



SENSES & SENSIBILITY 2019  
**LOST IN  
(G)LOCALIZATION**

| November 27th to 29th  
| Lisbon, Portugal



Faculdade de Design,  
Tecnologia e Comunicação  
Universidade Europeia



**FCT** Fundação  
para a Ciência  
e a Tecnologia

# **SENSES & SENSIBILITY'19: LOST IN (G)LOCALIZATION**

## **COLLECTION**

Proceedings book of UNIDCOM/IADE Conferences  
First Published: September 2020  
ISBN: 978-989-54829-3-1

## **COORDINATORS**

Emília Duarte  
Carlos Rosa

**Proceedings of the 10th International  
Conference, Senses & Sensibility: Lost in (G)  
localization  
27-29 November 2019, Lisbon, Portugal**

<http://senses2019.unidcom-iade.pt/>



## **CC BY-NC-ND**

This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.

## **HOW TO CITE THIS BOOK**

Duarte, E., & Rosa, C. (Ed.) (2019). Senses & Sensibility'19: Lost in (G)localization. Proceedings of the UNIDCOM 10th International Conference. Lisbon: EDIÇÕES IADE, Universidade Europeia.  
ISBN: 978-989-54829-3-1

## **ACKNOWLEDGEMENTS**

This conference has been partially supported by the FCT - Fundação para a Ciência e a Tecnologia (UID/DES/00711/2019)

# **TABLE OF CONTENTS**

Proceedings of 10th International Conference,  
Senses & Sensibility: Lost in (G)localization,  
UNIDCOM/IADE, Lisbon, Portugal, 27-29  
November 2019

## **CONFERENCE COMMITTEES**

Honour Committee Scientific Committee .....III  
Organising Committee .....VII

**KEYNOTE SPEAKERS** .....XIX

**TRACKS &  
COMMUNICATIONS**.....XXIII

# Track

## Design for New Materials and New Manufacturing Technologies

### FULL PAPERS

*Material as Storyteller. Hybrid Ways Between the Local Heritage and the Global Perspective*

**Chiara Del Gesso, Carmen Rotondi and Lorena Trebbi .....467**

*The Potential of Flexible Wooden Structures in a Project of Furniture Design*

**Ana Costa, António Pereira and Fátima Pombo .....476**

*Identity, Food and Culture: "Taste Without Waste"*

**Sabrina Lucibello, Chiara Del Gesso, Carmen Rotondi and Lorena Trebbi .....490**

### ABSTRACTS

*Case Study on the Development of the BUGA Fiber Pavilion 2019: Analyzes on Biomimetic Materials and Digital Fabrication Aspects*

**Theska Soares, Amilton Arruda, Rodrigo Araújo and Tarciana Andrade .....499**

# Track

## Design for New Materials and New Manufacturing Technologies

*Materials have always played a key role in the design process. Through them designers were able to express themselves and give shape, function and meaning to design ideas. If, at one time, materials and technologies were reasonably well known and stable, today, both worlds are characterized by dynamism and fast evolution. Nothing can be taken for granted anymore, and almost everything seems possible. Both yesterday and today, however, materials emerge as cultural expression and details that characterize a society – and therefore any reflection upon them cannot be set apart from a wider (social and cultural) framing. The track “Design for new materials and new manufacturing technology” aims to illuminate the role of materials in the present as well for the nearby future. Focus will be set on a broader scope the planetary social changes highlighting the relation between local and global in the design context. The track would like to explore, but is not limited to, the following topics: (i) materials and technologies for social changes; (ii) local materials and technologies; (iii) alternative sources for future materials; (iv) tools for materials selection; (v) challenges in the design of materials identity.*

### CO-CHAIRS

**Manuel Benito Martínez Torán**  
Universitat Politècnica de València, Spain

**Valentina Rognoli**  
Politecnico di Milano, Italy

**Pedro Oliveira**  
IADE, Universidade Europeia, Lisbon, Portugal

**Markus Holzbach,**  
Offenbach University of Art and Design, Germany

# Material as storyteller. Hybrid ways between the local heritage and the global perspective

**Chiara Del Gesso** <sup>1</sup>[0000-0003-1148-1279]

**Carmen Rotondi** <sup>1</sup>[0000-0003-2441-1851]

**Lorena Trebbi** <sup>1</sup>[0000-0003-0210-1115]



<sup>1</sup> Università di Roma “La Sapienza”, Via Flaminia 72, 00176 Roma, Italy

## Abstract

The debate around the loss of regional specificity as the consequence of globalization has accompanied the overcoming of modernity and gave birth to a new discussion around the relationship between places, history, products and identities. The design culture is questioning around the theme by applying new models of production and design closer to the local dimension that can embody an enhancement strategy for territorial specificities, identified in the use of local resources and material cultures, like knowledge, symbols and techniques.

