

# Establishing a Methodology for Scientific Research in Conservation in Montenegro – An Initiative by the Faculty of Fine Arts in Cetinje and the University of Montenegro

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## Summary

Heritage protection, as an exceptionally important resource of every state, is one of the priorities where education, science, history, economy, and other social segments intertwine. Conservation research, as an integral part of conservation practice, requires specific knowledge, scientific equipment, and a system of cooperation between conservators and scientists from both natural sciences and the humanities. The path toward achieving this goal leads through the education system, in connection with the heritage protection system. The Faculty of Fine Arts in Cetinje, through the study programme of Conservation and Restoration, initiates this process in Montenegro by establishing cooperation with faculties and institutes that possess the necessary scientific equipment. The first results relate to master's theses in conservation, demonstrating the readiness of all participants for collaboration. The final goal is to establish a Laboratory for Heritage Material Research in Montenegro.

**KEYWORDS:** *scientific research in conservation, Faculty of Fine Arts in Cetinje, conservator education, Laboratory for Heritage Material Research*

## Introduction

Heritage protection, as an exceptionally important resource of every state, is one of the priorities where education, science, history, economy, and other important social segments intertwine. Although the significance of cultural heritage as a non-renewable resource is emphasized in state strategies, the path to establishing an effective heritage protection system is not straightforward. Among other things, it involves scientific research aimed at identifying and documenting degradation processes, physical, chemical, and biological causes of deterioration, determining the composition of original and added materials, verifying the effectiveness of conservation procedures, and forming databases that can subsequently be used for qualitative and quantitative analyses, including in an international context.

Scientific research in conservation requires specific knowledge, scientific equipment, and a system of cooperation between conservators and scientists – from both natural sciences and the humanities dealing with heritage. The path toward achieving this goal leads through the education system in connection with the heritage protection system. The Faculty of Fine Arts in Cetinje, through the study programme of Conservation and Restoration, has initiated this process in Montenegro by establishing cooperation with faculties and institutes that possess the necessary scientific equipment, primarily with the Faculty of Metallurgy and Technology of the University of Montenegro and the Institute for Medicines and Medical Devices of Montenegro (CinMED) in Podgorica. The first results of cooperation within the study programme of Conservation and Restoration are related to the realization of master's theses, in which the necessary analyses of materials were performed through cooperation with partner institutions. This paper presents the results of this cooperation and the perspectives for future work toward the establishment of a comprehensive heritage research laboratory.

## Historical Context of Conservation-Restoration Education in Montenegro

The tradition of training conservators in Montenegro experienced a particularly significant period with the establishment and operation of the Faculty of Cultural Studies in Cetinje, which offered a state-of-the-art multidisciplinary programme and produced generations of highly

skilled conservators. The Faculty of Cultural Studies was founded in 1981 with the primary aim of educating qualified higher-education professionals capable of addressing the catastrophic consequences of the devastating 1979 earthquake, which destroyed, damaged, and endangered a large portion of Montenegro's cultural heritage.<sup>1</sup>

The Faculty housed the Department of Conservation and Restoration of Cultural Heritage, with two specializations: one in the conservation and restoration of works of art, including easel painting, mural painting, mosaics, and polychrome sculpture; and another in the conservation and restoration of movable cultural property made of metal, stone, ceramics, glass, wood, paper, textiles, and other materials. The Faculty's professors were the most prominent Yugoslav experts in the field of cultural heritage protection, some of whom were also UNESCO experts.<sup>2</sup>

Teaching was conducted in close cooperation with the Institute for the Protection of Cultural Monuments of Montenegro and the museums of Cetinje, which served as a teaching base where the practical component of instruction was carried out through studio-based professional work.<sup>3</sup> Through cooperation with other Yugoslav institutes for the protection of cultural monuments, students participated in summer internships in the form of fieldwork

- 1 Branko BABIĆ: "Kulturološki fakultet od ideje do danas," in: Ratko Đurović (ed.): *Kulturno nasljeđe*, Cetinje: Faculty of Cultural Studies, 1985, 66-81.
- 2 Within the Founding Commission, which was very significant for the establishment and operation of the Faculty of Cultural Studies (it was active from 1981 to 1984, until the constitution of all institutional bodies of the Faculty), in addition to distinguished members from Montenegro, renowned Yugoslav experts were also engaged: Antun Bauer (Zagreb), Mate Suić (Zagreb), Franc Kokalj (Ljubljana), Anika Skovran (Belgrade), and Milorad Medić (Belgrade). See: "Odluka o osnivanju Matične komisije," *Kulturna baština*, Cetinje: Kulturološki fakultet, 1985, 214-215. B. BABIĆ, *ibid.*, 76. At the Faculty of Cultural Studies, excellent Yugoslav experts taught as guest professors: Franc Kokalj (UNESCO expert), Momo Vuković and Ivan Bogovčić from Ljubljana, Anika Skovran (UNESCO expert and ICCROM collaborator), Zvonimir Zeković, Đorđina Stojanović Gabričević, Vera Radosavljević, Petar Vlahović, and Sreten Petković from Belgrade, as well as Ljerka Smailagić from Zagreb (data from CF archival documents). Among Montenegrin staff, distinguished professors of the University Veljko Vlahović taught at the Faculty of Cultural Studies: Pavle Mijović (first dean of CF), Mihailo Jovičević, Slobodan Tomović, Radovan Radonjić (second dean of CF), Čedomir Marković, Smail Karailo, Branko Babić (third dean of CF), Refik Zejnilović, Dragoje Živković, Drago Đurović (fourth dean of CF), Rajko Vujičić, and others (data from CF archival documents).
- 3 Of great importance was the engagement of conservators from the mentioned institutions, who within institutional conservation studios realized practical teaching for third and fourth-year students: Marija Marković, Miodrag Koljević, Zdravko Gagović, Nevenka Koljević, and Radoslav Milošević Atos (data from CF archival documents).

on various endangered cultural and historical monuments throughout the former Yugoslavia.<sup>4</sup>

The Faculty was attended by students from across the former Yugoslavia. A total of 212 students graduated, the majority of whom found employment in cultural institutions in Montenegro, a significant number in the republics of the former Yugoslavia, and around ten across Europe, particularly in Italy and Germany.

