

## Research Group

### Gems and Jewels: History and Design - Hjde

**Reference year:**

2025

**Scientific Coordinator:**

JACAZZI Danila / Full Professor / DADI / Università degli Studi della Campania Luigi Vanvitelli

**Group Members:**

ARGENZIANO Pasquale / Associate Professor / DADI / Università degli Studi della Campania Luigi Vanvitelli

AVELLA Alessandra // Associate Professor / DADI / Università degli Studi della Campania Luigi Vanvitelli

AVERSA Raffaella / Full Professor / DADI / Università degli Studi della Campania Luigi Vanvitelli

BURDA Andronira / Professor / FAU / Universiteti Politeknik i Tiranës (Albania)

CERIANI SEBREGONDI Giulia / Associate Professor / DADI / Università degli Studi della Campania Luigi Vanvitelli

CIRAFICI Alessandra / Full Professor / DADI / Università degli Studi della Campania Luigi Vanvitelli

CIRILLO Ornella / Associate Professor / DADI / Università degli Studi della Campania Luigi Vanvitelli

CIRILLO Vincenzo / Associate Professor DADI / Università degli Studi della Campania Luigi Vanvitelli

CORNIELLO Luigi / Researcher / DADI / Università degli Studi della Campania Luigi Vanvitelli

LIBERTI Roberto / Associate Professor / DADI / Università degli Studi della Campania Luigi Vanvitelli

MALIQARI Andrea / Full Professor / FAU / Universiteti Politeknik i Tiranës (Albania)

MARTUSCIELLO Sabina / Associate Professor / DADI / Università degli Studi della Campania Luigi Vanvitelli

MORELLI Maria Dolores / Associate Professor / DADI / Università degli Studi della Campania Luigi Vanvitelli

PERGEGA Edmond / Full Professor / FAU / Universiteti Politeknik i Tiranës (Albania)

PISACANE Nicola / Associate Professor / DADI / Università degli Studi della Campania Luigi Vanvitelli

RICCIOTTI Laura / Researcher / DADI / Università degli Studi della Campania Luigi Vanvitelli

SCARPITTI Chiara / Researcher / DADI / Università degli Studi della Campania Luigi Vanvitelli

VEIZAJ Denada / Professor / FAU / Universiteti Politeknik i Tiranës (Albania)

*Research fellow*

CICALA Margherita / Research fellow / DADI / Università degli Studi della Campania Luigi Vanvitelli

PERROTTA Valeria/ Research fellow / DADI / Università degli Studi della Campania Luigi Vanvitelli

TREMATERRA Adriana/ Research fellow / DADI / Università degli Studi della Campania Luigi Vanvitelli

*PhD*

FIORILLO Raffaella / Phd / DADI / Università degli Studi della Campania Luigi Vanvitelli

*PhD students*

ARAPI Saimira / PhD student / FAU / Universiteti Politeknik i Tiranës (Albania)

BARBATO Carmela/ PhD student / DADI / Università degli Studi della Campania Luigi Vanvitelli

BIANCO Annarita / PhD student / DADI / Università degli Studi della Campania Luigi Vanvitelli

DE CARO Rosa / PhD student / DADI / Università degli Studi della Campania Luigi Vanvitelli

DE CICCIO Angelo / PhD student / DADI / Università degli Studi della Campania Luigi Vanvitelli

DI GIROLAMO Felicia / PhD student / DADI / Università degli Studi della Campania Luigi Vanvitelli

GIOIOSO Gianluca / PhD student / DADI / Università degli Studi della Campania Luigi Vanvitelli

IADEROSA Rosina / PhD student / DADI / Università degli Studi della Campania Luigi Vanvitelli

MIELE Riccardo / PhD student / DADI / Università degli Studi della Campania Luigi Vanvitelli

TABAKU Blerina / PhD student / DADI / Università degli Studi della Campania Luigi Vanvitelli

**Description of research lines:**

***HISTORY AND DESIGN OF JEWELLERY***

During last years, the academic research in the field of jewellery has acquired a growing autonomy within the wider field of Fashion Design. The research path is basically composed of two closely related fields of study: History and Design. The first one is aimed at the disciplinary basis of the Jewel History, as an expression of the artistic cultures of past eras, and of the modern trends of goldsmith art, through the analysis of iconographic sources and products — preserved in Museums or in public and private collections —, the study of processing techniques related to materials.

The second one is related to Goldsmith Design that transforms the themes and characters of historical goldsmith art into innovative products, according to the social and cultural changes of Fashion. The goldsmith design also experiments with new generation shapes and materials in relation to production institutions and local traditions to develop original products on great interest issues, waste materials transformation, Fashion Design vs. goldsmith design.

According to multidisciplinary tools and methods, Drawing and Prototyping members integrate the research team, to study the patterns and geometric matrices behind the jewel design, also tending to the most innovative digital dissemination of goldsmith art and packaging.

