

Appl[e]ause. A Food Design experiment to create new processed foods

Original

Appl[e]ause. A Food Design experiment to create new processed foods / Passaro, Raffaele; Campagnaro, Cristian. - ELETTRONICO. - (2024), pp. 127-127. (Design Commit - 1st International Conference on Design & Industry 2024 Braga (POR) May 20 - 22, 2024).

Availability:

This version is available at: 11583/2993965 since: 2024-10-30T12:44:33Z

Publisher:

UA Editora - Universidade de Aveiro

Published

DOI:

Terms of use:

This article is made available under terms and conditions as specified in the corresponding bibliographic description in the repository

Publisher copyright

(Article begins on next page)



DESIGN COMMIT

1ST INTERNATIONAL CONFERENCE
ON DESIGN & INDUSTRY · 2024

MAY, 20 - 22 2024

BOOK OF ABSTRACTS >>

MARIA JOÃO FÉLIX | FÁTIMA POMBO | FERNANDO MOREIRA DA SILVA | PAULO CRUZ | RITA ASSOREIRA ALMENDRA

[HTTPS://DESIGNCOMMIT.PT/](https://designcommit.pt/)





BOOK OF ABSTRACTS



This work is financed by national funds through the FCT – Fundação para a Ciência e a Tecnologia, I.P., under the scope of the project UIDB/04057/2020.

TECHNICAL DATA**TITLE**

*Design Commit - 1st International Conference on Design & Industry 2024:
Book of Abstracts*

EDITORS

*Maria João Félix
Fátima Pombo
Fernando Moreira da Silva
Paulo Cruz
Rita Assoreira Almendra*

PUBLISHER

UA Editora - Universidade de Aveiro

ISBN

978-972-789-914-2

DOI

<https://doi.org/10.48528/40cz-rc04>

YEAR OF PUBLICATION

1st Edition - May 2024

*The sole responsibility for the content of this publication lies with the authors. © Authors.
This work is licensed under a Creative Commons Attribution 4.0 International License.*

CREDITS **DESIGN AND ART DIRECTION**

Nuno Martins

BOOK OF ABSTRACTS EDITORIAL - DESIGN AND PAGINATION

Sofia Simões

COMMUNICATION DESIGN

Rita da Cruz Tavares

Rogério Ribeiro

WEB DESIGN

Rita da Cruz Tavares

Rogério Ribeiro

WEBSITE

<https://designcommit.pt/>

PORTUGUESE SCIENTIFIC REPOSITORIES

IPCB Repository

Repository UA

Repository IPCA

Repository FAUL

Repository UMinho

SCIENTIFIC EDITORIAL

**LIST OF SCIENTIFIC
EDITORIAL COMMITTEE /
AFFILIATIONS AND CREDITS
OF EDITORS**

MARIA JOÃO FÉLIX

School of Design, Polytechnic
Institute of Cávado and Ave (PT)

FÁTIMA POMBO

Department of Communication and
Art of University of Aveiro (PT)

PAULO CRUZ

School of Architecture, Art and
Design of University of Minho (PT)

FERNANDO MOREIRA DA SILVA

Lisbon School of Architecture,
University of Lisbon (PT)

RITA ASSOREIRA ALMENDRA

Lisbon School of Architecture,
University of Lisbon (PT)

BOOK OF ABSTRACTS FOR THE DESIGN COMMIT 2024 CONFERENCE

INTRODUCTION

This Book of Abstracts is a collective endeavor and an academic commitment from the participants of the Design Commit 2024 Conference. All abstracts have undergone a meticulous peer-review process, orchestrated by our Scientific Committee and executed under strict guidelines of anonymity and impartiality. Our goal is to present a compilation of research that not only reflects innovation and diversity in the field of design and industry but also fosters constructive dialogue on sustainable futures and social responsibility within these realms.

SUBMISSION AND REVIEW PROCESS

Each submitted manuscript underwent an initial review to ensure relevance to the conference theme and adherence to established guidelines. The subsequent double-blind peer review was employed to safeguard the integrity of both reviewers and authors, supporting fair and unbiased judgment. We recognize the importance of authentic academic discourse and as such, are dedicated to a zero-tolerance policy on plagiarism and a commitment to originality.

EDITORIAL ETHICS AND CONTENT USAGE

This book is a copyright-protected work, with all rights reserved. Any use of the content herein, outside the scope of private study, research, criticism, or review, requires explicit authorization from copyright holders. We underscore the importance of ethics in academic information usage and encourage practices that promote scientific integrity and collaboration.

CONTRIBUTIONS AND AUTHORSHIP

We clearly outline the responsibilities of authors, from initial submission to the presentation process. Contributions should reflect the work of no more than five collaborators, with the designation of the corresponding author established to facilitate communication and ensure accountability. We emphasize the value of transparency and the proactive declaration of any potential conflicts of interest.

COMMITMENT OF REVIEWERS AND COMMITTEES

Both the members of the Scientific Committee and reviewers are integral parts of this process, committed to maintaining the academic rigor and excellence that are the hallmark of Design Commit. They are dedicated to thoughtful evaluations, enhancements of submissions, and the efficacy of academic communication.

CONCLUSION

The DESIGN COMMIT 2024 Secretariat wishes to express gratitude to all contributors, whose works comprise this volume. May the abstracts presented here serve as catalysts for ongoing innovation and inspiration for all those committed to the advancement of design and industry.



DESIGN COMMIT conference is an event organized by the **Lisbon School of Architecture** (FA ULisboa), in partnership with the **School of Design** (ESD) of the **Polytechnic Institute of Cávado and Ave** (IPCA), the **Department of Communication and Art of the University of Aveiro** and the **OIKOS research group** of the **Research Institute for Design, Media and Culture** (ID+), the **School of Applied Arts** (ESART) of the **Polytechnic University of Castelo Branco** (IPCB), and **Rethink - Research Group on Design for the Territory** (CIAUD); and **School of Architecture, Art and Design of the University of Minho** (EAAD) and the **Design and Technology Group** (DeTech) of the **Laboratory of Landscape, Heritage and Territory** (Lab2PT).

The conference operates under the scope of the **Research & Education in Design research group** (REDES) from the **Center for Research in Architecture Urbanism and Design** (CIAUD).

CONFERENCE CHAIRS

GENERAL CHAIR

Maria João Félix

School of Design, Polytechnic Institute of Cavado and Ave, and Research & Education in Design research group (REDES) from the Center for Research in Architecture Urbanism and Design (CIAUD).

mfelix@ipca.pt

CHAIR

Fátima Pombo

Department of Communication and Art of University of Aveiro, and Design for Ecosystemic Spaces Research Group (OIKOS) from the Research Institute for Design, Media and Culture (ID+).

fpombo@ua.pt

CHAIR

Paulo Cruz

School of Architecture, Art and Design of the University of Minho and Research & Education in Design and Technology Group (DeTech) from the Laboratory of Landscape, Heritage and Territory (Lab2PT)

pcruz@eaad.uminho.pt

CHAIR

Fernando Moreira da Silva

Lisbon School of Architecture (FA ULisboa) and Research & Education in Design research group (REDES) from the Center for Research in Architecture Urbanism and Design (CIAUD).

fms.fautl@gmail.com

CHAIR

Rita Assoreira Almendra

Lisbon School of Architecture (FA ULisboa) and Research & Education in Design research group (REDES) from the Center for Research in Architecture Urbanism and Design (CIAUD).

almendra@fa.ulisboa.pt

HONORARY COMMITTEE

FULL PROFESSOR OF THE LISBON SCHOOL OF ARCHITECTURE

Carlos Francisco Lucas Dias Coelho

PRESIDENT OF THE POLYTECHNIC INSTITUTE OF CAVADO AND AVE

Maria José Fernandes

RECTOR OF THE UNIVERSITY OF AVEIRO

Paulo Jorge Ferreira

PRESIDENT OF THE POLYTECHNIC INSTITUTE OF CASTELO BRANCO

António Fernandes

RECTOR OF THE UNIVERSITY OF MINHO

Rui Vieira de Castro

PRESIDENT OF THE BOARD OF DIRECTORS OF THE FOUNDATION FOR SCIENCE AND TECHNOLOGY

Maria Madalena dos Santos Alves

MAYOR OF BRAGA CITY COUNCIL

Ricardo Bruno Antunes Machado Rio

[HTTPS://DESIGNCOMMIT.PT/ABOUT/](https://designcommit.pt/about/)

SCIENTIFIC COMMITTEE

Afonso Nuno R. de Pinto Borges
University of Aveiro (PT)

Alba Cappellieri
Politecnico Di Milano (IT)

Alexandra Cruchinho
Lusófona University, Lisbon (PT)

Álvaro M. Sampaio
School of Architecture, Art and Design of the University of
Minho (PT)

Ana Moreira da Silva
Research Center for Architecture, Urbanism and Design,
Lisbon School of Architecture, University of Lisbon (PT)

Ana Tudichum Vasconcelos
Faculty of Fine Arts, University of Lisbon (PT)

Anders V. Munch
University of Southern Denmark (DK)

Annette Svaneklink Jakobsen
University of Southern Denmark (DK)

António Gil Andrade Campos
University of Aveiro (PT)

António Gorgel Pinto
IADE - Universidade Europeia (PT)

Bárbara Coutinho
Instituto Superior Técnico, University of Lisbon (PT)

Bartolomeu Paiva
Polytechnic Institute of Coimbra (PT)

Bernardo Providência
University of Minho (PT)

Bettina Maisch
Munich University of Applied Sciences (DE)

Carla Cristina da Costa Pereira
Lisbon School of Architecture, University of Lisbon (PT)

Carlos Alberto Miranda Duarte
IADE - Universidade Europeia (PT)

Carlos Rosa
IADE - Universidade Europeia (PT)

Cláudia Viegas
ESTeSL – Escola Superior de Tecnologia da Saúde,
Instituto Politécnico de Lisboa (PT)

Cristina Carvalho
Lisbon School of Architecture, University of Lisbon (PT)

Cristina Isabel dos Santos
Polytechnic Institute of Beja (PT)

Daniel Brandão
University of Minho (PT)

Daniel Raposo
Polytechnic Institute of Castelo Branco (PT)

Dijon De Moraes
Minas Gerais State University (BR)

Eduardo Jorge Henriques Noronha
University of Aveiro (PT)