In Setting up a dialogue between local identities and contemporary issues, design became a tool for transmitting material and immaterial heritage that, through the contamination and hybridization of methods, techniques and resources, can produce artifacts able to remember the past, the history of places and people, but even to narrate their own story, from their production to their use. In this scenario Materials act as an interface narrating several aspects related to territorial specificity in which is clearly visible the value of signs as the result of the direct action of man and nature on matter.

The paper will show how it is possible to create, through design, innovative scenarios, by establishing new dialogues: between two ways of production currently considered distinct: the standardized one of globalization and the withdrawn one of the local districts; and between user and products through new ways of interaction between materials and environment, production process, and way of use.

## Keywords:

**Local Identity, Material interactions, Human Traces.**

## 1. AFFORDABILITY VS LOCAL SPECIFICITIES

During the last century the introduction of bulk production has fueled the accumulating principle of capital producing and, whilst it has guaranteed the access to goods till then considered a luxury, it produced semantic and environmental pollution (Manzini, 1990) from a large scale of objects with questionable material and immaterial value. The serial nature of machines has interrupted a chain of uniqueness and diversity of knowledge creating products and morphologies without any geographical connotation or territorial culture claim. The belonging of objects to places, that characterised the material culture from the first signs of the human presence on earth, has gradually disappeared together with the progress of industrial society, with the substitution of manual skills linked to handed down techniques and to the expertise in making. The objects therefore represent the dimension that has paid the highest price of entry to modernity. The postmodern condition so became, above all, an attitude in facing the loss of identity suffered by modern society with the born of the necessity to recover the notion of regional specificity and to create a new discussion around the relationship between places, history, products and identities (Burkhardt, 1997). The open challenge of contemporary is to bring together the cultural diversity of places with the elements of a widespread global culture, and let coexist and interact universal object with local systems without the former prevailing over the latter. Preserving places means designing a world in which curiosity and a desire for knowledge oppose the homologation that the incorrect use of technology entails. The System of objects plays a primary role, especially in Italy, in which materials, craftsmanship and knowledge of the territories have been the basis of economic

development and of a global national identity.

## 2. THE ANSWER OF DESIGN: SELF-PRODUCTION AND MATERIAL EXPERIMENTATION

Design culture is questioning around the theme of locality-globality by applying new design approaches and models of production closer to the local dimension of self-production, based on the figure of designer-entrepreneur. Starting from the third industrial revolution, new opportunities concerning the way we produce or distribute products and services appeared to be possible, thanks to digital fabrication technologies that allowed miniaturization, networking, integration and interconnection of production and distribution processes (The Economist, 2012). So, with democratization of technologies, designers moved into the FabLabs contaminating and often blending with the Maker culture, triggering new self-production and co-design approaches which mirror the increased consciousness about social, cultural and environmental impact of industrial mass production. In a world where everybody designs, designers are now charged with a new responsibility upon products; self-production is indeed a political word (Maffei, 2013), in the way that it potentially unfolds a new path for the development and evolution of design culture. It characterizes and describes a twist between business and design, acting within territories contributing to their socio-cultural and economic development.

The focus of designers is then moving from products to processes, with the emergence of

new approaches bringing about a radical shift in the design culture, placing materials as starting point of the project and input of the creative process, operating a transition from the mere selection from a pre-existing palette, to direct involvement in material experimentation. Manzini first highlighted how materials don't represent anymore given entities upstream of the project becoming in their turn elements to be designed, and so innovation can arise both from the quality of the idea as from the intrinsic qualities of the material itself (Manzini, 1986). Material experimentation represents also a way for learning about materials and research their *hidden character* (Ashby, 2014), vehicle of immaterial and sensory aspects; it is able to produce unexpected results and let designers develop a novel and different position compared to their initial ideas and mindset (Farresin & Trimarchi, 2019). Such design approach brings *iperdesign* in the field of matter (Lucibello, 2018; Lucibello & Ferrara, 2009), places designers into laboratories – new places for making –, and identifies in the *neomateric* phenomenon (La Rocca, 2016) – intended as the reconsideration of the fascination and the potential inherent to direct transformation and processing of matter – the evolutionary push of the project. Material experimentations create then new relationships among designers, processes, techniques and materials (Rognoli et al., 2015), giving rise to unique and unconventional design experiences which often result in outputs related to territory and local culture, and expanding the designer's conception of what can be self-produced to almost everything. Understanding production processes can suggest new rules and bring designers to follow unexpected paths. Starting from the interaction with materials, studying their characteristics at various scales through tinkering and self-production, is in fact a source of inspiration for the project, able to generate invention and re-think the paradigms of