*Coordinator Danila Jacazzi*

***GEOGIOIELLO design.*** *Topology of Italian jewellery craft districts and experimentation with new uses of precious metals.*

The incipit of the research line is the study of the jewellery district in Italy through the cataloguing of museums, training places, companies and sales centres. The GEOGIOIELLO Research Group has promoted the foundation of the international magazine "Alkimya Magazine", born from an agreement with the Goldsmith Center OROMARE, GEM TECH, Officina Vanvitelli, the first scientific-popular magazine on the theme of the precious. The research activities also focus on the construction of a "Gold Community\_sistema of the goldsmith sectors in Italy", a form of systemic collaboration between the Italian goldsmith sectors and the University in order to develop high-quality training courses capable of defining professional profiles capable of contributing to innovation in jewellery companies. In addition, project actions have been carried out on interdisciplinary and transcultural themes, for example the project "A jewel for peace" with the University of Perugia and the non-profit association "Il Nodo"; the precious collection "CORallo/CORredo" for the research project "Fashion Alive"; the research "Bengems, multisensory jewels for well-being" in order to enhance the natural resources of the Mediterranean area, designing and creating multisensory jewels with the National Institute of Geophysics and Volcanology, the Department of Agriculture "Federico II", the Academy of Fine Arts Bologna-Ravenna, the Archaeological Park of Herculaneum, the Higher Institute of Musical Studies "G. Verdi", the Azienda D'Elia 1790, GEMTECH, Oromare, the Coral Museum of Torre del Greco, CFP Galdus Orafi, Milan and with the members of the Historical Goldsmith's Society in London.

*Coordinator Maria Dolores Morelli*

***CONTEMPORARY JEWELLERY.*** *Design-oriented meanings, technologies and processes*

The line of research affirms the legitimacy of contemporary jewellery as a significant form of cultural production that crosses the fields of design, fashion, art and industrial production. The insights investigate the meaning of ornament and its projection towards future scenarios defined by new needs and digital technologies. Unlike traditional jewellery, contemporary jewellery is characterised by a strongly innovative and design-oriented approach; it does not necessarily adopt precious materials, but rather is oriented towards an evolution of the product towards new aesthetics, meanings and processes. This line of research deals with an advanced segment of jewellery design that is internationally strategic for companies and organisations wishing to renew themselves. Thanks to the role of the web and technologies, this field is constantly expanding: the growth of the sector is witnessed by the exponential birth of international fairs and specialised events, web platforms, galleries, associations and museums. The innovation investigated is based on a different understanding of craftsmanship and production, through the hybridisation of skills of both a technical and intellectual nature, and whose explorations place their reasons for being in a semantic investigation of the object. The line of research delves into the international debate on new perspectives related to Industry 4.0 and digitisation in the field of ornamentation. Cooperations in this line of research include those undertaken with the AGC - Association for Contemporary Jewellery and the ADI - Association for Industrial Design.

*Coordinator Chiara Scarpitti*

***PRECIOUS GEOMETRIES***

The Precious Geometries line of research, framing itself within the disciplines of Design, focuses on aspects connected with both the spatial configuration of gems and their flat representation. In order to minimise the loss of material as a result of machining and at the same time obtain the best

levels of brilliance, a preliminary geometric study is necessary to determine the layout of the section planes that guarantee an optimisation of both the compliance with the interaction with light and the quantity of material to be removed from the raw volume. If in common meaning the term stereotomy is connected to the cutting and working of building materials in architecture (stone, wood, metals), its etymology (from the Greek στερεος, solid and τομη, cut) refers to the cutting of solids in general and, therefore, can also be extended to precious stones. The studies conducted in the scientific field on the subject of precious geometries have also been extended in recent years to teaching activities through specific thematic workshops that have produced such significant results as to introduce this field among the lines of research already undertaken by this Research Group. More specifically, this line of research starting from the study of sources also in relation to the relationship between architectural and gemmological stereotomy, of the main shapes through the analysis and geometric breakdown also by surveying gems belonging to existing collections and of the control of shapes through geometric and photorealistic modelling software will tend to investigate different investigative directions, also by virtue of possible collaborations with stakeholders in the area.

*Coordinator Nicola Pisacane*

#### ***PRECIOUS OF EASTERN EUROPE***

The research line “Precious of Eastern Europe” proposes an interdisciplinary methodological approach focusing on the documentation, knowledge, analysis and digital reproduction of decorative artefacts of great value from Eastern Europe. The small size of jewellery, headgear, headbands, belts, objects of common use and the apparatuses typical of Eastern European fashion and tradition are the object of study linked to the events of personalities, travellers, leaders who characterised the social and geopolitical evolution of the Near East. Studies on the subject are complemented by the transdisciplinary skills of the study of textures, patterns and geometric matrices also through the use of innovative technologies for digital representation and audio-visual communication. International relations with several Eastern European Universities are active and a Collaborative Research Project on the topic is in progress.

*Coordinator: Luigi Corniello*

#### ***MATERIALS AND TECHNOLOGIES for innovative applications in the jewelery sector***

In recent years, there have been several innovative developments in the field of jewelry materials, driven by advances in technology, sustainability and the desire for unique designs.

With the support of the equipment and personnel belonging to the Advanced Materials Lab, it is possible to identify topics to explore for the purposes of innovative applications:

-Ceramics with a geopolymer matrix to be created in the laboratory, moldable by casting in moulds, a sustainable and cheaper alternative to extracted stones.

-3D print in clay to create complex designs that are difficult or impossible to create with traditional methods. It also reduces material waste.

- Hybrid materials from the experimentation of traditional materials and modern materials such as acrylic, resin or ceramic to create unique and contemporary pieces.

- Wood and bamboo to offer a rustic and eco-friendly aesthetic.

These innovations reflect a broader trend in the jewelry industry towards sustainability, ethical sourcing and the adoption of new design and manufacturing technologies.