Elisabete Rolo
Lisbon School of Architecture, University of Lisbon (PT)

Emílio Manuel Távora Vilar
Faculty of Fine Arts, University of Lisbon (PT)

Ermanno Aparo
Polytechnic Institute of Viana do Castelo (PT)

Eva Oliveira
School of Technology, Polytechnic Institute of Cávado
and Ave (PT)

SCIENTIFIC COMMITTEE

Fernando Manuel Penitência Poeiros
Caldas da Rainha School of Arts and Design,
Polytechnic of Leiria (PT)

Francisco Gonçalves
Polytechnic Institute of Cávado and Ave (PT)

Gabriela Forman
Lisbon School of Architecture, University of Lisbon (PT)

Gianni Montagna
Lisbon School of Architecture, University of Lisbon (PT)

Giovanni Maria Conti
Politecnico di Milano – Design Department (IT)

Gonçalo João Ribeiro Gomes
University of Aveiro (PT)

Hande Ayanoğlu
IADE – Universidade Europeia (PT)

Heitor Manuel Cunha e Alvelos
Faculty of Fine Arts, University of Porto (PT)

Helena Bártolo
Polytechnic Institute of Leiria (PT)

Huang Qian
School of Architecture and Planning, Hunan University (CN)

Hugo José A. Teixeira Lopes Farias
Lisbon School of Architecture, University of Lisbon (PT)

Joana Quental
University of Aveiro (PT)

Jeremy Hugh Aston
ESAD – College of Art and Design (PT)

João Batalheiro Ferreira
IADE – Universidade Europeia (PT)

João Carlos Monteiro Martins
Polytechnic Institute of Viana do Castelo (PT)

João Vasco Matos Neves
Polytechnic Institute of Castelo Branco (PT)

José Carlos Sá
School of Engineering of Porto (PT)

José Manuel Silveira Dias
Lisbon School of Architecture, University of Lisbon (PT)

José Mendes Machado
University of Minho (PT)

José Miguel Gago da Silva
School of Arts, University of Évora (PT)

José Rui Marcelino
Lisbon School of Architecture, University of Lisbon (PT)

Katja Tschimmel
University of Porto (PT)

Lígia Maria Pinto Lopes
Faculty of Fine Arts of the University of Porto (PT)

Liliana Soares
Polytechnic Institute of Viana do Castelo (PT)

Lisha Ren
College of Design and Innovation (CN)

Louise Valentine
Heriot Watt University Dubai Campus (AE)

Luis Carlos Paschoarelli
São Paulo State University (BR)

Luís Mota
Polytechnic Institute of Viana do Castelo (PT)

SCIENTIFIC COMMITTEE

Luísa Rita Brites Sanches Salvado
University of Beira Interior (PT)

Manuel Gilberto Freitas Santos
School of Design, Polytechnic Institute of Cávado and Ave (PT)

Marco António Neves da Silva
Lisbon School of Architecture, University of Lisbon (PT)

Maria Emília Capucho Duarte
IADE – Universidade Europeia (PT)

Maria Inês Costa da Veiga
Lisbon School of Architecture, University of Lisbon (PT)

Maria Inês Secca Ruivo
University of Évora (PT)

Maria João Bravo Lima Delgado
Lisbon School of Architecture, University of Lisbon (PT)

Maria Raquel N. Casal Pelayo
Faculty of Architecture, University of Porto (PT)

Maria Sílvia Barros de Held
University of São Paulo (BR)

Mariana Eidler Díaz
Elisava, Barcelona School of Design and Engineering / FORK,
The Food Design Organization (ES)

Miguel Carvalhais
i2ADS & Faculty of Fine Arts of the University of Porto (PT)

Miguel de Aboim Borges
ISMAT – Instituto Superior Manuel Teixeira Gomes (PT)

Mónica Romãozinho
University of Beira Interior (PT)

Nuno Martins
School of Design, Polytechnic Institute of Cávado and Ave (PT)

Patrizia Ranzo
Università della Campania “Luigi Vanvitelli” (IT)

Paula Trigueiros
School of Architecture, Art and Design of the
University of Minho (PT)

Paulo António dos Santos Silva
University of Aveiro (PT)

Paulo Jorge da Silva Bartolo
Nanyang Technological University (SG)

Paulo Maldonado
University of Évora (PT)

Pedro Nuno Kosztyla Bandeira Maia
Coimbra School of Education, Polytechnic Institute
of Coimbra (PT)

Renato Jorge C. Lopes Bispo
Caldas da Rainha School of Arts and Design,
Polytechnic of Leiria (PT)

Renee Wever
Linköping University (SE)

Ricardo Bonacho
Faculty of Social Sciences and Technology,
at Universidade Europeia (PT)

Ricardo João Ferreira Simões
School of Design, Polytechnic Institute of Cávado and Ave (PT)

Rui Carlos Costa
University of Aveiro (PT)

Rute Andreia Lourenço Gomes
Research Center for Architecture, Urbanism and Design,
Lisbon School of Architecture, University of Lisbon (PT)

Sara Patrícia Martins Gancho
IADE – Universidade Europeia (PT)

SCIENTIFIC COMMITTEE

Silvina Félix da Silva
University of Aveiro (PT)

Soraia Luísa Pereira Pinto Ala
Aveiro North Higher School, University of Aveiro (PT)

Susana Cruz Barreto
University of Porto (PT)

Tenna Doktor Olsen Tvedebrink
Aalborg University, Department of Architecture,
Design and Media Technology (DK)

Terence Love
University of Tehran, Kish. Design Out Crime and
CPTED Centre, and Variety Dynamics (AU)

Vera Lúcia Vintém Barradas Martins
Polytechnic Institute of Portalegre (PT)

Vasco Afonso da Silva Branco
Department of Communication and Art of
University of Aveiro (PT)

Violeta Clemente
University of Aveiro (PT)



ORGANIZING COMMITTEE

Daniel Raposo

Diogo Riobom

Fátima Pombo

Fernando Moreira da Silva

Guilherme Cruz

Maria João Félix

Paulo Cruz

Pedro Bandeira Maia

Ricardo Simões

Rita Assoreira Almendra

Rita Tavares

Rogério Ribeiro

Sónia Seixas

Suzana Dias

Verónica Duarte

EVENT ORGANIZATION PARTNERS

Fátima Ribeiro and Manuela Sequeira Campos (Be Formal)

ORGANIZERS



PARTNERSHIPS



SPONSORS



► ABOUT US

The first edition will be an in-person international event, consisting of a wide variety of plenary sessions, and bringing together researchers, academics, designers, rapidly expanding technology companies, emerging companies, business associations and policy makers, with the objective of fostering and actively developing a joint reflection, in a transdisciplinary scientific exchange, which enhances innovation through Design and Industry for a better future with a strategic vision.

Fields that will stimulate responses to the challenges of climate change and environmental degradation will be proposed, paving the way to achieve the goals of the 2030 agendas.

The DESIGN COMMIT 2024 will take place during the 7th Braga Economics Week, an initiative promoted by InvestBraga, aimed at addressing economic issues, involving various types of events, and promoting the exchange of ideas among economic agents, institutions, and citizens.

► PURPOSE

This international conference aims to explore models that prioritize a post-growth economy, with **modern, resource efficient, smart, sustainable** and **inclusive** principles, focused on enhancing human health and education, promoting knowledge and inter-sector collaboration, and a digital society for all. And, in this way, contribute to the transition towards a more sustainable, equitable, and resilient future that considers the well-being of both people and the planet.

Amid pandemics, wars and environmental disasters, designers and industries have been forced to imagine a world in which the only way to move forward is to look back. Design and Industry need to understand the role they can play in removing obstacles to social progress and work together to create healthier societies.

➤ **PREFACE TO THE
DESIGN COMMIT
2024 CONFERENCE**

A Word from the Conference Chairs

Dear participants and collaborators,

It is with immense pleasure and honor that, on behalf of all the chairs of Design Commit 2024, we welcome you to this unique event, dedicated to the fusion of design and industry and their vital role in shaping a resilient and sustainable future.

In a world of constant transformation, where sustainability and innovation have become imperatives, Design Commit emerges as a beacon of knowledge and collaboration. Our mission is to unite thinkers, creators, educators, and industry leaders to discuss, share, and promote practices that lead to excellence and responsible innovation.

This year's conference presents an exceptional program, filled with inspiring keynotes and discussion panels that promise to stimulate critical thinking and the exchange of ideas. Each session has been carefully planned to reflect the challenges and opportunities presented to our global community.

Through this Book of Abstracts, we offer a glimpse of the innovative research and studies that will be showcased. The abstracts reflect the depth and diversity of the participants' contributions and serve as a window into the future directions of design and industry.

We wish to express our profound thanks to the members of the Scientific Committee, the organizing team, and everyone who contributed to making Design Commit 2024 possible. Your tireless commitment to excellence and the exchange of knowledge is the driving force behind the success of this event.

We invite you to delve into the following pages and join us on the journey of learning and discovery that we promote. May the discussions and insights generated here inspire actions and innovations that transcend the boundaries of this meeting.

With high expectations and a sense of enthusiastic anticipation, we move forward together to explore the boundless potential of design and industry in creating a more promising future for all.

Warm regards,

The Chairs of Design Commit 2024

**MARIA JOÃO FÉLIX, FÁTIMA POMBO, FERNANDO MOREIRA DA SILVA, PAULO CRUZ, RITA ASSOREIRA
ALMENDRA**

➤ OVERVIEW AND OBJECTIVES OF THE DESIGN COMMIT CONFERENCE

➤ OVERVIEW

Design Commit stands at the forefront of interdisciplinary dialogue, bringing together innovators, visionaries, and thought leaders from the realms of design and industry. As we gather in the bustling heart of creativity, our agenda is driven by the challenges and possibilities of integrating sustainable practices within these dynamic fields.

At the core of Design Commit is the dedication to fostering a community where collaboration transcends traditional boundaries, encouraging a synergy that fuels transformation and growth. We convene under the shared belief that design is not just an aesthetic choice but a pivotal tool for societal and industrial evolution.

