

# The “Parco Della Pace” in Ravenna: The Restoration of the Mosaic Fountain “Le Chaos Et La Source De Vie” by Claude Rahir

## Modern Approaches to the Conservation and Restoration of Contemporary Works of Art Exposed Outdoors

### Ravenna‘daki “Parco Della Pace”: Claude Rahir Tarafından “Le Chaos Et La Source De Vie” Adlı Mozaik Çeşmenin Restorasyonu

#### Dış Mekânlara Açık Çağdaş Sanat Eserlerinin Korunması ve Restorasyonuna Yönelik Modern Yaklaşımlar


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#### Abstract

*The “Parco della Pace” was born in Ravenna in 1988, under the initiative of the Municipality of Ravenna and with the support of International Association of Contemporary Mosaicists (AIMC) and UNESCO. Considered a real open-air museum, it preserves nine monumental works of contemporary mosaic made by internationally renowned artists. A plan for the redevelopment and enhancement of the entire park has recently been approved: the agreement between the Municipality of Ravenna, the University of Bologna, the Flaminia Foundation, and the RavennAntica Foundation made possible the restoration of the fountain mosaic “Le chaos et la source de vie” by Claude Rahir, realized in 1984. The first part of the intervention focused on a careful study of the archival documentation that provides an understanding of the artist’s spirit and volition. The restoration techniques, put in place to re-establish the artwork compromised by years of neglect and vandalization, have allowed us to compare products and methodologies now standardized with others of recent experimentation. Special attention had to be given to the problem of the integration of gaps, relating the theory of restoration applied to protected cultural heritage with the world of contemporary art. In support of the intervention a three-dimensional survey of the artwork has been created using the “Structure from motion” technique. The project ended with the enhancement and redevelopment of the entire area through the setup of a dedicated website and explanatory panels.*


**Keywords:** Bio-restoration, contemporary mosaic, outdoors, photogrammetry, fountain.

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## Öz

“Parco della Pace”, 1988 yılında Ravenna Belediyesi'nin girişimiyle ve Uluslararası Çağdaş Mozaikçiler Derneği (AIMC) ve UNESCO'nun desteğiyle Ravenna'da ortaya çıkmıştır. Gerçek bir açık hava müzesi olarak kabul edilen bu yer, uluslararası üne sahip sanatçılar tarafından yapılmış dokuz anıtsal çağdaş mozaik eseri korumaktadır. Yakın zamanda; Ravenna Belediyesi, Bologna Üniversitesi, Flaminia Vakfı ve RavennAntica Vakfı arasında yapılan bir anlaşma ile birlikte, 1984'te Claude Rahir tarafından yapılan “Le chaos et la source de vie” çeşme mozaığının restorasyonu gerçekleştirilmiştir. Restorasyonun ilk bölümü, sanatçının ruhunun ve amacının anlaşılmasını sağlayan arşiv belgelerinin dikkatli bir şekilde incelenmesine odaklanmıştır. Yıllarca süren ihmal ve tahrip sebebiyle tehlikeye atılan sanat eserini yeniden inşa etmek için uygulanan restorasyon teknikleri, artık standartlaştırılmış ürünleri ve metodolojileri yakın zamanda yapılan diğer deneylerle karşılaştırmayı da mümkün kılmıştır. Boşlukların giderilmesi için, korunan kültürel mirasa uygulanan restorasyon teorisi çağdaş sanat dünyası ile ilişkilendirerek, özel bir çalışma gerçekleştirilmiştir. Restorasyonu desteklemek için “hareketten yapı” tekniği kullanılarak sanat eserinin üç boyutlu bir modeli oluşturulmuştur. Proje, özel bir web sitesi ve açıklayıcı panellerin kurulması yoluyla tüm alanın iyileştirilmesi ve yeniden geliştirilmesiyle sona ermiştir.

**Anahtar Kelimeler:** Biyo-restorasyon, çağdaş mozaik, açık hava, fotogrametri, çeşme.

The starting point of this project was the desire to focus on contemporary mosaic artworks located outside the traditional tourist routes. Thanks to the Framework Agreement stipulated between the Municipality of Ravenna, the Alma Mater Studiorum - University of Bologna, the Flaminia Foundation, the RavennAntica - Archaeological Park of Classe Foundation and the collaboration with the International Association of Contemporary Mosaicists (AIMC), it was possible to study and restore the fountain-mosaic “Le chaos et la source de vie” made by Claude Rahir in 1984 located in the Parco della Pace in Ravenna (Figs. 1a-b). The studies and operations aimed at redeveloping the park and the

Figure 1a  
Geographic map of the city of Ravenna. The perimeter of the city center has been highlighted in white following the old walls. The position of the Parco della Pace has been highlighted in red.