*Coordinator: Raffaella Aversa*

### **Relationships with other research groups of the University of Campania L. Vanvitelli during the last three years:**

The activities carried out in the three-year period saw active interaction with other groups in the Department, in particular with:

- Design Sostenibile per il Made in Italy – SIDE;
- Advanced Materials Lab;
- 'Knowledge, valorisation and digital communication of cultural heritage';
- Development of products, processes and services through contemporary design theories and methods
- Contemporary scenarios for research and innovation in fashion design FA.RE. lab);
- LANDesignR | Local Area Network Design
- Officina Vanvitelli

### **Participation in research projects during the last three years:**

#### **2024**

**Titolo del progetto:** *I DreAM of a Jewel*

**Responsabile Scientifico:** Maria Dolores MORELLI, Danila JACAZZI

**Responsabile UdR DADI:** Maria Dolores morelli

**Titolo del bando:** **I dreAM of a Jewel, Corvino Gioielli**

**Descrizione delle attività di ricerca del progetto:**

L'attività di ricerca finanziata dalla gioielleria Corvino, con sede a san Marcellino (CE) e con OROMARE prevede il progetto e la prototipazione di artefatti preziosi sul tema dell'educazione al sentimento e alla cura di sé.

**Personale coinvolto:** Carmela Barbato, Raffaella Fiorillo, Felicia Di Girolamo

**Enti Partners:** Gioielleria Corvino, Oromare

**Stato del Progetto:** *finanziato*

**Date di inizio:** 08/03/2024, **fine progetto:** in corso

#### **2023-2024**

**Project title:** *Tangible and intangible heritage for knowledge, documentation and enhancement between 1750 and 1850*

**Scientific Coordinator:** Ornella ZERLENGA, Luigi CORNIELLO, Andrea MALIQARI

**Title of the Call:** Collaborative Research Project

**Abstract:** The research project between the Department of Architecture and Industrial Design of the University of Campania Luigi Vanvitelli (Italy) and the Polytechnic University of Tirana (Albania) proposes the study of the figure of Ali Pasha of Tepelena in its broader view. It analyses both the structures used for the defence of the territory and his marks left in the villages, as well as the rich set of jewellery currently preserved in Ioannina. The research focuses on the collection of graphic and iconographic sources narrating the conquered places, the survey of the major architectural structures that marked their course, the analysis of the current state of the structures and possible guidelines for restoration, the analysis of the jewellery and its gold comparison by historical periods.

**Involved persons:** Ornella ZERLENGA, Luigi CORNIELLO, Andrea MALIQARI, Danila JACAZZI, Riccardo SERRAGLIO, Vincenzo CIRILLO, Raffaella FIORILLO, Adriana

TREMATERRA, Margherita CICALA, Rosa DE CARO, Angelo DE CICCO, Felicia DI GIROLAMO, Rosina IADEROSA, Gianluca GIOIOSO, Fabiana GUERRIERO, Riccardo MIELE, Gennaro Pio LENTO, Denada VEIZAJ, Andronira BURDA

**Partners:** Polytechnic University of Tirana (Albania)

**Project Status:** *in progress*

**Project submission/start/end date:** 01\09\2023- 31\12\2024

## 2023-2026

**Project title:** *"POT NEED" Class L4 Industrial Design*

**Scientific Coordinator:** Maria Dolores MORELLI, DADI

**Title of the Call:** MIUR, POT Orientation and Tutoring Plans 2023-2026

**Abstract:** NEED promotes design education with methods, processes and tools, responding to the needs of "a new lifestyle" through the empathic and technological relationship between nature and artifice. NEED is a place/laboratory structure for pupils, students, researchers and teachers, open to local stakeholders and aimed at transdisciplinary design education, to allow the construction of educational paths that strengthen skills, digital technologies and the construction of soft skills, strongly connected between School, University, Territory, Companies, Institutions with new educational opportunities thanks also to the training of teachers, improving digital skills using educational platforms; fostering self-assessment tools in manual and digital learning environments.

**Involved persons:** Caterina FRETTOLOSO

**Partners:** CUID Italian University Design Conference "NEED\_new empathic educational design" presented as part of the Orientation and Tutoring Plans for the three-year period 2021 – 2023 and having among its partners the Universities of PERUGIA, University of GENOA, University of SASSARI, University of "G. d'Annunzio" CHIETI-PESCARA, University of "Mediterranea" of REGGIO CALABRIA, Polytechnic of BARI, University of BOLOGNA, University of CAMERINO, University of FERRARA, Polytechnic of MILAN, University of Naples "Federico II", University of PALERMO, University of PARMA, University of Rome "La Sapienza", Polytechnic of TURIN, University of TUSCIA, University of FLORENCE.

**Project Status:** *funded*

**Project submission/start/end date:** 2023/2026

## 2023-2025

**Title of the project:** *The Design System in the territories of Southern Italy. Design and craftsmanship of excellence for the development of Made in Italy and the commitment of local knowledge (DeinSite).*

**Scientific coordinator:** Maria Dolores MORELLI

**Call title:** PRIN: RESEARCH PROJECTS OF RELEVANT NATIONAL INTEREST – Call 2022 Prot. 20229NW8M9 PI: Francesca TOSI (formerly Claudio GAMBARDELLA).

**Abstract:** The project proposes to create in the South of Italy a large container consisting of five Regional Museum Systems, both physical and virtual, each equipped with a company museum to be located in areas of high tourist value thanks to the presence of archaeological and historical areas, centers, marinas and so on, acting as a connector for the participating museums and companies, as already done for the Campanian System in Pompeii. In other words, a museum for contemporary design, conceived primarily as an exceptional place that displays and produces objects of independent Italian design, rigorously combined with high craftsmanship.