➤ OBJECTIVES

- **To Inspire Innovation:** By showcasing cutting-edge research and case studies, we aim to spark new ideas that participants can take back to their own work, driving the frontiers of design and industry forward.
- **To Facilitate Networking:** Providing a platform for professionals from various sectors to connect, share insights, and forge partnerships that have the power to reshape the market landscape.
- **To Educate:** Through keynotes and panel discussions, we offer learning opportunities that enhance skills, expand knowledge, and offer new perspectives on tackling the design and industry challenges of today and tomorrow.
- **To Promote Sustainability:** Emphasizing the importance of eco-friendly and socially responsible design, we encourage discussions and solutions that contribute to a sustainable future.
- **To Advance Research:** Encouraging the exchange of academic findings and engaging with the latest in scholarly work, thus nurturing a space where theory meets practical application.
- **To Advocate for Change:** Pushing the boundaries of what's possible, and advocating for a proactive stance on global issues through the lens of design and industrial development.

As we embark on this journey of discovery and innovation, the Design Commit Conference is more than just an event, it is a catalyst for change, driving a future where design and industry not only coexist but thrive together, fostering an ecosystem of sustainable development and progressive thought.

➤ **ACKNOWLEDGMENTS
TO SPONSORS,
COLLABORATORS,
AND SUPPORTING
INSTITUTIONS**

The realization of the Design Commit 2024 Conference was made possible through the generous support and commitment of our sponsors, collaborators, and supporting institutions. At this moment of gratitude, we would like to express our recognition to everyone who contributed to the success of this event.

To our sponsors, whose financial and in-kind support has strengthened the structure and quality of the conference, we offer our heartfelt thanks. Your vision and understanding of the value of innovation in design and industry are fundamental to our collective progress.

We are immensely grateful to the organizing team, who shared their expertise and passion, enriching the program with insightful talks and discussion panels. Your dedication to excellence and professional development has not gone unnoticed.

A special thank you goes to the supporting institutions, whose partnership and support were essential to expanding the reach and depth of our meeting. Your collaboration allows the ideas discussed here to resonate beyond the conference walls.

We also acknowledge the assistance of various entities and volunteers, whose help behind the scenes was vital for the logistics and organization of the event. Your hard work and attention to detail ensured a smooth and memorable experience for all attendees.

Last but not least, we thank the academic and research institutions that, by supporting their representatives and researchers to participate in Design Commit, underscore the importance of an ongoing commitment to learning and innovation.

Together, we have built a conference that reflects the intersection between creativity, technology, and business, paving the way for the future of design and industry. Our sincere thanks to all of you for being part of this journey.

INDEX



SCIENTIFIC EDITORIAL	5	DETAILED PROGRAM	37
BOOK OF ABSTRACTS FOR THE DESIGN COMMIT 2024 CONFERENCE	6	SMART	67
CONFERENCE CHAIRS	8	PAPER ID [1]	69
HONORARY COMMITTEE	8	OPERATIONS OPTIMIZATION FOR THE INDUSTRIAL FAUCET INDUSTRY: TEST ASSEMBLY AND PACKAGING IN A ONE-PIECE FLOW LINE	
SCIENTIFIC COMMITTEE	9	<i>Miguel Terroso (ID+ Research Institute for Design, Media and Culture, School of Design, IPCA, Barcelos, Portugal), Ivo Rodrigues (ID+ Research Institute for Design, Media and Culture, School of Design, IPCA, Barcelos, Portugal), Adriana Amorim (ID+ Research Institute for Design, Media and Culture, School of Design, IPCA, Barcelos, Portugal), Deividi Hartmann (Superior Institute of Engineering of Porto, ISEP, Porto, Portugal) and Maria João Figueiredo (School of Management, IPCA, Barcelos, Portugal).</i>	
ORGANIZING COMMITTEE	13	PAPER ID [9]	69
ABOUT US	14	DESIGN CULTURE TOOLKIT: A UNIVERSITY-INDUSTRY CO-CREATION APPROACH TO IMPACT COMPANIES' CORPORATE CULTURE	
PURPOSE	14	<i>Hugo Palmares (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal), Miguel Terroso (ID+ Research Institute for Design, Media and Culture, School of Design, IPCA, Portugal) and Emília Costa (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal).</i>	
PREFACE TO THE DESIGN COMMIT 2024 CONFERENCE	15	PAPER ID [10]	70
OVERVIEW AND OBJECTIVES OF THE DESIGN COMMIT CONFERENCE	16	MAPPING A NETWORK CULTURE: FROM AN EMPIRICAL STUDY ON UNIVERSITY-INDUSTRY COLLABORATION	
OVERVIEW	16	<i>Hugo Palmares (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal), Miguel Terroso (ID+ Research Institute for Design, Media and Culture, School of Design, IPCA, Portugal) and Emilia Costa (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal).</i>	
OBJECTIVES	16	PAPER ID [23]	71
ACKNOWLEDGMENTS TO SPONSORS, COLLABORATORS, AND SUPPORTING INSTITUTIONS	17	DESIGN OF AN ELECTRONIC MECHANISM TO CONTROL THE REMOVAL OF BAGS IN A PUBLIC DISPENSER: CONTRIBUTIONS OF 3D PRINTING TO THE CREATIVE PROCESS	
KEYNOTE SPEAKERS	18	<i>Diogo Santo (Faculty of Fine Arts of the University of Porto, Portugal), Alice Araújo (Faculty of Fine Arts of the</i>	
CONFERENCE PROGRAM	33		

University of Porto, Portugal), **Raquel Souto** (Faculty of Fine Arts of the University of Porto, Portugal), **Rui Silva** (Faculty of Fine Arts of the University of Porto, Portugal), **Cláudia Lima** (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal) and **Rui Mendonça** (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal)

PAPER ID [311]
DESIGNERS FOR/AND/WITH MANUFACTURING: DESIGN-DRIVEN SOLUTIONS FOR AN UPDATED DIALOGUE BETWEEN YOUNG CREATIVE TALENTS AND THE TEXTILE-KNITWEAR INDUSTRY

Giovanni Maria Conti (Politecnico di Milano, Italy), **Martina Motta** (Politecnico di Milano, Italy), **Mariana Ciancia** (Politecnico di Milano, Italy), **Katia Goldoni** (Politecnico di Milano, Italy), **Francesca Piredda** (Politecnico di Milano, Italy) and **Beatrice Zagatto** (Politecnico di Milano, Italy).

PAPER ID [461]
DESIGN OF BRAIDED FIBROUS STRUCTURE (SCAFFOLD) FOR TREATMENT OF SPINAL INJURY USING RHINOCEROS 3D® SOFTWARE AND GRASSHOPPER PLUGIN

Ivis Aguiar Souza (Centre for Textile Science and Technology (2C2T), University of Minho, Guimarães, Portugal), **Lais Kohan** (College of Animal Science and Food Engineering, University of São Paulo, Pirassununga, Brazil), **Maurício José da Silva Filho** (Institute of Architecture and Urbanism, University of São Paulo, São Carlos, Brazil), **Raul M. E. S. Fangueiro** (Centre for Textile Science and Technology (2C2T), University of Minho, Guimarães, Portugal) and **Diana S. P. Ferreira** (Centre for Textile Science and Technology (2C2T), University of Minho, Guimarães, Portugal).

PAPER ID [511]
INNOVATIVE DESIGN SOLUTIONS IN MANUFACTURING INDUSTRIES BY ADOPTING ART-DRIVEN EXPERIMENTATION

Chiara Frencia (INOVA+, Belgium), **Bettina Maisch** (Munich University of Applied Sciences, Germany) and **Fátima Pombo** (ID+ Research Institute for Design, Media and Culture, University of Aveiro, Portugal).

PAPER ID [531]
DESIGN OF SMART LED STREETLIGHT LUMINAIRE FOR THE MITIGATION OF LIGHT POLLUTION

David Figueiredo (ID+ Research Institute for Design, Media and Culture, University of Aveiro, Portugal), **Eduardo Noronha** (ID+ Research Institute for Design, Media and Culture, University of Aveiro, Portugal) and **João Dias-de-Oliveira** (TEMA – Centre for Mechanical Technology and Automation, University of Aveiro, Portugal).

PAPER ID [551]
VIRTUAL PRODUCTION: A CLOSER LOOK AT DIGITAL INNOVATION AND HEALTH

71

Guilherme Cruz (Instituto Politécnico do Cávado e do Ave), **José Raimundo** (ID+ Research Institute for Design, Media and Culture, School of Design, IPCA, Barcelos, Portugal) and **Marta Madureira** (ID+ Research Institute for Design, Media and Culture, School of Design, IPCA, Barcelos, Portugal).

PAPER ID [611]
THE INTEGRATION OF ARTIFICIAL INTELLIGENCE IN JEWELLERY DESIGN PROCESSES

72

Livia Tenuta (Design Department, Politecnico di Milano, Italy), **Susanna Testa** (Design Department, Politecnico di Milano, Italy), **Francesca Antinarelli Freitas** (Design Department, Politecnico di Milano, Italy), **Beatrice Rossato** (Design Department, Politecnico di Milano, Italy) and **Alba Cappellieri** (Design Department, Politecnico di Milano, Italy).

PAPER ID [661]
A GRASSHOPPER-BASED COMPUTATIONAL FRAMEWORK FOR GEOMETRY ANALYSES BASED ON THE JOLLYING PROCESS

Diogo Carvalho (Department of Communication and Art; Department of Mechanical Engineering, University of Aveiro, Portugal), **João Oliveira** (TEMA–Centre for Mechanical Technology and Automation, University of Aveiro, Portugal) and **Violeta Clemente** (ID+ Research Institute for Design, Media and Culture, University of Aveiro, Portugal).

PAPER ID [741]
POSTPARTUM POSTURE CORRECTION IN BABY CARRIERS: BIOMECHANICAL INSIGHTS AND STRUCTURAL DETERMINANTS

73

Maria Moga (West University of Timisoara, Faculty of Design and Applied Arts, Romania).

PAPER ID [791]
FRUGAL INNOVATION IN TRANSFORMING SCARCITY INTO OPPORTUNITIES

73

Ismael Gonçalves Taborda (Department of Design, Universidade Estadual de Maringá, Maringá, PR, Brazil)

and **Cláudia Cirineo Ferreira Monteiro** (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa and Department of Design, Universidade Estadual de Maringá, Maringá, PR, Brazil).

PAPER ID [83]
DESIGN THINKING IN THE DEVELOPMENT OF SUSTAINABLE FURNITURE

Sofia Soares (Instituto Politécnico de Viana do Castelo, Portugal), **Liliana Soares** (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal) and **Ermanno Aparo** (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal).