the material culture (Trebbi, 2018). Experimenting with materials and production processes can embody an enhancement strategy for territorial specificities, setting up a dialogue between local identities – which represent both local resources and material cultures, like knowledge, symbols and techniques (Follesa, 2013) – and contemporary issues such as environment, technology innovation, production processes and society needs, in a dynamic process of endless contamination between the local and global dimension.

### 3. DESIGN STRATEGY: AN EVOLUTION OF IDENTITY

Contamination represents a stimulus to the evolution of identities: every culture lives in the deal between identity and otherness, between local knowledge and external knowledge. We must not protect and isolate cultures but renew them and develop new identities by drawing on local cultures, made of signs, symbols, techniques, textures and morphologies and combining them with contemporary issues, languages and needs. This approach will be able to create connection between the local and the global dimension, verifying the ability of local products to enter the large flows of the economy through their own peculiarities applying the principle of *produce locally, think globally*.

Design will be able to establish an interaction between technology innovation and craftsmanship, solving some problematic aspects of artisanal production through the use of digital technology and rapid manufacturing processes, simplifying the processes but preserving the authenticity of handicrafts, their unicity, their suggestions and their connection with territories. Finally the design strategy will set up a dialogue between the elements of ancient tradition and the contests of contemporary made of different



spaces, uses, habits and values.

Examples of this kind of hybridization show how it is possible to create new languages from the combination of traditional materials and rapid manufacturing processes, not simply entrusting to machines the reproduction of ancient textures and typologies, but exploiting their potential to re-elaborate them. Alternatively, using traditional process and methods on new typology of materials – result of contemporary needs – to award them familiar aesthetics. The results of this process should be Artifacts that embody the memory of traditions together with the concretization of the current evolutionary processes (Lotti, 2010), Designer so draws on territory resources but re-elaborates them, combining them, renewing them, repurposing them in new forms, designing through materials (Lucibello, 2018) preserving their symbolic values. With this approach design becomes a tool for transmitting material and immaterial heritage turning intangible values into meaningful objects (Lerma et al., 2018).

#### 4. MATERIALS AND NARRATIONS

Materials become storytellers, able to narrate ancient traditions, but even their own story, from production to use, expanding the concept of both collective and individual memory, and enhancing the emotional involvement of the user. They indeed “stimulate an emotional tension with our historical memory: a condition that designer sublimates into product in any project” and “interacted over time with the production processes – from the artisan’s work to the manufacturing techniques – modelling and modifying them to adapt them continuously to their own prerogatives” (Paris, 2009). In this way they act as an interface (Parisi & Rognoli, 2016). narrating the evolution of our relationship with them, as well as several aspects that can

reconnect products to the territory they belong.

##### 4.1 TRACES OF GEOGRAPHY

An inescapable relationship so links technique to matter and matter to territory, understood both as geographically determined location – offering raw material as a resource to be used – and as sense of belonging to a community (Fiorani, 2000).

An example in this regard is *De Natura Fossilium* project by Studio Formafantasma, which investigates the culture surrounding the Sicilian Etna’s experience to bring both the landscape and the forces of nature together as facilities for production. With this project they investigate the link between tradition and local culture and the relationship between objects and the idea of cultural heritage: the Etna landscape and its raw materials are no longer object of mere contemplation but become, through manufacturing processes, living and vibrant matter.

Materials can also show us how the climate and morphology can change the fruits of land, as in the case of the *Sensorial Kit for Craft Beer Tasting* by Chiara del Gesso, realized using Brewery Spent Grains or BSG as raw material for the production of a set of tools for tasting solid craft beer.

According to the place or region where the kit is realized, the grain presents different textures and colours, which are transferred to the material and so embedded in the final product.