**Involved persons:** Daniela PISCITELLI, Francesca LA ROCCA, Simona OTTIERI  
**Partners:** Simbola, Museoimpresa, Museo Madre, Plart, University of FLORENCE, University of Campania "Luigi Vanvitelli" (leader)  
**Project Status:** *funded*  
**Project submission/start/end date:** 2023-2025

**Project title:** *ResHaping made in ITALy (RHITA). Circular models for Italian fashion heritage and manufactures through digital inclusivity and conscious innovation.*

**Scientific coordinator:** Chiara Scarpitti

**Call title:** Bando PRIN PNRR 2022

**Abstract:** RHITA intends to: frame the landscapes of Italian fashion through human capital, education, the valorization of production; giving shape to Made in Italy fashion in a contemporary green and digital world; reshape an inclusive digital fashion system through a web 3.0 platform; create new collaborative and circular models through technology, conscious innovation and the enhancement of identity.

**Involved persons:** Elisabetta Benelli, Elisabetta Cianfanelli, Ornella Cirillo, Dylan Colussi (PhD), Mariagiovanna Di Iorio (PhD), Gabriela Fabro Cardoso (PhD), Caterina Fiorentino, Maria Luisa Frisa, Valeria Iannilli, Francesco Izzo, Roberto Liberti, Gabriele Monti, Patrizia Marti, Patrizia Ranzo, Venere Sanna, Maria Antonietta Sbordone, Chiara Scarpitti, Alessandra Spagnoli.

**Project status:** *funded*

**Project start and end dates:** 31.01.2023 / 31.12.2025

**Project title:** Zero Waste Fashion Training: a new international, cross- sector training approach for fashion

**Scientific responsible:** Gisela Fortuna, Madrid

**Call title:** *Call 2023 Round 1, KA210 – ADU Small-scale partnerships in adult education, Programme Erasmus +*

**Description of the project's research activities:** Attraverso modelli di progettazione sostenibile, i partner del progetto ZWF mirano a fornire agli studenti strumenti completi per aiutare ad affrontare la complessità delle questioni relative alla sostenibilità, soprattutto dal punto di vista del designer, e combinarli in un approccio olistico. Proponiamo quindi un programma di formazione aggiornato sulle metodologie di progettazione sostenibile applicate alla moda, in formato sincrono e asincrono, con l'obiettivo di aumentare la consapevolezza sulla sostenibilità, basato su strumenti accademici e scientifici impegnati nello sviluppo di un futuro sostenibile.

**Staff involved::** R. Liberti, M. Calabrò, O. Cirillo, C.C. Fiorentino, C. Scarpitti.

**Project status::** *Funded*

**Project start and end dates:** 1/9/2023 – 31/08/2025

**Project title:** *Geopolymers for eco-architecture: chemo-reactive and thermo-kinetic research for the development of 3D printable formulations - GEA*

**Scientific responsible:** Dr. Laura RICCIOTTI

**Call title:** PRIN call: Research Projects of Significant National Interest - 2022 PNRR call

**Description of the project's research activities:** The GEA project deals with the optimisation of geopolymer (GP) formulations, through the alkaline activation of different types of aluminosilicate waste, for their use as materials, in 3D printing of housing units in sustainable buildings. The GEA project aims to develop an innovative strategy to overcome the main limitations of large-scale 3D printing of GP materials through a systemic and highly interdisciplinary approach. This innovative method enables the recycling and reuse of different types of waste, which would be a significant

contribution to sustainable development towards the adoption of the 'zero waste' principle.

**Staff involved:** Professors RICCIOTTI Laura, AVERSA Raffaella, IANNACE Gino, FRANCHINO Rossella, FRETTOLOSO Caterina, PISACANE Nicola; PhD student Salima Zerari  
Partner institutions: University of Campania 'Luigi Vanvitelli', University of Studies 'G. d'Annunzio' CHIETI-PESCARA

**Project status:** *funded*

**Submission date:** 31.01.2023 / 31.12.2025

## 2023

**Project title:** *GEA: Application of geopolymers for sustainable architecture: chemoreological and thermokinetic study for the development of formulations for additive technologies*

**Scientific Coordinator:** Laura RICCIOTTI

**Call title:** University call for the funding of fundamental and applied research projects dedicated to Young Researchers D.R. 509/2022

**Abstract:** The GEA project deals with the optimisation of geopolymers (inorganic-based polymer formulations) for their use as materials for 3D printing new housing units in sustainable buildings. The project is based on a sound application and functional philosophy structured in such a way as to apply a systemic and strongly interdisciplinary approach that does not merely address a sectoral scientific issue but considers the entirety of the experimental production system to be developed, thus covering topics that not only involve aspects of materials science and technology but also those relating to the whole of which these new types of building structures will be a part.