PAPER ID [89]
FLY-PT PROJECT: COLLABORATIVE APPROACHES IN E-VTOL PASSENGER CABIN DESIGN

José Rui Marcelino (Lisbon School of Architecture, Universidade de Lisboa, Portugal), **André Castro** (Lisbon School of Architecture, Universidade de Lisboa, Portugal) and **Catarina Ferreira** (Lisbon School of Architecture, Universidade de Lisboa, Portugal).

PAPER ID [93]
EMERGING APPROACHES IN YACHT DESIGN AND MANUFACTURING: STATE OF THE ART AND FUTURE PERSPECTIVES OF GENERATIVE DESIGN AND ADDITIVE MANUFACTURING

Massimo Piccioni (Politecnico di Milano, Design Department, Italy), **Arianna Bionda** (Politecnico di Milano, Italy) and **Andrea Ratti** (Politecnico di Milano, Design Department, Italy).

PAPER ID [96]
DRAWING AND MANUAL SKETCHING IN THE CONTEXT OF INDUSTRIAL DESIGN, IN THE ERA OF ARTIFICIAL INTELLIGENCE

Verónica Duarte (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal), **Maria João Félix** (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal) and **Miguel de Aboim Borges** (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal)

PAPER ID [98]
THE ROLE OF DESIGN IN FOSTERING CIRCULAR STRATEGIES THROUGH DIGITALIZATION IN WATERBORNE PASSENGER URBAN MOBILITY ECOSYSTEMS.

Laura Pirrone (Department of Design, Politecnico di Milano, Milan, Italy), **Arianna Bionda** (Department of Design, Politecnico di Milano, Milan, Italy) and **Andrea Ratti** (Department of Design, Politecnico di Milano, Milan, Italy).

PAPER ID [106]
VAI – A COLLABORATIVE PROJECT TO IMMUNIZE PEOPLE THROUGH MASS VACCINATION

Ana Brum (Universidade Federal do Paraná, Brazil), **Gláucia Ferro** (Centro Brasil Design, Brazil) and **Aguinaldo Santos** (Universidade Federal do Paraná, Brazil).

PAPER ID [111]
INDUSTRY 5.0 AND SUSTAINABLE FASHION: FUTURE PROSPECTS FOR DESIGNERS IN THE ERA OF SMART FACTORY AND ARTIFICIAL INTELLIGENCE

Fernando Moreira da Silva (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal, Roberto Liberti (Dipartimento di Architettura e Disegno Industriale, Università della Campania Luigi Vanvitelli, Italy), **Silvestro Di Sarno** (Dipartimento di Architettura e Disegno Industriale, Università della Campania Luigi Vanvitelli, Italy) and **Valentina Alfieri** (Dipartimento di Architettura e Disegno Industriale, Università della Campania Luigi Vanvitelli, Italy).

PAPER ID [112]
PERSPECTIVES OF STUDENTS ON AI USE IN INTERIOR ARCHITECTURE AND DESIGN

Jinoh Park (University of Arkansas, United States of America).

PAPER ID [117]
INCLUSIVE KNOWLEDGE SYSTEM: A CYBER PHYSICAL SYSTEM FOR EDUCATION AND RESEARCH IN THE MADE IN ITALY PH.D. PROGRAM

Arrigo Bertacchini (Università degli Studi della Campania Luigi Vanvitelli, Italy) and **Salvatore Carleo** (Università degli Studi della Campania Luigi Vanvitelli, Italy).

PAPER ID [130]
EXPLORING PSEUDO-TACTILE SENSATIONS: VIRTUAL REALITY INTEGRATION IN THE TEXTILE INDUSTRY FOR SUSTAINABLE TRANSFORMATION

Cláudia Legoinha (University of Aveiro, Portugal) and *Silvina Félix* (ID+ Research Institute for Design, Media and Culture, University of Aveiro, Portugal).

PAPER ID [134]
USING THE WORKSHOP TECHNIQUE AS AN EVALUATION TOOL: THE CASE OF THE WAYFINDING INFORMATION BEHAVIOR METHOD.

Kelli Cas Smythe (Universidade Federal do Paraná, Brazil) and *Érica Santos Vargas* (Universidade Federal do Paraná, Brazil).

PAPER ID [143]
UNCOMPILABLE: AN INTERPLAY BETWEEN DESIGN AND AI IN THE REAL WORLD

Daniel Risi (IADE- Universidade Europeia, Lisbon, Portugal).

SOCIAL

PAPER ID [5]
BRAND DESIGN: PROJECT-BASED LEARNING CASE STUDY

Raquel Antunes (FAA, Universidade Lusíada Porto, Portugal; ESTG, Politécnico de Leiria, Portugal; CITAD.) and *António Brandão* (FAA, Universidade Lusíada Porto, Portugal; CITAD.).

PAPER ID [14]
SYNESTHETIC DESIGN PRACTICE: THE SMELL OF MUSIC

Yang Li (Design Department of Lisbon School of Architecture, Portugal), *Yiyuan Ding* (Design Department of Lisbon School of Architecture, Portugal), *Nankai Cheng* (Design Department of Lisbon School of Architecture, Portugal) and *Giuseppe Lotti* (Department of Architecture, University of Florence, Italy).

PAPER ID [15]
PRODUCER TO CONSUMER VEHICLE (P2CV) PRODUCT DESIGN OF A SMART MOBILITY SOLUTIONS FOR MINIMISING LOSS AND WASTE IN MICRO FOOD SUPPLY CHAINS

Guilherme Matos (ESAD College of Art and Design, Portugal) and *Jeremy Aston* (ESAD College of Art and Design, Portugal).

PAPER ID [17]
WEAVING A TAPESTRY OF KNOWLEDGE FOR THE PORTUGUESE TEXTILE DESIGN EDUCATION

83

Sónia Seixas (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal), *Gianni Montagna* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal) and *Maria João Félix* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal).

87

83

PAPER ID [18]
SPORTS BRA DESIGN FOR WELL-BEING: FOCUS ON MOBILITY, FABRIC MOISTURE MANAGEMENT AND AIR PERMEABILITY

Ines Katić Križmančić (2K IDEJA, Zagreb, Croatia), *Ivana Salopek Čubrić* (Faculty of Textile Technology, University of Zagreb, Croatia) and *Vesna Marija Potočić Matković* (Faculty of Textile Technology, University of Zagreb, Croatia).

88

84

86

PAPER ID [19]
THE TEMPORARY AND SUSTAINABLE MUSIC FESTIVAL AS A PROSCENIUM FOR NEW CULTURAL ACTS. GLASTONBURY FESTIVAL: ANATOMY OF A SUSTAINABLE FESTIVAL

Marco Manfra (University of Camerino, SAAD, Ascoli Piceno, Italy) and *Alessandro Damiani* (University of Padova, Italy).

88

86

PAPER ID [21]
PARTICIPATORY DESIGN IN CERAMICS CRAFT: A CASE STUDY IN THE POTY VELHO DISTRICT

Rebecca Nunes (Faculty of Architecture and Arts, University Lusíada Porto, Portugal) and *Raquel Antunes* (Faculty of Architecture and Arts, University Lusíada Porto; ESTG, Polytechnic of Leiria; CITAD).

89

86

PAPER ID [22]
PARTICIPATORY DESIGN AND FOOD LITERACY, PROMOTING HEALTH AND WELL-BEING AS INTEGRAL COMPONENTS OF A POST-GROWTH ECONOMY

Verónica Duarte (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal), *Maria João Félix* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal), *Miguel de Aboim Borges* (Lisbon School of Architecture, Universidade de Lisboa, Portugal) and

89

Cláudia Viegas (H&TRC—Health & Technology Research Center, ESTeSL—Escola Superior de Tecnologia da Saúde, Instituto Politécnico de Lisboa, Lisbon, Portugal).

PAPER ID [35]

COLOUR IN THE FOOD, COLOUR ON THE CERAMIC PLATE – SYMBOLIC PERCEPTION OF THE WHOLE

Maria João Mercês (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal).

PAPER ID [39]

EMPOWER CREATIVE EDUCATION WITH AWARENESS AND CRITICAL THINKING. NARRATIVES OF 'CHANGE AND POWER' IN FOSTERING FUTURE CREATIVE LEADERS

Francesco Galli (IULM University Milan, Italy) and *Irina Suteu* (NABA - Nuova Accademia di Belle Arti Milan, Italy).

PAPER ID [42]

EMOTIONAL DESIGN AFFECTING CONSUMERS' PREFERENCES FOR CHINA-CHIC STYLE CHARACTER DESIGN

Kaiqing Chen (Queensland College of Art and Design, Griffith University, Brisbane, Australia), *Dominique Falla* (Queensland College of Art and Design, Griffith University, Brisbane, Australia) and *Dale Patterson* (Queensland College of Art and Design, Griffith University, Brisbane, Australia).

PAPER ID [48]

QUALITATIVE RESEARCH TO IMPROVE USABILITY IN HOUSING FOR OLD ADULTS USERS: METHODOLOGIES COMPARED IN RESEARCH IN PORTUGAL AND THE NETHERLANDS

Maristela Silva (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal), *Rita Filipe* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal) and *Masi Mohammadi* (TU/e University of Technology Eindhoven, Netherlands).

PAPER ID [49]

REFLECTIONS ON INCLUSIVE CLOTHING: CONTRIBUTIONS TO DEVELOPMENT

Leticia Nardoni Marteli (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal), *Luis Carlos Paschoarelli* (School of Architecture, Arts, Communication and Design, Sao Paulo State University, Bauru, Brazil), *Fernando Moreira da Silva* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal) and *Paula Trigueiros* (School of Architecture, Art and Design, University of Minho, 4800-058, Guimarães, Portugal).

PAPER ID [54]

ECOMUSEALIA: THE CULTURAL LANDSCAPE AS A MUSEUM OBJECT. THE DESIGNER'S PERSPECTIVE THROUGH COMMUNICATION

Ana Moreno (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal), *Nelson Zagalo* (DigiMedia – Digital Media and Interaction Research Center, University of Aveiro, Portugal) and *Heitor Alvelos* (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal).

PAPER ID [56]

TEACHER-GENERATED DRAWING STRATEGY. A STARRY NIGHT SCREAM

Rui Costa (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal), *Susana Campos* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal) and *Pedro Bandeira Maia* (ID+ Research Institute for Design, Media and Culture, Polytechnic Institute of Coimbra, Portugal).