Figure 1b  
Area of the Parco della Pace where all the artworks have been highlighted and numbered. The fountain-mosaic is number 1.

work of art in question were the result of three master's theses of the degree course in Conservation and Restoration of Cultural Heritage in Ravenna (Coccia 2021; Carra 2022). A complex restoration work, which lasted about a year, was carried out on the fountain. Before the interventions, it was necessary to follow a meticulous process which included the study and the analysis of

the context and the artworks exhibited in the park, as well as focusing on the fountain, analysing the life and philosophy of the artist, and then proceeding with a series of preliminary diagnostic investigations. In 1980, artists from all over the world were invited to meet in Ravenna to discuss the role of mosaics in contemporary art (Argan 1988: 7-15). During the meeting, C. Rahir and P. Fischer put forward an idea of the establishment of the Parco della Pace. The works began in the summer of 1984 and ended in 1988 with the inauguration of the park<sup>1</sup>. Each work is an interpretation by each artist and their nation of the concept of peace and friendship between nations. Initially six artists were selected; among those, J. Carter, M. Coupe, J. Deru, C. Rahir, A. Kornoukhov and E. Mally’s sketches were realized in collaboration with the mosaicists of Ravenna (Ragonese 1983)<sup>2</sup>. Later, M. Paladino joined the group: his sketch was realized by the representatives of the Ravenna school of Mosaics<sup>3</sup>. Finally, after Bruno Saetti’s sudden death, his heirs decided to donate a pre-existing mosaic - the Archangel Michael - to support the Park project (Carlino Ravenna 1988). The last work to be added was created through the collaboration of the Academy of Fine Arts of Ravenna and the Albe Steiner Institute. After the establishment of an order of priorities for the restoration procedures, it became immediately evident that Rahir’s artwork was the one with the most advanced state of decay, hence the decision to intervene.

The first stage of the work was to study Claude Rahir’s life (Verviers 1937; Nodebais 2007). His artistic training began in Belgium, specifically in his hometown Liège, where he learned how to paint, it continued in Louvain where he mastered sculpture, and then in Italy, where he discovered mosaic art. Rahir’s artistic talent explores the most varied expressive modes: mural painting, mosaic, bas-relief, sculpture, painting, and drawing, but also calligraphy and poetry<sup>4</sup>. For the project, Rahir identified a circular structure of 18 m in diameter divided into two large semicircles, one of which forms the entrance. In the middle, a cube in Carrara marble represents the core of the composition<sup>5</sup>. Conceived as a fountain (Fig. 2), the entire work was later adapted to a monument for safety reasons (Fig. 3). The first stages of the restoration focused on determining the building materials, through optical microscopy analysis<sup>6</sup> which was compared to archival research; drafting the state of the conservation, anticipated by the recognition of the types of degradation and biodeteriogens<sup>7</sup>; and the removal of graffiti and biodeteriogens, after testing different methods and products. We proceeded with the intervention on the work starting with cleaning. A heat treatment proposal resulting from a recent study (Tretiach et al. 2012: 6851–6859) was considered as a valid alternative to the use of biocidal products. It has been shown that short

1 Due to the lack of official documents, the local newspaper articles were also taken into account: Il resto del Carlino 1988, “Museo dedicato alla fratellanza”. Newspaper article found in the official AIMC archive, Mar – Museo d’arte della città di Ravenna, Italy.

2 For further information consult: Il Resto del Carlino 1984, “Minerali dall’Antartide per il Parco della Pace”, newspaper article, Ravenna.

3 Official website of the Museo d’Arte della città di Ravenna: <http://www.mosaicoravenna.it/mosaico-a-ravenna/parco-della-pace/> [last viewed 27 August 2022].

4 Official website of Maison de la poesie et de la langue française: <https://maisondelapoesie.be/poetes-list/rahir-claude/> [last viewed 27 August 2022] and Official website of Korea JoongAng Daily: <https://koreajoongangdaily.joins.com/news/article/Article.aspx?aid=1904150> [last viewed 27 August 2022].

5 Mosaic database, International Mosaic Documentation Center (CIDM), id. card 444, card code R.

6 The analyses were carried out by Analitica S.a.s., a laboratory for analysis and research, managed by Dr. Francesco Dellisanti.

7 The recognition of biodeteriogens was possible thanks to the collaboration with the laboratory of microbiological diagnosis and monitoring BioresArt, under the supervision of Dr. Matteo Montanari and with the advice of Dr. Juri Nascimbene.



Figure 2

Photo of the fountain in 1988 in which the flow of water is evident. Photo of Julie Kazuko Rahir.