**Involved persons:** Professors RICCIOTTI Laura, AVERSA Raffaella, BORRELLI Marino, IANNACE Gino, MUZZILLO Francesca, FRANCHINO Rossella, FRETTOLOSO Caterina, PISACANE Nicola

**Project status:** *funded*

**Date of submission/start/end of project:** beginning of October 2022

## 2022

**Project title:** *RESTANZA. New movable systems for smart/co-working taking advantage of life quality, sustainability and energy efficiency*

**Scientific Coordinator:** Antonio CIERVIO

**Call title:** Bando di Selezione per il Finanziamento di Progettidi Ricerca Fondamentale ed Applicata dedicato ai Giovani Ricercatori

**Abstract:** A renewable energy-based, self-sustaining in energy use, eco-friendly, modular and flexible in set-up, Prefabricated Movable Building (PMB) for smart/co-working will be designed; a fullscale prototype will be realized and its field performance will be measured/analyzed while installed and operated in a selected suitable small village of the Caserta province of the Campania region (Italy). The PMB will be developed to optimize occupants' well-being, energy performance and integration of indoor environment with outdoor architectural/historical/landscape elements via innovative design methods (immersive virtual reality and dynamic simulation models). The project aims at 1) promoting the exploitation of renewable energy and energy-efficient systems via innovative design methods, 2) reducing environmental/ecological footprint associated to both building and transport sectors, 3) suggesting an alternative lifestyle combining tradition and modernity, 4) facilitating social/economic rebirth of small villages with a significant regenerative potential. The research activities will be performed by a multidisciplinary team (involving 3 Scientific Disciplinary Sectors ING-IND/11, ICAR/18, ICAR/13) thanks to the know-how and



equipment of the RIAS laboratory [1] and the SENS i-Lab [2] of DADI. The project provides relevant environmental/social/territorial/economic impacts, together with significant results for engineers, architects, manufacturers of PMBs, scientific community and policymakers.

**Involved persons:** Antonio Ciervo, Luigi Maffei, Francesca Castano', Maria Dolores Morelli, Raffaella Marzocchi, Samiha Boucherit

**Project Status:** *funded*

**Project submission/start/end date:** 08/07/2022

**Project title:** *Designing with More-than-Human. Phygital interactions and artifacts for a transdisciplinary and post-anthropocentric manufacture. (De+Human)*

**Scientific Coordinator:** Chiara SCARPITTI

**Call title:** University call for the funding of fundamental and applied research projects dedicated to young researchers

**Abstract:** Characterised by a dual nature - theoretical and applicative - the project aims at the laboratory and transdisciplinary experimentation of processes and products on the borderline between design, fashion, digital technologies and nature, with a view to raising awareness of the most urgent issues related to multi-species coexistence and environmental ecosystems.

**Project status:** *funded.*

**Project start and end dates:** 01.10.2022/12.12.2023

**Project title:** *Fashion Alive.*

**Scientific Coordinator:** Roberto LIBERTI

**Call title:** European Commission CREA-CULT 2021 Coop1

**Abstract:** The FASHION ALIVE project promotes sustainable practices in the fashion industry through the creation of events to involve a wider public and raise awareness on this issue. The FASHION ALIVE Project approach is supported by three different partners: on the one hand, CREAMODITE (Spain), UMINHO (Portugal) and UNICAMPANIA (Italy) will conceptualise and experiment the creation of sustainable fashion methods, where each partner will work on a specific innovative methodology. In parallel, XSENTRIK (Austria) will explore and envisage a digital and audiovisual strategy using technological tools (combination of video, 3D projections, video mapping software, sound, light and music created by artificial intelligence)

**Involved persons:** Ornella CIRILLO, Chiara SCARPITTI, Vincenzo CIRILLO, Alessandra AVELLA, Pasquale ARGENZIANO, Lorenzo CAPOBIANCO, Alessandra CIRAFICI, Caterina Cristino FIORENTINO, Gabriele PONTILLO, Giulia CERIANI SEBREGONDI, Danila JACAZZI, Antonella VIOLANO, Phs students: Silvestro DI SARNO, Valentina ALFIERI.

**Partners:** Creamodite Asociacion para la constitucion y reestructuracion de espresas de moda. diseno y tecnologia (Madrid); Universidade do Minho (Lisboa); Università degli Studi della Campania Luigi Vanvitelli (Italy); Xsentrikarts platform for arts (Austria)

**Project status:** *funded.*

**Project start and end dates:**2022/2024

**Project title:** *BENGEMS. Multisensory jewels with beneficial effects made with volcanic stones from the Mediterranean area.*

**Scientific Coordinator::** Maria Dolores Morelli

**Call title:** PRIN 2022

**Abstract:** The "BENGEMS" research in compliance with the "DNSH", in accordance with art. 17 of Regulation (EU) 2020/852, and the relevant EU and national environmental legislation, intends to enhance the natural resources of the Mediterranean area, designing and creating multisensory

jewels with volcanic stones. These gems, in addition to reflecting the mineral characteristics of the area, can contain and eventually release a series of trace elements that would bring beneficial effects to humans. The research aims to compose precious artifacts capable of bringing well-being to the people who wear them by satisfying multiple needs: healthy, visual, tactile, auditory, in full respect of sustainability and the enhancement of the resources of the territory. To achieve this, the gems are collected without disfiguring the environment, analyzed in their hidden precious properties, enhancing them through an adequate media design that can also give users a pleasant musicality.

**Involved persons::** Morelli Maria Dolores Unicompania, Pappalardo Lucia, Cirillo Teresa Unina, Babini Paola Ababo, Storace Anna Maria Issm.

**Partners:** DADI, Università Degli Studi Della Campania "Luigi Vanvitelli", Istituto Di Igiene, Università Degli Studi Di Napoli "Federico Ii", Istituto Nazionale Di Geofisica E Vulcanologia, Accademia Delle Belle Arti Di Bologna, Istituto Superiore Di Studi Musicali "Giuseppe Verdi", Ravenna.