PAPER ID [57]

ART THINKING AND THE TRANSFORMATION OF THE ANACHRONISTIC OBJECT "MAKING THE STRANGE FAMILIAR AND MAKING THE FAMILIAR STRANGE". REHEARSAL AT RECOLETA AND BAJOS DE MENA, SANTIAGO DE CHILE

92

90

90

91

91

93

93

94

Gaston Uriel Lisak Zobotinsky (REDES – Research & Education in Design, Universidade de Lisboa, Portugal and ELISAVA Research Lab, Spain).

PAPER ID [58]
**DEVICES FOR CURB-CLIMBING
WHEELCHAIRS**

Ana Rita Silva (University Lusíada, Faculty of Architecture and Arts; Center for Research in Territory, Architecture and Design [CITAD], Portugal), *Benedita Camacho* (University Lusíada, Faculty of Architecture and Arts; Center for Research in Territory, Architecture and Design [CITAD], Portugal) and *António Nicolau Costa* (University Lusíada, Faculty of Architecture and Arts; Center for Research in Territory, Architecture and Design [CITAD], Portugal).

PAPER ID [59]
**TRANSPEDAGOGY AS AN ACTIVIST DESIGN
PRACTICE: OTHER MODES OF KNOWLEDGE
PRODUCTION AND ACTION THROUGH A
SCHOOL SHIP.**

Raúl Goñi (REDES – Research & Education in Design, Universidade de Lisboa, Portugal) and *Manuela Valtchanova* (Elisava Research, Barcelona School of Design and Engineering (UVic-UCC), Spain).

PAPER ID [65]
**ANALYSIS OF THE ACADEMIC PRODUCTION
USING SYSTEMATIC LITERATURE REVIEW:
BRAZIL – PORTUGAL (2017–2022)**

Lívia Brasil (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal) and *Gonçalo Falcão* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal)

PAPER ID [68]
**CITIZEN PARTICIPATION IN STRATEGIC
CONVERSATIONS ABOUT FUTURE
UNCERTAINTIES**

Jennifer Schubert (TH Augsburg, Germany).

PAPER ID [69]
**INNOVATION IN DESIGN AND ENGINEERING:
THE REFILL_H2O**

Ana Filomena Curralo (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal), *Sergio Ivan Lopes* (Polytechnic Institute of Viana do Castelo, Portugal), *João Mendes* (Polytechnic Institute of Viana do Castelo, Portugal) and *Antonio Curado* (Polytechnic Institute of Viana do Castelo, Portugal).

94

PAPER ID [71]
**INCLUSIVE DESIGN: CONSUMER DIVERSITY
IN HOTEL SERVICE**

Maristela Silva (Lisbon School of Architecture, Universidade de Lisboa, Portugal), *Rita Filipe* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal) and *Paola Rebolgar* (Federal University of Santa Catarina, Brazil).

97

95

PAPER ID [73]
**DESIGNING SUSTAINABLE TOURISM
EXPERIENCES FOR AQUATIC ECOSYSTEMS
THE DEVELOPMENT OF A REGENERATIVE
FLOATING RESORT**

Elena Elgani (Politecnico di Milano, Italy), *Elisa Schembri* (Politecnico di Milano, Italy), *Giulia Etori* (Politecnico di Milano, Italy), *Rosanna Caldarella* (Politecnico di Milano, Italy) and *Davide Grasso* (Politecnico di Milano, Italy).

97

95

PAPER ID [75]
**“CAN I HAVE MORE IDEAS?” – DEVELOPING
SOFT SKILLS IN SECONDARY EDUCATION
CHILDREN USING DESIGN THINKING**

Sofia Nunes (IADE - Faculty of Design, Technology and Communication, Portugal) and *João Ferreira* (IADE - Faculty of Design, Technology and Communication, Portugal).

98

96

PAPER ID [82]
**INNOVATION IN COASTAL SAFETY:
DESIGNING AND DEPLOYING A MOBILE
COMPACT LIFEGUARD TOWER FOR
MATOSINHOS BEACHES**

Jose Luis Ferreira (ESAD-College of Art and Design, Portugal), *Rui Pedro Freire* (ESAD-College of Art and Design, Portugal) and *Rafael Coelho* (ESAD-College of Art and Design, Portugal).

99

96

PAPER ID [85]

WON'T THIS BE WEIRD? APPROACHING THE DESIGN FIXATION PROBLEM CAUSED BY SOCIAL CONFORMITY AS A NEW PERSPECTIVE

Nikole Melo de Mendonça (Lisbon School of Architecture, Universidade de Lisboa, Portugal) and *Rita Assoreira Almendra* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal).

PAPER ID [86]

DESIGNING FOR TOMORROW: INSPIRING STUDENTS TO SHAPE A BETTER WORLD

Carla Cadete (Universidade Lusófona do Porto, Portugal).

PAPER ID [87]

THE NEIGHBORHOOD IS INCLUSIVE). THE SYNERGY OF PARTICIPATORY DESIGN, ART PRACTICES, AND SOCIAL DESIGN IN COMMUNITY EMPOWERMENT AND SOCIETAL TRANSFORMATION.

Ana Cardoso (ESAD—IDEA · research in design and art; ESAD-College of Art and Design; Blue Design Alliance, FCT; Portugal), *Maria Milano* (ESAD—IDEA · research in design and art; ESAD-College of Art and Design; Blue Design Alliance, FCT, Portugal) and *Cláudia Pinhão* (ESAD-College of Art and Design, FCT, Portugal).

PAPER ID [88]

MAPPING THE AWARENESS OF A PLACE

Jose Silva (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal) and *Fernando Moreira da Silva* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal).

PAPER ID [90]

DESIGN AS LEVERAGE - MAPPING SOLUTIONS

José Gago (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal) and *Tiago Marques* (CHAIA, Universidade de Évora, Portugal), *Fernando Moreira da Silva*

99 (*CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal*) and *Ema Rolo* (CLLC, University of Aveiro, Portugal)

PAPER ID [97]

SUSTAINABLE REGIONAL DEVELOPMENT THROUGH DESIGN

Ana Moreira da Silva (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal).

100 PAPER ID [101]

PERSONAL IMAGE PERCEPTION: THE IMPORTANCE FOR SUSTAINABLE THINKING

Raquel Francisco de Almeida Gripp (Universidade de São Paulo, Brazil), *Carolina Bianque Galito* (Universidade de São Paulo, Brazil) and *Maria Sílvia Barros de Held* (Universidade de São Paulo, Brazil).

100

PAPER ID [119]

SUSTAINABLE SOCIAL INNOVATION PRACTICES SUPPORTING COMMUNITIES IN PLACE-BASED INNOVATIONS. THE CASE OF AN INTERGENERATIONAL COMMUNITY CARE CENTER

Silvia Maria Gramegna (Department of Design, Politecnico di Milano, Italy) and *Alessandro Biamonti* (Department of Design, Politecnico di Milano, Italy).

101

PAPER ID [120]

ACTION STRATEGIES FOR THE DEFINITION OF A NEIGHBOURHOOD COMMUNITY: THE DISCIPLINE OF DESIGN MEETS CONDOMINIUMS FOR THE DEVELOPMENT OF "BLOCK"

Giuseppe Sorvillo (Università degli Studi della Campania Luigi Vanvitelli, Italy).

102

PAPER ID [125]

FOOD LITERACY FOR PUBLIC HEALTH: AN INFORMATION DESIGN EXPLORATORY STUDY

Suzana Parreira (CIEBA — Centro de Investigação e de Estudos em Belas-Artes, Portugal), *Pedro Duarte de Almeida* (CIEBA — Centro de Investigação e de Estudos em Belas-Artes, Portugal) and *Duarte Vital Brito* (Cascais Public Health Unit, ARS Lisboa e Vale do Tejo, Portugal).

102

103

103

104

104

PAPER ID [133]

**DESIGNING FOR IMPACT: ELEVATING
EMPLOYEE EXPERIENCE AND SERVICE
DELIVERY IN TANDEM**

Nidhi Singh Rathore (Civic Design Lead, Montgomery County Government, United States of America) and *Sogand Seirafi* (Deputy Division Chief, Transit Services, Montgomery County Government, United States of America).

PAPER ID [135]

**MULTICULTURAL INTERFACE DESIGN:
COLLECTING AND DESIGNING INFORMATION
FOR THE ACCESS OF MIGRANT AND REFUGEE
WOMEN AND CHILDREN TO THE BRAZILIAN
HEALTHCARE SYSTEM.**

Diovana Mazur Damacena (Universidade Federal do Paraná, Brazil) and *Kelli Cas Smythe* (Universidade Federal do Paraná, Brazil).

PAPER ID [137]

**REVOLUTIONIZING BELL'S PALSRY RECOVERY:
THE INNOVATIONS OF REACTIVATE IN
DESIGN FOR HEALTH AND WELL-BEING**

Valentina Sorvillo (Università degli studi della Campania Luigi Vanvitelli, Italy).

PAPER ID [141]

**REDESIGNING THE LEARNING ENVIRONMENT
OF AN ONLINE FASHION DESIGN COURSE: A
STEP TOWARDS HEUTAGOGY**

Graça Guedes (University of Minho, School of Engineering, Textile Engineering, Portugal) and *Patrícia Gomes* (University of Minho, School of Engineering, Textile Engineering, Portugal).

PAPER ID [142]

**IMPACT OF INTIMATE APPAREL AESTHETICS
ON THE CONSUMER**

Graça Guedes (University of Minho, School of Engineering, Textile Engineering, Portugal) and *Mélanie Rodrigues* (University of Minho, School of Engineering, Textile Engineering, Portugal).

PAPER ID [145]

**THE CONTRIBUTION OF INTERFACE DESIGN
IN THE FIGHT AGAINST COVID-19:
ANALYSIS OF THE DGS AND SNS24
WEBSITES, PORTUGAL**

105

Inês Costa (School of Design, Polytechnic of Cavado and Ave, Portugal), *Nuno Martins* (ID+ Research Institute for Design, Media and Culture, School of Design, IPCA, Portugal), **Francisco Garcia** (CIES-ISCTE - Centre for Research and Studies in Sociology, Portugal), **Rita Espanha** (CIES-ISCTE - Centre for Research and Studies in Sociology, Portugal), **Daniel Brandão** (CECS, Institute of Social Sciences, University of Minho),

106

Ana Barros (Portuguese Society of Pneumology, Portugal) and *Branco Di Fátima* (LabCom - University of Beira Interior, Portugal).