*Algae Geographies* is a project by the Algae Lab of Atelier Luma (see Fig. 1), a center for experimental cultivation who explores the potential of production of bio-materials from micro and macro algae. The increases in temperature together with the acidifications of waters are threatening many marine species, creating on the other side a favorable environment for algae growth. Aim of this project is to employ locally sourced algae in the bio-materials production, developing

moreover a material library concerning algae and other living materials, available to designers. Their ambition is to map a network of resources, competences, and cultural documents in the Mediterranean area, working together with native communities in order to reactivate local economies.



Fig.1 “Algae Lab” by Atelier Luma. 3d Printed pots realized with filament derived from algae of different geographic areas. [Antonelli, P. & Tannir, A. (2019). Broken Nature. XXII Triennale di Milano. Electa: Milano].

#### 4.2 TRACES OF PRODUCTION

Materials can narrate the belonging of products to places also through traces of manufacturing and production techniques. Unique and special production processes have been historically connected with specific places, a condition that now has been lost with the progress of industrial society. Nowadays however, new types of signs mark the products: this signs are no longer those of manual craft production, but instead are signs of tools and machines used, or signs of the laboratory or atelier environment, displaying in both cases signs of the production in a specific place or location.

In the case of *Adaptive Manufacturing*, a collaborative project by Sander Wassink and Olivier van Herpt (see Fig. 2), the starting

point and core of the concept is to highlight the production process at a time when digital technologies have replaced the craftsman, removing all the traces of human and local influence. Their research looks at the possibility of sensing the local environment and embed it into the production process, translating it into specific behaviours of the printer through software: the printer becomes a sensory machine that feels its environment, translating input into a document of a specific time, location or raw material.



Fig.2 “Adaptive Manufacturing” by Oliver van Herpt & Sander Wassink. Printed Terracotta. [Antonelli, P. & Tannir, A. (2019). Broken Nature. XXII Triennale di Milano. Electa: Milano].

From a twist of tradition and innovation, *Terra Cotta* project by the Iranian designer Talia Mukmel (see Fig. 3) explores materials and sign of ancient times mixed together with contemporary processing methods. The designer was inspired by communities in desert climates, which make use of available raw materials to produce everyday objects. The result is a series of unique containers made of sand and flour, realized using threads to create the final morphology while the artefact is baked in the oven. As an evolution of the product in a second stage she used the modern technology of photo etching to create a metal grid, so printed circuits and etching are mixed

together to create a new surface on the material. Finally, with her project *Made By Rain*, Aliko van der Kruijs (see Fig. 4) developed her own technique called pluviagraphy to capture raindrops in ink, in order to create textures and color variations impressing rain on fabrics. Through this process she realized a collection of unique textiles, each customised with specific time, location and amount of rainfall, making it possible to “wear the weather”.



Fig.3 “Terra Cotta #1” by Talia Mukmel. A first version of the project realized with ropes that in the later stages will be substituted with metal grids. [Antonelli, P. & Tannir, A. (2019). *Broken Nature*. XXII Triennale di Milano. Electa: Milano].



Fig.4 “Made by Rain” by Aliko van der Kruijs. [Lipps, A., Condell, C., McQuaid, M. & Bertrand, G. (2019). *Nature: Collaborations in Design*. New York: Cooper-Hewitt Museum]

#### 4.3 TRACES OF USE

Tools and technologies “mark” materials in a vivid and peculiar manner modifying products’ morphology and determining the gestures around production and use affecting our lifestyle. At the same time people interact with products through materials – interfaces in such interaction – leaving signs and traces as a testimony of their interplay. Such traces can narrate about individuality, returning signs of the use by a single person as in the case of *Infected* by Maurizio Montalti (see Fig. 5). The project consists of a series of 3D-printed jewellery pieces inspired by an experiment with fungi, which got contaminated by the accidental human touch. As a consequence different kinds of bacteria started growing on the product’s surface, creating new textures and shapes, and narrating about the fundamental role that such micro-organisms play in our everyday life. Aim of the project is indeed pushing to reflect on our body’s identity and the variety of life-forms which co-exists with us.

Moreover the traces can narrate about the behavior of an entire community, like in the case of Odo Fioravanti’s *Verderame* or Adrianus Kundert’s *Ripening Rugs*, copper tiles in the first case and a textile rug in the second, both changing their colour according to the consumption caused by people walking on them over time. Within this projects the process of wear is turned into a positive and narrative element, gradually revealing paths and signs of movement, as well as textures, colours and patterns through erosion, making the material somehow alive.