**Project status:** *not funded.*

**Date of submission/start, end of project:** 31/03/2022

#### **Scientific products of the last three years:**

*10 scientific publications on Class A journals and/or indexed in the Scopus/WoS databases:*

#### **2024**

[1] MORELLI M. D. (2024). Imparare a studiare design. (pp. 25-33).OP. CIT. vol. 179. (Classe A) ISSN 0030-3305.

[2] MORELLI M. D. (2024). Precisazioni sull'ecodesign. (pp. 139-145). OP. CIT. vol. 181. (Classe A) ISSN 0030-3305.

[3] SCARPITTI, C. (2024). *Objects, Things, Hyperobjects. A Philosophical Gaze on Contemporary Design.* (pp.165-174.). in F. Zanella et al. Multidisciplinary Aspects of Design: Objects, Processes, Experiences and Narratives | Design! OPEN 2022. Springer Series in Design and Innovation / SSDI vol. 37.<https://dx.doi.org/10.1007/978-3-031-49811-4> (Scopus Index) ISBN: 978-3-031-49811-4.

[4] RICCIOTTI, L., APICELLA, A., PERROTTA, V., AVERSA, R. Geopolymer Materials for Extrusion-Based 3D-Printing: A Review (2023) *Polymers*, 15 (24), art. no. 4688,

#### **2023**

[5] ZERLENGA, O., CIRILLO, V., CICALA, M. (2023). Drawing, Shapes and Parametric Design of Rod and Node Architectural Structures. *Nexus Netw J* 25 (Suppl 1), 303–311 (2023). <https://doi.org/10.1007/s00004-023-00722-3> (CLASSE A).

[6] AVERSA, R., PERROTTA, V., WANG, C., APICELLA, A. Bio-Resorption Control of Magnesium Alloy AZ31 Coated with High and Low Molecular Weight Polyethylene Oxide (PEO) Hydrogels (2023) *Gels*, 9 (10), art. no. 779,

**2022**

[7] MORELLI M.D., DE FUSCO R. (2022). *Logomachia*. OP. CIT., vol. 175, p. 19-26, ISSN: 0030-3305. (Open Access - Classe A).

[8] MORELLI M.D., DE FUSCO R. (2022). *La mimesi e il binomio continuità/discrezione*. OP. CIT., vol. 174, p. 45-53, ISSN: 0030-3305. (Open Access - Classe A)

[9] SCARPITTI, C. (2022). *Perdere il corpo, riconquistare il corpo. Riviverlo attraverso il digitale e le nuove pratiche di rilevazione sensoriale*. In Progetto Grafico n.38 "Salvare" - Supplemento online. ISSN: 1824-1301

[10] AVELLA A. (2022). *Vestimenta drawing in use by the Romans. Toward an Archive of Pompeii clothing patterns*. *Convergências - Revista de Investigação e Ensino das Artes*, vol. XV (30), p. 135-145, ISSN 2184 0180. DOI: 110.53681/c1514225187514391s.30

*Additional 10 scientific products:*

**2024**

[1] MORELLI M. D. (2024). *Il mutuo apporto dell'ecodesign. The mutual contribution of ecodesign* (pp. 63-70). AND vol. 44. ISSN: 1723-9990

[2] MORELLI M. D., TERENCEZ B. (2024). *Design for Social Emergency. Un gioiello per la pace*. (pp. 1-102) vol. 1. DADI \_ PRESS, Linea editoriale del Dipartimento di Architettura e Disegno Industriale, Aversa (CE). ISBN 978-88-85556-32-4. DOI 10.6093/978-88-85556-32-4

[3] MORELLI M. D., JACAZZI D. BARBATO C. (2024). *Jewelry Design Maps=Welry Design Maps*. In: (a cura di): D. Raposo J. Neves R. Silva L. Correia Castilho R. Dias, *Advances in Design, Music and Arts III*. vol. 2, Springer Nature, ISBN: 978-3-031-74977-3, Castelo Branco, Portugal, June 27–29, 2024,

[4] AVELLA A., PISACANE N. *Sostenibilità e design del gioiello. Dalla geometria dei cristalli al disegno delle gemme sfaccettate / Sustainability and jewelry design. From crystals geometry to faceted gemstone drawing*. In: AND. *Rivista scientifica di architettura e design in Open Access*, n. 45, pp. 11-18. SSN (online) 2785-7778, ISSN (print) 1723-9990, doi: <https://doi.org/10.58198/and.v45i1>

[5] R. FIORILLO, 2024. JEAN DESPRÉS: Dal motore al gioiello. *Alkimiya Mag – Jewelry Design Maps*, Anno II – Numero 2 , pp. 34-38.