Figure 3

State of conservation of the artwork before the restoration.

thermal shock treatments at 45 - 55 °C are sufficient to kill all biodeteriogenic species, but only if kept fully hydrated. Despite obtaining good results, in this specific case, it was decided not to exploit it on the entire surface due to adverse weather conditions, large size, and marked three-dimensionality of the work. Seeing that the mosaic area is very large and considering the ease of application, biodegradability, non-toxicity and effectiveness tested above all on mosses, Essenzio was, therefore, chosen as the biocide product to be used; it is a cleaner based on essential oils in conjunction with each other, mainly the Oregano extract (*Origanum vulgare*) and Thyme (*Thymus vulgaris*)<sup>8</sup>. It was applied as it is with the aid of a backpack sprayer. The product chosen for the deactivation of higher plants was a concentrated formula based on quaternary ammonium salts, a non-ionic surfactant<sup>9</sup>. Although not an entirely eco-friendly one, given the availability of the current market, it appears to be one of the least toxic

8 Essenzio, produced by IBIX Biocare. Official website of the IBIX Biocare: <https://www.ibixbiocare.it/it/prodotti/essenzio> [Last viewed 27 August 2022].

9 Fitex, produced by IBIX Biocare.

herbicides. The predominant presence of algal patina and lichens was found on the concrete base. The most used biocides, from chlorides to quaternary ammonium salts, were then tested. All tested products were found to be adequate for the removal of biodeteriogens from the cement substrate, but, in the end, it was decided to use Essenzio, seeing that it is the least polluting and least harmful to humans.

We then moved on to removing graffiti. Once the different types of paints were identified, the cleaning tests were carried out. As for the concrete and flooring, the best performing product was a plant-based anti-graffiti detergent (green apple extract) composed mainly of mixtures of oxygenated solvents and surface agents of natural origin<sup>10</sup>. Removing the graffiti on the marble turned out to be more complex; after carrying out a series of tests on each type of paint identified, an ad hoc process was followed for each side. The composition of some paints, the possible degradation of the support and the porosity of the material often make it difficult to remove graffiti without further damaging the surface. For this reason, techniques such as laser technology are necessary. The use of the Thunder Art model was therefore proposed to standardize and remove residual traces<sup>11</sup>.

Already from the first inspections, the presence of numerous lacunae and gaps in the work had emerged, involving different materials. The lack of material, in addition to seriously compromising the aesthetic integrity of the mosaic surface and flooring, was a danger for the habitual users of the Park. The most affected surface was the mosaic decoration. Particularly clear was the lack of slate slabs, which affected the three-dimensionality of the composition. The artist had placed the plates to create points of convergence, which rose up on the surrounding surface. Rahir describes his work as the juxtaposition of Yin and Yang, in which the chaotic and disordered mosaic hemicycle is opposed to the floor, which represents calm and purity. Inside the mosaic decorations were completely missing the asbestos pipes, removed by the Municipality of Ravenna in the 2000s for public health reasons. In addition to the mosaic hemicycle, the Istrian stone pavement was particularly damaged, with slabs detached from the cement screed below or completely missing. Others, on the other hand, had numerous fractures, related to the mechanical action of the root systems and to the cycles of frost and thaw that had aggravated the phenomenon of degradation. At the same time, structural causes have arisen because of the incorrect execution of the mosaic chamber.

From the photographs taken during the mosaic making phases in 1984, we were able to trace the technique followed by the artist. In the first phase of the works, the first part that was built was the outermost part of the cement structure. Those parts were filled with clay, laid out and pressed by means of an excavator. Above the filling layer of clay, were applied a grey cement conglomerate casting and a reinforcing metal mesh, later covered with an additional layer of cement mortar. The clay wasn't a suitable material for this function and, nowadays, the artwork is partially empty under the surface. This has created internal tensions that, together with the mechanical action of the roots and the telluric movements, have led to the creation of fractures and the loss of decorative materials. Factors of anthropic origin, linked to vandalism, also contributed to the loss of material. As a result of the numerous lacunae, it was chosen to proceed with complete integration of all the gaps found by using consubstantial material, similar in

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<sup>10</sup> Vegegraf, produced by IBIX Biocare. Official website of the IBIX Biocare: <https://www.ibixbiocare.it/it/prodotti/vegegraf> [Last viewed 27 August 2022].

<sup>11</sup> Through the collaboration with the restoration, analysis, and maintenance Leonardo s.r.l.

colour, composition and texture to those put in place, following the artist's will and respecting his writings, found in the archives. It was decided to operate in this way to restore the aesthetic unity that allows correct reading of the mosaic.

