthetics of Hybrid Space
MVRDV Virtual Space
Maria Lopez [MVRDV], The Netherlands

Chapter 8. The Aesthetics of Hybrid Space
The Digital Archive
Eva Castro, Federico Ruberto [Singapore University of Technology and Design], Singapore

Chapter 9. The Aesthetics of Hybrid Space
Jason Lim, Jane Chua, Deniz Mani Clarke, Nabila Larasati Pranoto, Sirus Gardens - the building
Sean Pickersgill [University of Southampton], United Kingdom

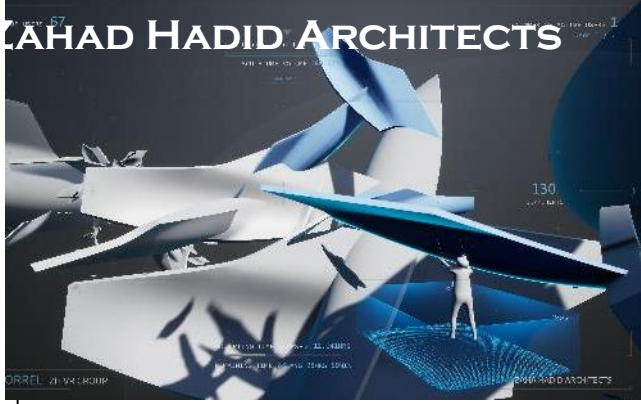
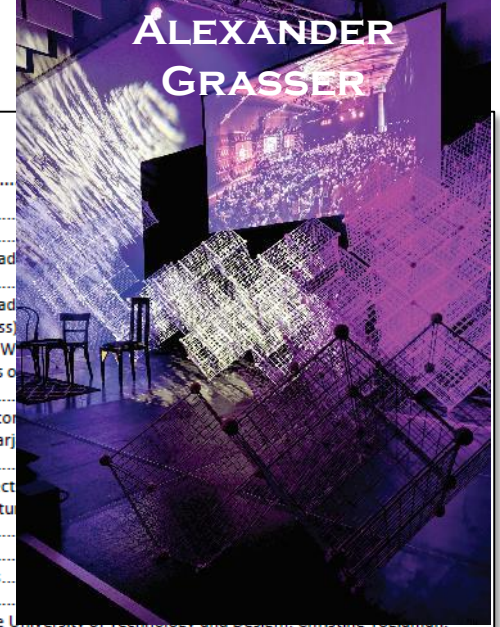
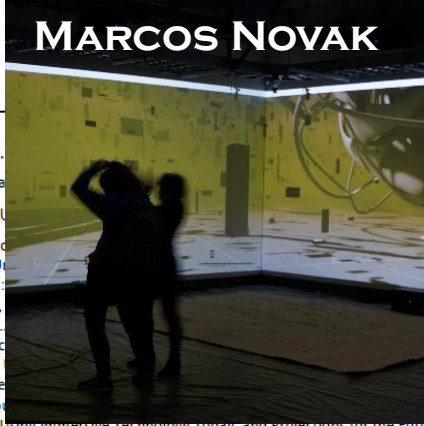
Chapter 10. The Aesthetics of Hybrid Space
Form Axioms: "the politics of mapping"
Eva Castro, Federico Ruberto [Singapore University of Technology and Design], Singapore

Chapter 11. The Aesthetics of Hybrid Space
Jason Lim, Jane Chua, Deniz Mani Clarke, Nabila Larasati Pranoto, Sirus Gardens - the building

Chapter 12. The Aesthetics of Hybrid Space
Cloud navigation
Iscte and Luis Dias [Iscte, ISTAR], Portugal

Chapter 13. The Aesthetics of Hybrid Space
Stage in conflict areas. The case of Palestine
Way

Chapter 14. The Aesthetics of Hybrid Space
Cybernetic monuments



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Obrigada

SARA ELOY