[6] BARBATO C., Adriana Del Duca. *Il gioiello contemporaneo tra perfezione tecnologica e poesia del saper fare a mano in Alkimiya Mag. Jewelry Design maps*, *Rivista semestrale*, n. 2. Edited by Gem Tech srls, pp. 24-29. ISSN a stampa: 2974-9964. ISSN on line: 2975- 030X

[7] PISACANE N., ARGENZIANO P., AVELLA A. (2024), *GEMSTONES' DRAWING/DESIGN. Geometry. Models. Representations*. Ponta Grossa: Atena Editore. Volume in Open Access. ISBN: 978-65-258-2751-3:

2023

[8] 2023, D. JACAZZI, L. MELILLO, G. LUISO, *Tes/ori. Tessuti e ori negli affreschi del MANN*, in I SAPERI DI EUMACHIA AL MUSEO ARCHEOLOGICO NAZIONALE DI NAPOLI. ANTICHI TESSUTI, NUOVI RACCONTI, A cura di Alessandra Cirafici, Luigia Melillo, Hapax Editore Torino, pp. 120-140. ISBN 979-12-80188-15-1

[9] 2023, D. JACAZZI, *Mosaici e micromosaici: una tecnica attraverso i secoli*, in Micromosaico, Edited by: ISHINSHA, Japan, pp. 6-7. ISBN: 978-4-910478-08-1

[10] O. CIRILLO (2023), *Città e moda, luoghi e protagonisti a Napoli tra fine '800 e metà '900*, Napoli, arte'm; ISBN: 9788856906301

**Relationships with international and national Companies, Institutions, Research Centres, Universities during the last three years:**

- Confindustria Salerno
- ADI delegazione Campania
- CCIAA Salerno
- Ordine degli Architetti di Napoli e Salerno
- Napoli Creativa,
- Archipelago
- Cratere
- Corvino Gioielli
- Parco Archeologico di Ercolano
- Museo del Corallo, Torre del Greco
- Museo Liverino, Torre del Greco
- Esa Saint-Luc Bruxelles, Bruxelles
- Okan Üniversitesi, İSTANBUL
- D'Elia Company 1790 2020- ITA Italian trade Agency
- Antonino DE SIMONE, Impresa storica 1830 2020
- Le Zirre, Napoli 2020- GENOS, gioielli
- GEMTECH.
- Centro Orafo OROMARE
- Museo della moda e del tessile - Fondazione Mondragone, Napoli
- Universidad de Palermo, Argentina
- Universidad Federal de Pernambuco, Brasil
- Scuola universitaria professionale della Svizzera italiana (SUPSI) Bachelor of Arts in Comunicazione visiva, Campus Mendrisio, Svizzera
- C.E.S.A.R. School, Recife, Brasile
- Universidade do Minho, Departamento de Engenharia Textil, Campus de Azures, Guimarães, Portugal
- Faculdade de Arquitetura Universidade de Lisboa, Portugal 2021 - Goenka University, New Delhi, India
- SDS Sustainable Design School (oggi Besign), Nizza
- Conservatoire des Arts et métiers multimedia Bamako, Mali

- Università do Minho, Escola De Engenharia, Departamento de Engenharia Tèxtil 2020
- ICOMOS Italia
- Istituto Nazionale Geofisico e Vulcanologico
- SILAE- Foundation Italo-Latino-americana di Etnomedicina. 2020
- Accademia di Belle Arti di Bologna
- Accademia di Belle Arti di Ravenna
- Istituto Superiore di Studi Musicali "G. Verdi", Ravenna 2020
- Department of Pharmacy, University of Salerno,
- Università degli Studi di Firenze
- Università degli Studi di Genova, Scuola Politecnica
- Università degli Studi di Palermo | Dipartimento di Architettura
- Sapienza Università di Roma | Centro Interdipartimentale Sapienza Design Research
- Çankaya University, Faculty of Architecture, Ankara (TR)
- East China Normal University, School of Design, Shanghai (CN)
- Universiteti Politeknik i Tiranës (Albania)
- OKAN UNIVERSITY, İstanbul Okan Üniversitesi Tuzla Kampüsü Akfirat-Tuzla / İSTANBUL
- MiBAC Museo Storico - Archeologico di Nola nell'ambito del Progetto SA.V.A.GE. Gigli di Nola.
- Istituto Superiore di Studi Musicali "G. Verdi", Ravenna

**Collaborations with Consortia, Scarl or other Institutions participated by the University of Campania L. Vanvitelli during the last three years:**

2024-2027\_Convenzione DADI - M.Z COSTRUZIONI SRL, brand Dowedo®,  
 Convenzione per attività di ricerca tra il Dipartimento di Architettura e disegno industriale dell'Università della Campania "Luigi Vanvitelli" e M.Z COSTRUZIONI SRL, brand Dowedo®,

Responsabile scientifico: Maria Dolores Morelli, Roberto Liberti

18 dicembre 2024

Durata: 3 ANNI

2023-2026\_Convenzione DADI - VESOI Convenzione per attività di ricerca tra il Dipartimento di Architettura e disegno industriale dell'Università della Campania "Luigi Vanvitelli" e VESOI  
 Responsabile scientifico: Maria Dolores Morelli, Sergio Sibilio Convenzione dicembre 2023.

2023-2026\_Convenzione DADI - CNA

Convenzione per attività di ricerca tra il Dipartimento di Architettura e disegno industriale dell'Università della Campania "Luigi Vanvitelli" e CNA; Responsabile scientifico: Maria Dolores Morelli; Convenzione 24/03/2017 n°1.

2022-2023 Convenzione MANN-DADI (2022-2023): Progetto di ricerca nell'ambito della Convenzione per attività di ricerca tra DADI e MANN\_ Museo Archeologico Nazionale di Napoli: prot. 82120 del 01/06/2022.