Nowadays, the criteria for properly addressing the mainstreaming of gaps are still open to debate and discussed by critics, historians, and conservators. In the Italian panorama, a central figure in the definition of the theory of restoration was Cesare Brandi, historian and art critic. In the Sixties, Brandi made a reflection on the lacunae and the lawfulness of integrations. Following his theory, the integration of lacunae is allowed only when it is supported by objective evidence, whether provided by the remaining fragments of the work or by graphic or photographic materials attesting to the original form. Nevertheless, integration must always be recognizable (Brandi 1963: 17). Brandi's theory was based on the Gestalt Psychology<sup>12</sup>. Brandi argues the need to place the lacunae on a different level than the figuration, grading level or the tone of the gap in such a way as to bring out the decorative image. At the operational level, these guidelines have resulted in the implementation of integrations defined as undercut and sub-tone. As the terms themselves suggest, in the undercut integrations the tiles are placed on a lower level than the mosaic; the integrations under-tone, instead, are recognizable by the colour, usually less saturated than the original tiles. With these two methods, the gaps are made imperceptible at great distances, going to restore integrity to the figuration. In the restoration of contemporary artwork, especially for outdoor works, it isn't always possible to apply Cesare Brandi's principles. It's necessary to implement a different methodological and operational approach, which considers the genesis and function of the work itself.

In the case of Claude Rahir's work, the definition of the operative methodology was preceded by a careful study of the sources, which allowed to reconstruct the idea of the artist and his *modus operandi*. Following these reflections, the integration was carried out using a consubstantial material, placed at the same level of the lacune and with the same composition, texture and shade of the lost original elements. This decision was in line with the restoration works carried out in the past years on some mosaics of the Parco della Pace, by the School of Mosaic Restoration managed by the Superintendence of Archaeology, Fine Arts and Landscape for the provinces of Ravenna, Forlì-Cesena and Rimini (Kniffitz et al. 2006: 88).

To protect the artist's copyright, we decided to get in touch with his daughter Julie Kazuko Rahir, who was available to provide notes, drawings and sketches of her father. Analysing the projects and the original letters left by the artist, the huge importance of mosaic materials stands out: Rahir had entrusted his message of peace to the materials themselves rather than to the overall figuration. The slates coming from Belgium, the pebbles of the rivers of Ravenna, the quartz crystals of Norway and the granite elements donated by a military expedition stationed in Antarctica are called to witness the friendly relations that bind the various peoples, whose union contributed to the creation of a single work of art.

After the study of the sources, we proceeded with the integration of the mosaic decoration and the paving in Istrian stone. The operational phases, which provided for the reallocation of the original detached elements and the integration of the lacunae with new materials, did not follow a single intervention methodology. In fact, having to respond to different materials with specific problems, the integrative interventions have been adapted on a case-by-case basis.

12 Official website of the Università Cusano a Torino: <https://torino.unicusano.it/studiare-a-torino/teoria-della-gestalt/> [last viewed 28 august 2022].



Figure 4  
Choosing pebbles for integration, based on color and shape.

On the mosaic section, a significant part of the slate slabs was missing and it was decided to integrate them using new slate material selected in a quarry in Liguria. The careful analysis of the artwork has made it possible to identify clear impressions, left by the original materials on the cement mortar. Where this was not possible, the archive photos were taken as a reference. The same procedure was followed for the pebbles (Fig.4) and cubes in red porphyry, selected according to the size and shape of the footprints left on the cement mortar. The gaps affecting the mosaic portions covered with yellow tiles in cement conglomerate were only integrated into the cases in which they were completely missing and/or excessively degraded. Since it was not possible to find the same type of material on the market, it was decided to create it from scratch by formulating a mixture as similar as possible to the original, in chemical composition, granulometry of the aggregates and colorimetric yield (Fig. 5). Subsequently, asbestos pipes were integrated. In this case, the traces left



Figure 5  
Positioning yellow tiles in cement conglomerate. The mixture of them was formulated to be as similar as possible to the original, in chemical composition.

by the original materials were extremely limited and allowed the identification of the thickness and some diameters of the tubes. For this reason, a careful study of the archival photographs was carried out to determine the heights, the shape and the total number of tubes. For the integration, it was decided to use an alternative material not harmful to health, but durable and aesthetically similar to the original. After considering different materials, it was decided to make the stoneware tubes, a resistant ceramic material with low porosity. The pipes were commissioned by a ceramist from Faenza (Fig. 6), who made six tubes with diameters of 14 cm and eighteen tubes with a diameter of 21 cm, three of which had a wider upper curb. To facilitate the production and transport operations, the tubes were all made with a height of 22 cm. After the first firing at 800 degrees, the tubes were cut to the right height and cooked at a higher temperature. Cooking at high temperatures leads to partial vitrification of the dough, which reduces its porosity. Subsequently, the pipes were bedded on a cement mortar. In the archive photos investigated, it was found that the asbestos tubes were originally conceived as vases containing succulents. In line with the principles implemented during the restoration operations, it was decided to give the same function to the ceramic tubes as well (Fig. 7).