PAPER ID [146]

**DESIGNING FOR MEANINGFUL HERITAGE:
AFFECT, EMBODIMENT AND EMOTION**

Gaëlle Pillault (ID+ Research Institute for Design, Media and Culture, University of Aveiro, Portugal), *Tenna Doktor Olsen Tvedebrink* (Aalborg University, Denmark) and *Fátima Pombo* (ID+ Research Institute for Design, Media and Culture, University of Aveiro, Portugal).

106

PAPER ID [147]

**CUSTOMIZING WEARABLE PROSTHETICS:
A PRELIMINARY REVIEW OF THE CURRENT
STATE OF THE ART IN UPPER LIMB
PROSTHESES**

Andreia Caldas (ID+ Research Institute for Design, Media and Culture, School of Design, IPCA, Barcelos, Portugal), *Demétrio Matos* (ID+ Research Institute for Design, Media and Culture, School of Design, IPCA, Barcelos, Portugal), *Adam de Eyto* (LSAD Research Institute, Limerick School of Art & Design, Technological University of the Shannon, Ireland) and *Nuno Martins* (ID+ Research Institute for Design, Media and Culture, School of Design, IPCA, Barcelos, Portugal).

107

107

PAPER ID [148]

**FOR A DEEPER ENCOUNTER WITH CULTURAL
HERITAGE: ANALYSIS OF "LEONARDO:
EXPERIENCE A MASTERPIECE" EXHIBITION
THROUGH THE LENS OF EXPERIENCE DESIGN**

Aleksandra Kosztyła (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal), *Pedro Cardoso* (DigiMedia - Digital Media and Interaction

108

108

109

109

Research Center, University of Aveiro, Portugal) and **Heitor Avelos** (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal).

PAPER ID [153]

THE ABSTRACTION EFFECT: HOW ABSTRACT LANGUAGE CAN COMBAT AVERSION TO IMPERFECTION AND INFLUENCE CONSUMER BEHAVIOR

Manuel Sousa Pereira (School of Business Sciences, Polytechnic Institute of Viana do Castelo, Portugal), **António Cardoso** (Department of Business and Communication Sciences, University Fernando Pessoa, Porto, Portugal), **Giulia D'Auria** (School of Business Sciences, Polytechnic Institute of Viana do Castelo, Portugal), **Marianna Aruta** (School of Business Sciences, Polytechnic Institute of Viana do Castelo, Portugal), **Mattia Adinolfi** (School of Business Sciences, Polytechnic Institute of Viana do Castelo, Portugal) and **José Carlos de Sá** (CIDEM, School of Engineering (ISEP), Polytechnic of Porto, Portugal).

GREEN

PAPER ID [7]

THE ECO-DESIGN OF TALLUM. A MULTIFUNCTIONAL KITCHEN ISLAND FOR AN INNOVATIVE ECO-USER

Carolina Polónio (TEMA - Centre for Mechanical Technology and Automation, University of Aveiro, Portugal), **J. Paulo Davim** (TEMA - Centre for Mechanical Technology and Automation, University of Aveiro, Portugal) and **Fátima Pombo** (ID+ Research Institute for Design, Media and Culture, University of Aveiro, Portugal).

PAPER ID [8]

DESIGNING AWARENESS: A COLLABORATIVE INITIATIVE FOR CLIMATE CHANGE ENGAGEMENT IN PORTO

Susana Barreto (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal) and **Juliana Pires** (Faculty of Fine Arts of the University of Porto, Portugal).

PAPER ID [13] INNOVATIVE AND SUSTAINABLE: DESIGN OF A HOME-BASED DEVICE FOR REUSING AND RECYCLING FACE MASKS

110

Nankai Cheng (Design Department of Lisbon School of Architecture, Portugal), **Yiyuan Ding** (Design Department of Lisbon School of Architecture, Portugal), **Li Yang** (Design Department of Lisbon School of Architecture, Portugal), **Paulo Noriega** (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal) and **Giuseppe Lotti** (Department of Architecture, University of Florence, Italy).

PAPER ID [20]

THE IMPACT OF TECHNOLOGY IN DESIGN LEARNING: A STUDY WITH DIGITAL NATIVES

115

Catarina Ferreira (Lisbon School of Architecture, University of Lisbon, Portugal), **Sara Lamúrias** (Lisbon School of Architecture, University of Lisbon, Portugal) and **Rita Martelo** (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal).

112

PAPER ID [28]

OUT-LINE TO A CIRCULAR-LINE. A REFLECTION ON CIRCULAR ECONOMY FOR SMALL HOUSEHOLD APPLIANCES: THE CASE OF FOOD PROCESSORS

116

Pedro Gonçalves (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal) and **José Vicente** (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal).

114

PAPER ID [30]

THE DESIGN APPLIED TO THE CREATION OF A SUSTAINABLE LUNCH BAG

117

Marta Correia (Polytechnic Institute of Viana do Castelo, Portugal), **João Martins** (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal) and **Ana Filomena Curralo** (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal).

PAPER ID [41]

PARAMETERS FOR A DEGROWTH ARCHITECTURE: SUBVERTING THE SOCIO-ECOLOGICAL SPATIAL CONDITIONS OF THE CAPITALIST-GROWTH REGIME

Anna Deeg (Aalborg University, Denmark).

PAPER ID [44]

INNOVATIVE DESIGN STRATEGIES FOR SUSTAINABLE CORAL REEF RESTORATION IN THE ANTHROPOCENE

Pedro Dias (Lisbon School of Architecture, Universidade de Lisboa, Portugal), *André Castro* (Lisbon School of Architecture, Universidade de Lisboa, Portugal) and *Maria João Félix* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal).

PAPER ID [50]

HYBRIDIZING CONSTRUCTION: THE TRANSFORMATIVE INFLUENCE OF CERAMIC AM

João Carvalho (Lab2PT – School of architecture, University of Minho, Portugal), *Paulo J. S. Cruz* (Lab2PT – School of architecture, University of Minho, Portugal) and *Bruno Figueiredo* (Lab2PT – School of architecture, University of Minho, Portugal).

PAPER ID [52]

THE LIFE AND DEATH OF GROWTH CITIES: INVESTIGATING THE TRANSITION TO DEGROWTH SPATIAL PLANNING

Anna Deeg (Aalborg University, Denmark).

PAPER ID [60]

SUSTAINABLE CONVERSIONS FOR COVD: CO-CREATION BETWEEN DESIGN AND CRAFTSMANSHIP

Amélia Ribeiro (Universidade Lusíada do Porto, Portugal) and *Maria João Barbosa* (Universidade Lusíada do Porto, Portugal and Center for Research in Territory, Architecture, and Design [CITAD]).

117

PAPER ID [67]

REIMAGINING FABRICS: THE ROLE OF ADDITIVE MANUFACTURING IN EVOLVING TEXTILE DESIGN AND PRODUCTION

Susana Marques (University of Beira Interior and Lab2PT, School of Architecture, Art and Design, University of Minho, Portugal), *Carina Lopes* (IPC - University of Minho and DONE Lab - Advanced Manufacturing of Polymers and Tools, Portugal), *Rui Miguel* (University of Beira Interior, Portugal) and *Álvaro M. Sampaio* (Lab2PT, School of Architecture, University of Minho and DONE Lab - Advanced Manufacturing of Polymers and Tools, Portugal).

118

PAPER ID [70]

ECODESIGN FUTURES. A WASTEWATER RECYCLING SYSTEM FOR ZERO-MILE VEGETABLE PRODUCTION

Giorgio Buratti (Politecnico di Milano, Italy), *Fiammetta Costa* (Politecnico di Milano, Italy), *Attilio Nebuloni* (Politecnico di Milano, Italy), *Luciana Migliore* (Università Tor Vergata, Rome, Italy), *Annamaria Alabiso* (Università di Roma Tor Vergata, Italy) and *Matteo Meraviglia* (Politecnico di Milano, Italy).

118

PAPER ID [72]

VISUALISING SCIENCE: CRAFTING MEMES IN DESIGN PEDAGOGY

Susana Barreto (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal), *Heitor Alvelos* (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal), *Cláudia Lima* (Lusófona University, Portugal), *José Carneiro* (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal), *Pedro Alves da Veiga* (University Aberta, Portugal), *Eliana Penedos-Santiago* (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal), *Marta Fernandes* (Porto Polytechnic, Portugal), *Nuno Martins* (ID+ Research Institute for Design, Media and Culture, School of Design, IPCA, Barcelos, Portugal) and *Júlio Dolbeth* (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal).

119

119

120

121

121

PAPER ID [76]

THE TEACHER'S ROLE IN THE IMPLEMENTATION OF THE METAVERSE

Yannara Negre (Universidade Europeia, IADE, UNIDCOM/IADE, Unidade de Investigação em Design e Comunicação, Portugal), *Rui Patrício* (Universidade Europeia, IADE, UNIDCOM/IADE, Unidade de Investigação em Design e Comunicação, Portugal) and *Élmano Ricarte* (Universidade Europeia, IADE, UNIDCOM/IADE, Unidade de Investigação em Design e Comunicação, ICNOVA, Portugal).

PAPER ID [77]

INDUSTRIAL WASTE FROM CORN USED IN THE DEVELOPMENT OF TUBES FOR PLANTING EUCALYPTUS SEEDLINGS

Leticia Perciliano Sakurai (State University of Maringá, Brazil), *Ghiovani Zanzotti Raniero* (State University of Maringá, Brazil), *Antonio Roberto Giriboni Monteiro* (State University of Maringá, Brazil) and *Cláudia Cirineo Ferreira Monteiro* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa and Department of Design, Universidade Estadual de Maringá, Maringá, PR, Brazil).

PAPER ID [78]

NEO-RURAL BIOCONSTRUCTION: A CULTURAL ANALYSIS. TRANSFORMATIONS AND CONNECTIONS BETWEEN THE PAST AND THE PRESENT

Llara Fuente Corripio (Universidad de Oviedo, Spain).