2022

Assocoral, Torre del Greco - BCP, Banca di Credito Popolare, Torre del Greco -Istituto

"F.Degni", Torre del Greco - Museo del Corallo di Torre del Greco – Museo del corallo ASCIONE, Napoli - Museo del corallo LIVERINO, Torre del Greco - Museo Archeologico Nazionale di Sperlonga - Accademia di Belle Arte di Ravenna - Istituto Galdus di Milano - Fondazione d'ELIA Company, Torre del Greco – Azienda del Corallo De Simone, Torre del Greco - Coscia Gioielli srl, Tarì Marciianise - Conservatoire des Arts et Métiers Multimédia Balla Fassaké Kouyaté di Bamaco - Sustainable Design School di Nizza - Aiap per il progetto Women in Design Award- ADI per ADI Design Index. Commissione Tematica ADI Design Index sulla Comunicazione. - Uni, Scrittura della Norma UNI sul design- IIID International Institute for Information Design- World Bank Mali-Italy Facilitated Exchange Program. June 13 to 15, 2017.- MIUR gruppo di lavoro sulDesign di cui all'articolo 1 del D.D.G. n. 278 2022- Convenzione di ricerca e Consulenza in conto terzi tra il Dipartimento di Architettura e Disegno Industriale e l'Associazione Chiaiolella Borgo Marinaro Procida per la partecipazione alle attività di Procida Capitale della Cultura 2022

date attività: 20 aprile 2022/ 31 dicembre 2022

Responsabile scientifico della Convenzione: Ornella CIRILLO

Gruppo di ricerca: Caterina Cristina FIORENTINO, Roberto LIBERTI

Descrizione delle attività di ricerca: la ricerca e la progettazione, finalizzate alla realizzazione di una mostra dal titolo "Fili d'Ombra, fili di luce" ha riguardato la ricerca storico critica, i processi progettuali di prodotto e di comunicazione delle pratiche di upcycling riferite alle produzioni artigianali locali in lino.

2022-2023 Convenzione di ricerca e Consulenza in conto terzi tra Dipartimento di Architettura e Disegno Industriale e COSMIND srl

date attività: 1° maggio 2022/ 1 maggio 2023

Responsabile scientifico della Convenzione: Roberto LIBERTI, Giovanni CIAMPI

Gruppo di ricerca: Gabriele PONTILLO, Silvestro DI SARNO, Chiara SCARPITTI

Descrizione delle attività di ricerca: Il cuore della convenzione è relativo al disegno e progetto della "capsule collection" di oggetti/gioielli/accessori in acciaio oggetto del presente accordo; in particolare saranno sviluppate diverse soluzioni progettuali verificate all'interno dell'insegnamento di Fashion Ecodesign 1, incardinato nel Corso di Laurea magistrale in Design per l'Innovazione, curriculum Fashion Ecodesign, sino alla creazione di una serie di prototipi con le stampanti 3D e macchinari specifici a disposizione della COSMIND srl che saranno presentati nell'ambito dell'evento LINEA PELLE 2022 presso FIERAMILANO RHO. Si valuterà la possibilità di utilizzare materiali innovativi per le collezioni oggetto di studio.

2021-2022 Azienda PROTOM Group SpA nell'ambito delle attività di ricerca PON "Ricerca e Innovazione" 2014-2020 di cui al D.M. n. 1062 del 10.08.2021, Azione IV.4 "Innovazione".

2021- A. Avella, Workshop tematico "Geometrie preziose. Di-segno di gemme e gioielli", 12-19- 26 Aprile 2021, Dipartimento di Architettura e Disegno Industriale, Università della Campania Luigi Vanvitelli e Gem - Tech Istituto Gemmologico di Marciianise con l'intervento del prof. F. Sequino (Direttore tecnico della Gem-Tech in Campania e docente di gemmologia all'International Gemological Institute di Anversa) dal titolo Il taglio delle gemme: l'eterno compromesso tra leggi fisiche e profitto economico.

#### **ISI Web of Science Subject Categories:**

- Medieval & Renaissance Studies

- History
- Communication
- Social Sciences, Interdisciplinary
- Humanities, Multidisciplinary
- Cultural Studies
- Management
- Art.
- Engineering, Manufacturing. (manufacturing processes for jewellery design)
- Materials Science, Multidisciplinary. (materials for jewellery design)

**Scientific-Disciplinary Sectors:**

- CEAR-11/A. (ICAR/18)
- CEAR-08/D. (ICAR/13)
- CEAR-10/A. (ICAR/17)
- IMAT-01/A (ING-IND/22)
- CEAR-11/B. (ICAR/19)

**Key words:**

- Goldsmithing
- Jewels
- Gems
- Cameos
- History
- Design
- Fashion
- Drawing
- Territorial identities
- Materials and Technologies

**ERC Categories:**

- PE8\_10 Industrial design (product design, ergonomics, man-machine interfaces, etc.)
- PE8\_11 Sustainable design (for recycling, for environment, eco-design)
- SH1\_9 Competitiveness, innovation, research and development
- SH1\_10 Organization studies: theory & strategy, industrial organization
- SH3\_12 Communication and information, networks, media
- SH5\_4 Visual and performing arts, film, design
- SH5\_6 History of art and architecture, arts-based research
- SH5\_7 Museums, exhibitions, conservation and restoration
- SH5\_8 Cultural studies, cultural identities and memories, cultural heritage
- PE11\_10 Soft materials engineering, e.g. gels, foams, colloids
- PE11\_10 Soft materials engineering, e.g. gels, foams, colloids
- PE11\_13 Metamaterials engineering
- PE11\_14 Computational methods for materials engineering