The hydraulic system that fed the Carrara marble cube and the water containment tank are no longer operational at the behest of the Municipality of Ravenna. On the top side of the cube remained the recess that was originally used to collect and drain water through the vertical grooves. It was decided to apply an element to close the cavity, made of Carrara marble, due to the continuous biological colonization, such as this cavity did not have proper drains.

At the end of the restoration work, a three-dimensional model of the work was created, mainly aimed at mapping the interventions performed on the mosaic surface and flooring. In recent years, the three-dimensional photogrammetric techniques have found wide use in the field of cultural heritage, making possible the digitization of works of art, creating databases useful for their preservation (Carra 2022: 536).

Technological progress has led to the development of numerous techniques, which exploit different tools and principles. The choice of methodology is a fundamental factor, as it defines the timing and costs of the intervention. The choice must also consider the size of the subject, the context in which it is inserted and the final use of the model, which defines the accuracy and the level of detail (Bittelli 2002: X-XI).

In the specific case examined in this article, the three-dimensional model was executed with a photogrammetric technique. Photogrammetry consists of a set of techniques that allow to detect the shape and position of an object through the comparison and overlapping of photographs, taken at different angles (McCarthy 2014: 176).

The most used photogrammetric technique is the Structure from Motion (SfM), which uses the triangulation of data and Computer Vision algorithms to contextualize the orientation of the room and recognise the common point between different photographs (Montanari 2015: 28).

The SfM technique consists of a rigid data acquisition and processing procedure, which follows a cascade pattern. The first phase, concerning the photographic campaign, plays a fundamental role and must comply with precise parameters and methods of acquisition. Due to the morphological and structural complexity of the work, it was necessary to design a new acquisition mode, suitable for the different inclinations of the surfaces. After some failed attempts, caused by an incorrect approach to the work, we were able to define an optimal operating methodology. The work was divided into different sections, as if they were

Figure 6  
Ceramists made pipes with a potter's wheel.

Figure 7  
Integration of ceramic pipes following the photo found in the archive.



facades, taking photographs according to a regular pattern. The most projecting elements of the mosaics and the Carrara marble cube were considered as individual objects: the acquisition, in this case, took place by moving around the object, to capture it in all its angles (Fig. 8).

Figure 8  
Acquisition campaign of the mosaic portion.  
The photos were taken with a Nikon D5300 camera, with an 18mm lens.



During the two-week photographic campaign, about 4000 photographs were taken. After the acquisition campaign we proceeded to the post-production of the photos, which was necessary to standardize the exposure of the photographs. As a result of the work being in an open area, in fact, it had been impossible to maintain constant light conditions. The photos were then imported into the photogrammetry software Agisoft Metashape Pro, which has been able to identify the common points within the photo and to reconstruct the artwork morphology.

To manage the large amount of data and be able to use the three-dimensional model on other mapping software, it was necessary to use low-quality meshes. To compensate for the poor quality of the mesh, an 8k texture was created, which made viewing the smallest details of the mosaic decoration possible. It was also necessary to divide the work into five parts. The various parts of the model were aligned through CloudCompare, which allowed the overlap of the models. Once a single model was obtained, it was imported into the 3D Blender software, with which it was possible to process the mesh and texture and eliminate small graphic defects (Fig. 9).

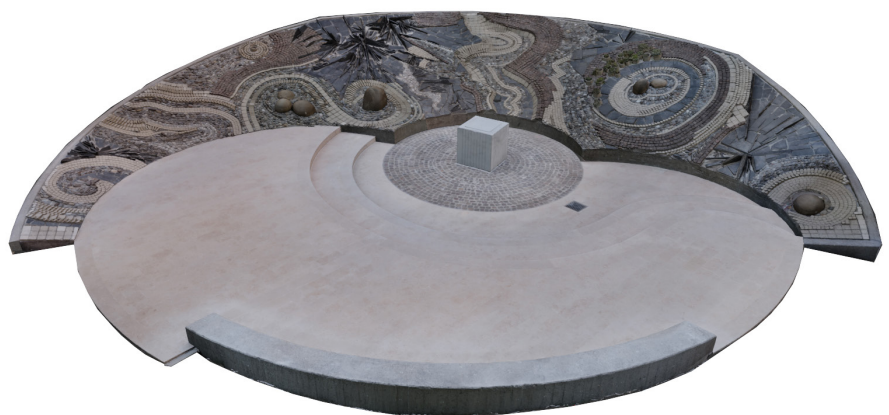


Figure 9  
Three-dimensional model of the work of  
Claude Rahir at the end of restoration work.  
The complete model is available on the official  
website of the Parco della Pace.

Through the comparison with the photographic documentation of the works, all the mosaic and flooring elements that had been realigned or replaced were recognized, thus allowing the integration intervention to be mapped.