PAPER ID [84]

DESIGN OF A YARN ANALYSIS MECHATRONIC PROTOTYPE FOR TEXTILE INDUSTRY

Filipe Pereira (Algoritmi Research Centre, School of Engineering, University of Minho, Portugal and MEtRICs Research Centre, School of Engineering, University of Minho, Portugal and 2C2T Research Centre, School of Engineering, University of Minho, Portugal and 2Ai, School of Technology, IPCA, Portugal), *José Machado* (MEtRICs Research Centre, School of Engineering, University of Minho, Portugal), *Filomena Soares* (Algoritmi Research Centre, School of Engineering, University of Minho,

122

Portugal), *Rosa Vasconcelos* (2C2T Research Centre, School of Engineering, University of Minho, Portugal) and *Vitor Carvalho* (Algoritmi Research Centre, School of Engineering, University of Minho, Portugal and 2Ai, School of Technology, IPCA, Portugal).

PAPER ID [92]

THE INTERSECTION OF DESIGN METHODOLOGIES AND CIRCULAR ECONOMY PRINCIPLES: A FOCUS ON WASTE REDUCTION, SUSTAINABLE MATERIALS MANAGEMENT, AND EDUCATIONAL TOYS

122

Raquel Salomé (ESAD—IDEA · research in design and art | ESAD-College of Art and Design, Blue Design Alliance, FCT, Portugal).

PAPER ID [94]

ECODESIGN: SHAPING A SUSTAINABLE FUTURE WITH PLASTIC PRODUCTS

Ana Barroso (PIEP - Pólo de Inovação em Engenharia de Polímeros, University of Minho, Portugal) and *André Gomes* (PIEP - Pólo de Inovação em Engenharia de Polímeros, University of Minho, Portugal).

PAPER ID [95]

NATURAL MATERIAL INNOVATIONS IN SUSTAINABLE BUILDING SYSTEMS

123

Tatiana Campos (University of Minho, Architecture School, Lab2PT – Landscapes, Heritage and Territory Laboratory, Portugal), *Paulo Cruz* (University of Minho, Architecture School, Lab2PT – Landscapes, Heritage and Territory Laboratory, Portugal) and *Bruno Figueiredo* (University of Minho, Architecture School, Lab2PT – Landscapes, Heritage and Territory Laboratory, Portugal).

124

PAPER ID [99]

SYNERGIES BETWEEN BIOMIMICRY AND DESIGN WORKSHOP BIOMIMICRY 101 - "HOW CAN NATURE GUIDE US INTO A SUSTAINABLE FUTURE."

Jeremy Aston (ESAD College of Art and Design / ESAD—IDEA, Portugal), *Ana Duque* (ESAD College of Art and Design / ESAD—IDEA, Portugal) and *Luciana Barbosa* (ESAD College of Art and Design / ESAD—IDEA, Portugal).

124

125

125

126

PAPER ID [102]

AESTHETICS AND MEANING WITHIN THE CIRCULAR DESIGN DISCOURSE: AN ANALYSIS BASED ON DESIGN PROJECTS

Nina Costa (ID+ Research Institute for Design, Media and Culture, University of Aveiro, Portugal), *Adriano Pinho* (ID+ Research Institute for Design, Media and Culture, University of Aveiro, Portugal) and *Francisco Providência* (ID+ Research Institute for Design, Media and Culture, University of Aveiro, Portugal).

PAPER ID [104]

APPL(E)AUSE. A FOOD DESIGN EXPERIMENT TO CREATE NEW PROCESSED FOODS FROM APPLE BY-PRODUCTS

Raffaele Passaro (Politecnico di Torino - Dipartimento di Architettura e Design (DAD), Italy) and *Cristian Campagnaro* (Politecnico di Torino - Dipartimento di Architettura e Design (DAD), Italy).

PAPER ID [107]

DESIGN OF TOOLS IN FIRE MANAGEMENT

Pierpaolo Antonio Fusaro (Department of Physics, University of Calabria, Rende, Italy), *Arrigo Bertacchini* (Department of Physics, University of Calabria, Italy and Department of Architecture and Industrial Design, University of Campania "Luigi Vanvitelli", Italy) and *Giulia Teverini* (Department of Architecture and Industrial Design, University of Campania "Luigi Vanvitelli", Italy and Department of Social, Political and Cognitive Sciences, University of Siena, Italy).

PAPER ID [110]

AN INTRODUCTORY AND EXPLORATORY STUDY INTO THE CONTEXT OF PORTUGUESE SUSTAINABLE FASHION MICRO-COMPANIES

Elsa Lima (Universidade de Lisboa - Faculdade de Arquitetura de Lisboa, Portugal), *Gianni Montagna* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal) and *António Dinis* (University of Minho, Portugal).

126

PAPER ID [113]

BIO-BASED MATERIALS IN COSMETICS: TERRITORIAL SYNERGIES AND DESIGN-ORIENTED PRODUCT EXPERIMENTATIONS.

Rosanna Veneziano (Università degli Studi della Campania Luigi Vanvitelli, Italy), *Michela Carlomagno* (Università degli Studi della Campania Luigi Vanvitelli, Italy) and *Stefano Salzillo* (Università degli Studi della Campania Luigi Vanvitelli, Italy).

129

127

PAPER ID [126]

SUSTAINABLE CRAFTS DESIGN RESEARCH - A SCOPING STUDY ABOUT CRAFT DEVELOPMENT PROBLEMS IN THE UK

Li Zhang (Loughborough University, United Kingdom), *Cees de Bont* (Loughborough University, United Kingdom) and *Avsar Gurpinar* (Loughborough University, United Kingdom).

129

128

PAPER ID [128]

CERAMIC WASTE AND OPPORTUNITIES: DESIGN AS A MEDIATOR IN THE CONSERVATION OF BIODIVERSITY

Joana Pinto (Faculty of Fine Arts of University of Porto, Portugal), *Lígia Lopes* (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal) and *Jorge Lino* (Faculty of Engineering of University of Porto, Portugal).

130

128

PAPER ID [150]

DESIGN OF WATER SUSTAINABILITY: TREES IN ARID AND SEMI-ARID CLIMATES

Terence Love (Love Services Pty Ltd, Australia).

130

PAPER ID [151]

SUSTAINABILITY IN BUSINESS PLANS: A PORTUGUESE LINEN TEXTILE COMPANY CASE

Isabel Duarte de Almeida (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal and IBS, Iscte-Instituto Universitário de Lisboa, Lisbon, Portugal) and *Maria João Delgado* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal).

131

SPECULATIVE

PAPER ID [4]

**THE ARCHITECTURAL PRESENT -
HYPERUTOPIA IN SINGAPORE**

João Rosmaninho (University of Minho, EAAD-LAB2PT, Portugal) and *Margarida Lopes* (University of Minho, EAAD, Portugal).

PAPER ID [24]

**AUTHORSHIP IN CONTEMPORARY TATTOO: A
DESIGN PERSPECTIVE**

Bruno Cordeiro (CIEBA - Center for Research and Study in Fine Arts, universidade de Lisboa, Portugal).

PAPER ID [34]

**ENHANCING USER EXPERIENCE IN THE
METAVERSE: EXPLORING ABSTRACT USER
DESIGN SEMIOTICS AND ITS IMPACT ON
COMMUNICATION CULTURE**

Anton Storey (Heriot Watt University, School of Design, Dubai, United Arab Emirates).

PAPER ID [37]

**SPECULATIVE PROPOSALS: A DESIGN
RESOURCE FOR CRAFTING SPECULATIVE
SCENARIOS**

David Palma (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal) and *Marco Neves* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal).

PAPER ID [45]

**THE LIVES OF METAL: A SPECULATIVE
INQUIRY BETWEEN ART AND INDUSTRY
THROUGH THE MOLDING OF ALUMINUM**

Antônio Frederico Lasalvia (M. Arch. and independent researcher), *Hugo Reis* (M. Arch and PhD candidate at ISCTE - IUL, Lisboa, Portugal) and *Filipa Frois Almeida* (Arch. and M. Photographer).

132

PAPER ID [109]

**FASHION, SPECULATIVE DESIGN AND
FASHION FILMS IN CONTEMPORARY
FASHION BRANDS: A LITERATURE REVIEW**

Mónica Lopes (Lusofona University - CICANT, Portugal), *Manuel José Damásio* (Lusofona University - CICANT, Portugal) and *Alexandra Cruchinho* (Lusofona University - CICANT, Portugal).

134

134

PAPER ID [115]

**A PARTICIPATORY SPECULATION TOOLKIT
FOR CO-DESIGNING WITH RURAL
COMMUNITIES**

Hernani Alves (IADE Universidade Europeia, Lisbon, Portugal), *Eduardo Gonçalves* (IADE Universidade Europeia, a Lisbon, Portugal) and *Ana Margarida Ferreira* (LABCOM Universidade da Beira Interior, Portugal).

135

135

PAPER ID [116]

**HOW DO AUDIENCES PERCEIVE PRACTICE
CASES? INVESTIGATING TYPOLOGICAL
DIFFERENCES IN DESIGN FUTURES THROUGH
PERCEPTUAL MAPPING TECHNIQUES**

Tiantian Li (Academy of Arts & Design, Tsinghua University, Beijing, China) and *Zhiyong Fu* (Academy of Arts & Design, Tsinghua University, Beijing, China).

136

PAPER ID [122]

**BEING-CENTRED DESIGN – NOTES ON A
SPECULATIVE PROCESS PHILOSOPHY**

Nuno Dias (ID+ Research Institute for Design, Media and Culture, University of Aveiro, Portugal), *Abhishek Chatterjee* (ID+ Research Institute for Design, Media and Culture, University of Aveiro, Portugal) and *Vasco Branco* (ID+ Research Institute for Design, Media and Culture, University of Aveiro, Portugal).

PAPER ID [123]

**MAKING MEANING: DISCUSSING FUTURES
OF MEASUREMENT, VALUE AND IMPACT IN
DESIGN HIGHER EDUCATION**

Suzanne E. Martin (Ireland).

136

137

137

138

139

CONVERT

PAPER ID [16]
**LAMP "SABOR A LUZ"®, 20 YEARS OF
ECODESIGN**

Fernando Miguel Marques (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal).

PAPER ID [27]
**CAPULANA: SEARCHING FOR THE FUTURE IN
TRADITION**

Sofia Lucas (Lisbon School of Architecture, Universidade de Lisboa, Portugal) and *Henri Christiaans* (School of Design & Human Engineering, Ulsan National Institute of Science and Technology_ UNIST, South Korea).