Fig.5 "Infected" by Maurizio Montalti for Officina Corpuscoli. Ring model customized after the interaction of human bacteria and mycelium. [Retrieved from <https://www.corpuscoli.com/projects/infected/>]

opposing to the homologation process and conferring back an individual and collective narration to artifacts.

## 5. NEW INTERACTIONS FOR THE IDENTITIES' EVOLUTION

The approach described in the contribution allows to trigger a process of objects identities renewal, not only through several design thinking but through the products belonging to a cultural heritage related both to geographic territories and to the community made up of individuals sharing places, activities and knowledge. It is crucial to preserve this kind of heritage by embracing the economical and technological changes of contemporary society, considering them as an opportunity rather than an obstacle. In this scenario the figure of the designer changes his role; he is no longer bound and involved to the mere designing principles and processes, but he manages even relations and consequences proper to the discipline. The materials, acting as a filter between user and products and relating to the sensory perception sphere that is responsible of the emotional involvement, still reveal themselves as a vehicle of meanings and lead us into new ways of interaction with objects that will customize the individual user experiences,

## REFERENCES

- Ashby, M. (2014). Foreword: Materials Experience. In E. Karana, O. Pedgley, & V. Rognoli (Eds). *Materials Experience: Fundamentals of Materials and Design*. Oxford: Elsevier.
- Burkhardt, F. (1997). La difficoltà di correggere un rapporto sfalsato: a proposito dell'artigianato e del design. In U. La Pietra (Ed.). *Fatto ad Arte. Arti Decorative e Artigianato*. Milano: Edizioni della Triennale.
- Farresin, S. & Trimarchi, A. (2019). Formafantasma: "Lasciamo che sia il Materiale a Guidare il Risultato Finale". Accessed 14 May 2019. [www.domusweb.it/it/design/2019/05/09/formafantasma-lasciamo-che-sia-il-materiale-a-guidare-il-risultato-finale.html](http://www.domusweb.it/it/design/2019/05/09/formafantasma-lasciamo-che-sia-il-materiale-a-guidare-il-risultato-finale.html)
- Fiorani, E. (2000). *Leggere i Materiali. Con l'Antropologia, con la Semiotica*. Milano: Lupetti editore
- Follesa, S. (2013). *Design e Identità. Progettare per i luoghi*. Milano: Franco Angeli.
- La Rocca, F. (2016). *Design e Delitto. Critica e Metamorfosi dell'Oggetto Contemporaneo*. Milano: Franco Angeli
- Lerma, B., Dal Palù, D., Bozzola, M. & De Giorgi, C. (2018). Merchandising as a strategic tool to Enhance and Spread Intangible Values of Cultural Resources. *Sustainability*, 10(7), 21-22. DOI: 10.3390/su10072122
- Lotti, G. (2010). *Territori & Connessioni. Design come Attore della Dialettica tra Locale e Globale*. Pisa: Edizioni ETS
- Lucibello, S. (2018). *Esperimenti di Design. Ricerca e Innovazione con e dei Materiali*. Trento: LISt Lab
- Lucibello, S., & Ferrara, M. (2009). *Design follows Materials*. Perugia: Alinea
- Maffei, S. (2013). Autoproduzione oggi. Le pagine dell'ADI, 146, 7-13. [https://www.academia.edu/6656952/Autoproduzione\\_oggi](https://www.academia.edu/6656952/Autoproduzione_oggi)
- Manzini, E. (1986). *La materia dell'Invenzione*. Milano: Arcadia Editore
- Manzini, E. (1990). *Artefatti. Verso una nuova ecologia dell'ambiente artificiale*. Milano: Domus Academy
- Paris, A. (2009). Sincerità e ambiguità dei materiali. In S. Lucibello & M. Ferrara (Eds). *Design follows Materials* (pp. 6-12). Perugia: Alinea

- Parisi, S. & Rognoli, V. (2016). Superfici Imperfette. *Material Design Journal*, 1(1), 78- 91. <http://mdj.materialdesign.it/index.php/mdj/article/view/63>
- Rognoli, V., Bianchini, M., Maffei, S. & Karana, E. (2015). DIY materials. *Materials and Design*, 86, 692-702
- The Economist* (2012, April). *A third Industrial revolution*. Retrieved December 1, 2019. <https://www.economist.com/leaders/2012/04/21/the-third-industrial-revolution>
- Trebbi, L. (2018). Re-think through and for the senses. Growing design and design with materials. *DIID disegno industriale | industrial design*, 65(18), 86-93