The restoration work and the realization of the three-dimensional model of the work of Claude Rahir are part of a large enhancement program. Over time, the museum function of the park has been lost and the park itself is simply considered a public garden. The project aims to redevelop the Parco della Pace and bring citizens closer to the mosaics placed in it.

In this project the creation of an identification logo for the Parco della Pace and two descriptive panels was planned. The graphic design was entrusted to the Liceo Artistico Statale Nervi-Severini, involving the students of class IV C of the school year 2020/2021.

The logo had to recall the theme of peace and mosaic. The students presented several proposals, which were evaluated by the International Association of Contemporary Mosaicists and the Municipality of Ravenna. The chosen logo respects the characteristics sought through the use of colour backgrounds, whose colours recall the flag of Peace (Fig. 10).

The descriptive panel, soon to be inaugurated, will be installed on a metal sheet, size 150x200 cm, placed on galvanized steel poles 100 cm high<sup>13</sup>. It was essential to create specific content that could provide all the information necessary for proper use.

To facilitate understanding it was imperative to carry out a careful sorting of the information that needed to be shown. This phase was strongly influenced by the communicative methodology used in the current museum and exhibition environment, aimed at dictating the guidelines to be respected in order to attract and maintain high the attention of the viewer (Fig. 11).

Within the valorisation project, a website dedicated to the Parco della Pace has been created<sup>14</sup>. From a general homepage, the user can access secondary pages, containing more historical and artistic insights. In-depth pages dedicated to mosaics have also been designed, containing a description of the work and the materials used to create it. The site also includes a short excerpt concerning the restoration work and a section dedicated to the three-dimensional model of the work of Claude Rahir (Fig. 12).

The site is designed as a means of disclosure and communication and can be used as an interactive guide to accompany visitors during their visit. For this reason it had been designed with a vertical scrolling layout, easily viewable from a smartphone.

The restoration and enhancement work performed on the artwork of Claude Rahir is part of a large project, which will determine the redevelopment of the entire Park. The final goal is to create a new stage in the tourist circuit of Ravenna through the involvement of citizens. Along this line, two new restoration projects for the mosaics by Mimmo Paladino and Jerry Carter, which are in a precarious state of conservation, have been proposed to the Municipality of Ravenna. The future restoration works, to date, pending approval and subsequent funding by the City Council, will be given over to the single cycle master's degree course in Conservation and Restoration of Cultural Heritage, under the guidance and technical direction of the professor of restoration, Doc. Paola Perpignani.



Figure 10  
Official logo of the Park of Peace, made by students of class IV C of the Liceo Artistico Statale Nervi-Severini.

<sup>13</sup> The panel was made by the advertising company Tuttifrutti, which will print the texts on an adhesive film.

<sup>14</sup> Official website of the Parco della Pace: <http://framelab.unibo.it/parcodellapace/>

# PARCO DELLA PACE

Il progetto Parco della Pace nacque agli albori degli anni Ottanta quando si manifestò a Ravenna la necessità di far entrare a pieno diritto il mosaico contemporaneo nel panorama artistico della città bizantina. Il progetto, nato per volere dell'Associazione Internazionale dei Mosaicisti Contemporanei (AIMC), ebbe il pieno appoggio del Comune di Ravenna, che mise a disposizione risorse e fondi per la sua realizzazione. Si tratta di un vero e proprio museo di mosaico contemporaneo in plein air interamente ispirato al tema della pace e dell'amicizia tra i popoli. Un Parco creato dall'uomo per l'uomo, indipendentemente dall'estrazione sociale, dal Paese di origine, dal sesso e dall'orientamento religioso. Un parco scisso da guerre economiche, ideologiche e da discriminazioni di ogni tipo. All'interno del Parco della Pace è possibile ammirare nove opere musive di carattere monumentale eseguite da artisti di fama internazionale, selezionati da una commissione artistica presieduta da Giulio Carlo Argan.

The "Parco della Pace" project was born at the beginning of the 1980s when in the city of Ravenna arose the need to bring contemporary mosaic into the artistic panorama of the Byzantine city. The project, created at the behest of the International Association of Contemporary Mosaicists, had the full support of the Municipality of Ravenna, which made available resources and funds for its realization. It is a real museum of En plein air contemporary mosaic, entirely inspired by the theme of peace and friendship between peoples. A park created by people for people, regardless of social background, country of origin, gender and religious orientation. A park free from economic and ideological wars and discrimination of any kind. Inside "Parco della Pace" it is possible to admire nine mosaic artworks of monumental structure, executed by artists of international fame selected by an artistic commission overseen by Giulio Carlo Argan.