PAPER ID [29]
**URBAN DESIGN SOLUTIONS FOR DOG WASTE:
DESIGN OF A MECHANICAL DEVICE FOR A
DOG WASTE STATION BAG DISPENSER**

Maria João Megre (Faculty of Fine Arts of the University of Porto, Portugal), *Francisco Pereira* (Faculty of Fine Arts of the University of Porto, Portugal), *Vasco Lameira* (Faculty of Fine Arts of the University of Porto, Portugal), *Cláudia Lima* (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal) and *Rui Mendonça* (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal).

PAPER ID [32]
**A NEW MODEL FOR STEAM APPROACH GUIDED
BY DESIGN**

Wilson Kindlein Júnior (Universidade Federal do Rio Grande do Sul – UFRGS, Brazil), *Brendon Willian Guedes Barbosa* (Universidade Federal do Rio Grande do Sul – UFRGS, Brazil), *Flávia Ribeiro Vieira* (Universidade Federal do Rio Grande do Sul – UFRGS, Brazil) and *Ivan de Lima E Silva Penz* (Universidade Federal do Rio Grande do Sul – UFRGS, Brazil).

PAPER ID [38]
**PULSE APPROACH WORKSHOP: ONE WAY
OF TESTING THE PROPOSAL OF INTEGRAL
DESIGN PROJECT MANAGEMENT TOOL**

140 *Luciana Lopes* (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal), *Heitor Alvelos* (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal), *Cristina Parente* (Faculty of Arts and Humanities of University of Porto - Institute of Sociology, Portugal) and *Gonçalo Gomes* (ID+ Research Institute for Design, Media and Culture, University of Aveiro, Portugal).

142
142 PAPER ID [83]
**BUSINESSES IN BAMBOO AND THEIR
CONSIDERATIONS FOR A SUSTAINABLE
VENTURE** 144

Monikuntala Das (PhD Research Scholar, Department of Design, Indian Institute of Technology Guwahati, India) and *Amarendra Kumar Das* (Professor, Department of Design, Indian Institute of Technology Guwahati, India).

143 PAPER ID [91]
**SUSTAINABLE PRODUCT DEVELOPMENT
STRATEGIES: AN ALTERNATIVE FOR THE
MICRO AND SMALL FURNITURE INDUSTRY IN
EMERGING ECONOMIES** 145

Júliana Cardoso Braga (Federal University of Uberlândia, Brazil), *Juliano Aparecido Pereira* (Federal University of Uberlândia, Brazil), *Fernando Moreira da Silva* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal) and *Luis Carlos Paschoarelli* (São Paulo State University, Brazil).

143 PAPER ID [118]
**THE PROFESSIONAL PRACTICE OF DESIGN: A
QUALITATIVE STUDY OF DESIGN PROCESSES
AND THEIR SUITABILITY FOR TEACHING
ACADEMIC DESIGN** 145

Luís Mota (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal), *João Martins* (Instituto Politécnico de Viana do Castelo, Portugal), *Liliana Soares* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal) and *Maria João Félix* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal).

PAPER ID [131]

**IKEA HACKING: CUSTOMIZATION AND
DEMOCRATIZATION OF OBJECTS**

Domenico Di Fuccia (Università degli Studi della Campania Luigi Vanvitelli, Italy).

PAPER ID [152]

**PROPOSING A SUSTAINABILITY
COMPENDIUM FOR THE PORTUGUESE
INDUSTRY SECTOR STUDENTS**

Rute Gomes (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal), *Paulo Dinis* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal), *José Silveira Dias* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal) and *Maria João Félix* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal).

FLASH RESEARCH DEMO

PAPER ID [158]

**SUSTAINABLE DESIGN TO SUPPORT THE
CREATION OF RURAL AND MOUNTAIN
COMMUNITIES IN INLAND PORTUGAL.**

Daniel Raposo (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa & ReThink – Centro de Investigação em Design para o Território, Portugal), *Teresa Paiva* (BRIDGES - Biotechnology Research, Innovation and Design for Health Products, Polytechnic of Guarda, Portugal & Research Centre in Business Sciences, University of Beira Interior, Portugal), *João Neves* (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa & ReThink – Centro de Investigação em Design para o Território, Portugal), *Maria Fátima Veríssimo* (Polytechnic Institute of Castelo Branco & ReThink – Centro de Investigação em Design para o Território, Portugal) and *Hugo Mendes* (BRIDGES - Biotechnology Research, Innovation and Design for Health Products, Polytechnic of Guarda & Research Centre in Business Sciences, University of Beira Interior, Portugal).

146

PAPER ID [159]

**A GAME-BASED FRAMEWORK TO DESIGN AND
ANALYZE GAMES TO AUGMENT CREATIVITY
IN THEIR PLAYERS**

José Raimundo (ID+ Research Institute for Design, Media and Culture, School of Design, IPCA, Barcelos, Portugal).

147

PAPER ID [160]

**THE IMPORTANCE OF TECHNOLOGY AND
DESIGN FOR THE SUCCESS OF NATIONS.**

Gilberto Santos (ID+ Research Institute for Design, Media and Culture, School of Design, IPCA, Barcelos, Portugal).

PAPER ID [161]

**BEYOND-VERBAL COMMUNICATION:
CHALLENGES OF CODESIGNING WITH
PERSONS WITH MODERATE TO LATE-STAGE
DEMENTIA**

Cláudia Lima (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal; Lusofona University, Portugal) and *Susana Barreto* (ID+ Research Institute for Design, Media and Culture, Faculty of Fine Arts of the University of Porto, Portugal).

148

150

PAPER ID [162]

**GENIE OF THE MAGIC LAMP OR
COLLABORATIVE GENIUS? REFLECTION
ON THE USE OF GENERATIVE ARTIFICIAL
INTELLIGENCE IN THE TEACHING-LEARNING
PROCESS IN COMMUNICATION DESIGN**

Vitor Tavares (N2i, Polytechnic Institute of Maia, Portugal), *Suzana Dias* (ID+ Research Institute for Design, Media and Culture, School of Design, IPCA, Barcelos, Portugal), *Manuel Granja*, *Mónica Santos* (ID+ Research Institute for Design, Media and Culture/Polo FBAUP, Portugal) and *Estela Vilhena* (2Ai – School of Technology, IPCA, Barcelos, Portugal; LASI – Associate Laboratory of Intelligent Systems, Guimarães, Portugal).

PAPER ID [163]

**A PRECIOUS TERRITORIAL NETWORK:
ALKIMIYA MAG JEWELRY DESIGN MAPS**

Morelli Maria Dolores (Università degli Studi della Campania “Luigi Vanvitelli”, Caserta, Italy) and *Barbato Carmela* (Università degli Studi della Campania “Luigi Vanvitelli”, Caserta, Italy).

151

151

152

153

154

PAPER ID [164]

**DEVELOPMENT, IMPLEMENTATION AND
MANAGEMENT OF VISUAL IDENTITIES
DEFINITION OF A MODEL FOR SMES IN THE
AGRI-FOOD SECTOR**

Rogério Ribeiro (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa & ReThink – Centro de Investigação em Design para o Território, Portugal), **Daniel Raposo** (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, & ReThink – Centro de Investigação em Design para o Território, Portugal), **Rita Assoreira Almendra** (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal) and **João Neves** (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal & ReThink – Centro de Investigação em Design para o Território, Portugal).

PAPER ID [165]

**EUROACE BAUHAUS VILLAGES STRATEGIC
PLAN**

João Neves (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, 1349-063 Lisboa, Portugal & ReThink – Centro de Investigação em Design para o Território, Portugal), **Daniel Raposo** (CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa & ReThink – Centro de Investigação em Design para o Território, Portugal) and **Domingos Santos** (Polytechnic Institute of Castelo Branco & ReThink – Centro de Investigação em Design para o Território, Portugal).

154

**PRACTICAL INFORMATION FOR
PARTICIPANTS**

157

**GUIDELINES ON THE RIGHTS OF
USE AND CITATION OF WORKS
FOR DESIGN COMMIT 2024**

159

155

GREEN

Design is recognised as a crucial driver of innovation and a facilitator of the transition to a circular economy. While there are numerous strategies to support circular design practices, many tend to prioritise management and engineering processes, overlooking design's aesthetic dimension and its role as a cultural mediator. This research paper aims to revisit the role of design in the circular economy, emphasising its aesthetic and meaning dimensions, and exploring the potential of circular design to trigger socio-cultural change. It develops a framework based on existing literature and examines 14 master design projects developed within a higher education institution in Portugal, using tenets of multiple case study analysis and interpretative approach. The paper proposes a conceptual matrix that connects material function, meaning, and sustainability aesthetics, forming a continuum of design approaches for circular projects. The findings indicate that material exploration and transformation often shape the ethos of the project, while design intention and aesthetics assumes a secondary role. Moreover, the potential to reach a significant human impact is still quite limited. These results highlight the importance of expanding beyond functionalism and rebalancing ontological borders of the field within circular discourse.

Keywords: circular economy; circular design; sustainable aesthetics; sustainable products; design projects

>>

PAPER ID [104]

APPL(E)AUSE. A FOOD DESIGN EXPERIMENT TO CREATE NEW PROCESSED FOODS FROM APPLE BY-PRODUCTS

Raffaele Passaro (Politecnico di Torino - Dipartimento di Architettura e Design (DAD), Italy) and Cristian Campagnaro (Politecnico di Torino - Dipartimento di Architettura e Design (DAD), Italy).

The work addresses the challenges associated with the sustainable management of food resources through the application of knowledge from the discipline of Design. The aim of the research is to identify new scenarios to increase the competitiveness of the Piedmontese agro-industry sector by identifying new uses for the by-products of fruit processing. The work focuses on using apple pomace in the development of new edible products, enhancing local food resources, and proposing new uses for a by-product that is currently destined for disposal. By adopting a transdisciplinary and design-led approach, it was possible co-design new edible processed foods, involving different territorial actors. The first collected results showed the possibility of valorising apple pomace and reintroducing it into the food cycle, adopting a circular economy for food approach.

Keywords: Food Design, Design With Food, Transdisciplinary Approach, Apple Pomace, Circular Economy.

>>



DESIGN COMMIT

1ST INTERNATIONAL CONFERENCE
ON DESIGN & INDUSTRY · 2024

ORGANIZERS



PARTNERSHIPS



SPONSORS