## 1. Segno di pace e amicizia

**Claude Rahir (1937-2007) Belgio**  
L'opera occupa uno spazio circolare, suddiviso in due emisferi: il primo è pavimentato in calcare di colore chiaro, mentre il secondo, posto su piano inclinato, è decorato a mosaico utilizzando in prevalenza ciottoli e schegge litiche che compongono dei disegni curvilinei. L'insieme decorativo riprende i paesaggi zen, che testimoniano l'attenzione di Rahir per la filosofia e la cultura orientale.

The artwork occupies a circular space, divided into two hemispheres: the first is paved in light-coloured limestone, while the second, placed on an inclined plane, is decorated with mosaics using mainly pebbles and stone chips that compose curvilinear designs. The decorative ensemble is reminiscent of Zen landscapes, showing Rahir's attention to Eastern philosophy and culture.

## 2. Un Pacifico libero dall'atomica

**Margaret Couope (1922-2006) Nuova Zelanda**  
L'opera musiva illustra una scena che testimonia le prove atomiche compiute al largo delle coste della Nuova Zelanda. Navi da guerra e uomini in uniforme fluttuano in acque verdi-azzurree. L'orizzonte, alto e scuro, è attraversato da bagliori di rosso. Gigantesche balene, vittime delle radiazioni, mostrano il loro dorso. EmERGE dalle acque la vela bianca di una barca che reca il simbolo della pace.

The mosaic artwork illustrates a scene that bears witness to the atomic tests carried out off the coast of New Zealand. Warships and men in uniform float in blue-green waters. The horizon, high and dark, is crossed by flashes of red. Giant whales, victims of radiation, show their backs. The white sail of a boat, bearing the symbol of peace, emerges from the waters.

## 3. La seconda genesi

**Jerry Carter (1941) U.S.A.**  
Il mosaico rappresenta un paesaggio dal carattere visionario. Grandi campi di colore, distribuiti lungo linee orizzontali, e una forma semicircolare, in primo piano, descrivono un orizzonte attraversato da nubi ed esplosioni. Il titolo dell'opera allude alla rinascita, alla morte e alla vita. Uno scenario ambiguo che rimanda tanto a un fenomeno aurorale quanto all'immagine di una tremenda distruzione.

The mosaic represents a visionary landscape. The large fields of colour, distributed along horizontal lines, and a semicircular shape in the foreground, depict a horizon crossed by clouds and explosions. The title of the artwork alludes to rebirth, death and life. An ambiguous scenario that alludes as much to an auroral phenomenon as to the image of tremendous destruction.

## 4. L'uomo e la natura

**Alexander Komokhov (1947) Russia**  
Scultura a tutto tondo composta da tre pannelli intersecchi a formare una stele. Fronte e retro di ogni piano sono rivestiti da un tessuto musivo lapideo dai colori bruno e ocra, campiti in grandi moduli geometrici e attraversati da filari di tessere in smalto blu, rosso, nero e oro. Nella zona inferiore si distinguono i profili di un cavallo e di un uomo.

All-rounder sculpture composed of three panels, intersected to form a stele. The front and back of each level are covered with stone mosaics in brown and ochre colours, sampled in large geometric modules and crossed by rows of blue, red, black and gold enamel tiles. In the lower area, the profiles of a horse and a man can be distinguished.

## 5. Francobollo

**Accademia di Belle Arti Ravenna (1990) Italia**  
L'opera riproduce, in dimensioni monumentali, un francobollo emesso nel 1990 dall'Istituto Poligrafico e Zecca dello Stato. Sul fronte campeggia un particolare, in scala di grigio, della veste di San Vitale, tratto dalla decorazione del catino absidiale dell'omonima chiesa ravennate. Il dettaglio contiene una colomba, che evoca il tema della pace.

The artwork reproduces, in monumental dimensions, a stamp issued in 1990 by the Polygraphic Institute and the State Mint of Italy. On the front, there is a grayscale detail of the robe of San Vitale, based on the decoration of the apsidal basin of the homonymous church in Ravenna. The detail includes a dove, evoking the theme of peace.

## 6. Albero della vita

**Domenico Palafino (1948) Italia**  
Il pavimento musivo ripropone una variazione del tema dell'albero della vita. La rappresentazione è interamente occupata da un enorme albero, i cui lunghi rami raggiungono i limiti dell'opera. L'albero accoglie segni, simboli, figure antropomorfe e zoomorfe, tra le quali possiamo riconoscere dei pesci, un pavone e un rettile, oltre a presenze iconiche inafferrabili.

The mosaic floor proposes a variation on the theme of the tree of life. The representation is entirely occupied by an enormous tree, whose long branches reach the boundaries of the artwork. The tree hosts signs, symbols, anthropomorphic and zoomorphic figures (among which we can recognize fishes, a peacock and a reptile) as well as elusive iconographic presences.

## 7. Albero della vita

**Josette Deru (1931-2016) Francia**  
Il mosaico rappresenta un albero stilizzato, con foglie dai colori sgargianti e uccelli colorati, che richiamano il ciclo delle stagioni e i simboli dello Spirito Santo. Al di sotto, due giovani sono raffigurati mentre piantano degli arbusti, un richiamo alla vita e alla sua continua rigenerazione.

The mosaic represents a tree, with brightly coloured leaves and colourful birds, which recall the cycle of the seasons and the symbols of the Holy Spirit. Below the tree, two young people are depicted planting shrubs, a call to life and its continuous regeneration.

## 8. Le ali della pace

**Edda Mally (1938) Austria**  
La scultura a tutto tondo rappresenta l'ala di una colomba, che si protende in verticale. I colori chiari e brillanti della parte superiore rimandano al candore della colomba, mentre nella parte inferiore dominano colori scuri e linee nette, a simboleggiare una frattura.

The all-rounder sculpture represents the wing of a dove, which extends vertically. The light and bright colours of the upper part refer to the candour of the dove, while the lower part is dominated by dark colours and sharp lines, symbolizing a fracture.

## 9. San Michele Arcangelo

**Bruno Saetti (1902-1984) Italia**  
Il mosaico raffigura San Michele sovrastato dal sole, simbolo della luce divina. L'Arcangelo solleva la mano destra in segno di pace e benedizione. Ai suoi piedi, campi di colore rosso e nero indicano il demone. Michele è l'angelo guerriero che sconfigge il male e apre le porte dell'eternità.

The mosaic depicts St. Michael surmounted by the sun, symbol of divine light. The Archangel raises his right hand as a sign of peace and blessing. At his feet, red and black fields of colour symbolize the devil. Michael is the warrior angel who defeats evil and opens the doors of eternity.

Nel 2020 il Comune di Ravenna, proprietario del Parco della Pace, ha approvato un progetto per la realizzazione di attività di studio, formazione e ricerca finalizzate al restauro e alla valorizzazione dei mosaici. Il progetto, con la collaborazione del Museo d'Arte della Città, dell'AIMC e del Liceo Artistico Nervi-Severini di Ravenna, è stato inserito all'interno delle attività promosse dall'Accordo Quadro, stipulato tra Comune di Ravenna, Università di Bologna, Fondazione Ravennatica e Fondazione Flaminia. I cantieri di restauro sono stati affidati alla LMCU in Conservazione e Restauro dei Beni Culturali dell'Università di Bologna, campus di Ravenna, e all'Accademia di Belle Arti di Ravenna. La peculiarità storica e di contesto rendono l'intero progetto un caso di studio molto fecondo per giovani studenti che a Ravenna stanno seguendo un percorso formativo di eccellenza.

In 2020, the Municipality of Ravenna, owner of "Parco della Pace", approved a project for the implementation of study, training and research activities aimed at the restoration and enhancement of the mosaics. The project, with the collaboration of the City Art Museum, AIMC and "Nervi-Severini" Artistic High School of Ravenna, has been included within the activities promoted by the framework agreement stipulated between the Municipality of Ravenna, University of Bologna, Ravennatica Foundation and Flaminia Foundation. The restoration works have been entrusted to the Master's Degree course in "Conservation and Restoration of Cultural Heritage" of the University of Bologna (campus of Ravenna), and to the Academy of Fine Arts of Ravenna. The historical-artistic peculiarity and the context make the whole project a very fruitful case study for young students who are following a training course of excellence in Ravenna.



www.parcoldellapace.it



Figure 11  
Description panel, which will be placed near one of the entrances to the Park. The graphic design of the panel was realized by the students of class IV C of the Liceo Artistico Statale Nervi-Severini.

Figure 12  
Explanatory example of the official website of the Parco della Pace.



## L'opera in digitale

La tecnica di rilievo tridimensionale è ampiamente diffusa nel mondo dei beni culturali.

I modelli 3D trovano largo uso nella ricerca e nella valorizzazione, fornendo materiale prezioso per costituire gli archivi digitali. La tecnica è impiegata anche nella comunicazione museale, attraverso la creazione di tour virtuali o render grafici.



Modello 3D a cura di Silvia Maria Coma

Al giorno d'oggi, il progresso tecnologico ha permesso lo sviluppo di numerose tecniche per il rilievo tridimensionale.

Tra le più diffuse troviamo le tecniche fotogrammetriche, che si basano sulla sovrapposizione delle fotografie dell'oggetto. Tramite precise equazioni matematiche, i software riescono ad analizzare e riconoscere i punti in comuni di una serie di foto, ricavando così una nuvola di punti tridimensionale. Mediante l'elaborazione di questa nuvola, si può ottenere un modello 3D con una superficie poligonale perfettamente uguale a quella dell'oggetto di partenza.



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