The Faculty of Cultural Studies was closed in 1988 following its transformation into the Faculty of Fine Arts. Today, it can be concluded that the existence of the Faculty of Cultural Studies, with its Department dedicated to the education of highly qualified professionals in conservation and restoration, was exceptionally advanced—not only within the regional context, but also within the European framework of the time.

### The Needs of Contemporary Heritage Protection in Montenegro and the Establishment of the Conservation and Restoration Study Programme

Processes of modernization, the rapid expansion of construction, and the development of tourism – particularly after Montenegro gained independence in 2006 – have had a positive impact on the country's economic development; however, at the same time, they have become a threat to the preservation of cultural heritage. In the long term, these challenges are especially pronounced in the city of Kotor and the wider area of the Bay of Kotor, a region under UNESCO protection.<sup>5</sup>

In order to align with internationally accepted principles and standards in this field, Montenegro adopted a new Law on the Protection of Cultural Heritage (*Zakon o zaštiti kulturne baštine*) in 2010,<sup>6</sup> along with a comprehensive set

of regulations harmonized with the European legislative framework and international conventions of general binding importance. Key national institutions responsible for the protection of cultural heritage were reorganized, and additional funding mechanisms were introduced in this area. Furthermore, the Government of Montenegro and the Ministry of Culture periodically adopt strategic documents of relevance to cultural heritage protection<sup>7</sup>

One of the main reasons for these comprehensive reforms also lay in the extremely alarming condition of cultural heritage, which became evident in 2006 through the analytical document of the Ministry of Culture entitled *The State of Cultural Heritage in Montenegro (Stanje kulturne baštine Crne Gore)*.<sup>8</sup> This document highlighted, among other issues, an unfavourable human resources structure – namely, the lack of highly qualified professionals – and the absence of a study programme for the education of the professional profiles required in the field of cultural heritage protection. These findings were further confirmed in the strategic document *Management Plan of the Historic Core of Cetinje (Menadžment plan istorijskog jezgra Cetinja)* from 2009.<sup>9</sup>

In 2011, the Faculty of Fine Arts launched an initiative to establish a study programme in Conservation and Restoration, pointing to the deficit of professional conservators and the potential risk that, due to the retirement of senior conservators, a complete lack of qualified personnel and a collapse of the heritage protection system could soon occur.<sup>10</sup>

4 B. Babić cites data for 1984 on field practices at sites in Kotor and Ulcinj, at the Patriarchate of Peć in Peć, and at sacred buildings in Kraljevo and Užice. Branko Babić, *ibid.*, 76. The co-author of this paper, N. Đurović, along with a group of colleagues, participated as a student in field work on the iconostasis of the Ravanica monastery, the iconostasis of the Church of the Holy Trinity in Kraljevo, and the iconostasis of the Cathedral Church in Užice, as well as on the wall paintings of the Stična monastery near Ljubljana (N. Đurović personal archive).

5 Branka PLAMENAC: "UNESCO traži trenutni moratorijum na gradnju u Kotoru," *Monitor*, August 8, 2025. <https://www.monitor.co.me/unesco-trazi-trenutni-moratorijum-na-gradnju-u-kotoru-obustava-gradnje-i-za-tivat-herceg-novi-i-dio-cetinja/> (accessed October 28, 2025).

6 \*\*\* *Zakon o zaštiti kulturnih dobara*, 2010. <https://www.gov.me/dokumenta/62633794-e279-4b80-a8a4-4043c3fa2a0e> (accessed October 28, 2025).

7 *Nacionalni program razvoja kulture 2023–2027*. <https://wapi.gov.me/download-preview/d663190d-8da7-463c-acdd-cfe010332cb1?version=1.0> and *Nacionalna strategija održivog razvoja do 2030*. <https://www.gov.me/dokumenta/67dc487e-097d-41d2-8fd5-7827a19a-1f5a> (accessed October 28, 2025).

8 \*\*\* *Stanje kulturne baštine Crne Gore* [State of Cultural Heritage of Montenegro], Ministarstvo kulture Crne Gore [Ministry of Culture of Montenegro], 2006, [https://www.academia.edu/34930071/Stanje\\_kulturne\\_ba%C5%A1tine\\_Crne\\_Gore\\_2006\\_full\\_text\\_](https://www.academia.edu/34930071/Stanje_kulturne_ba%C5%A1tine_Crne_Gore_2006_full_text_) (accessed October 28, 2025).

9 \*\*\* *Menadžment plan istorijskog jezgra Cetinja* [Management Plan of the Historic Core of Cetinje], Ministarstvo kulture, sporta i medija Crne Gore [Ministry of Culture, Sports and Media of Montenegro] 2009, <https://unescomontenegro.com/images/stories/documents/MPCT%20mne.pdf> (accessed October 28, 2025).

10 The co-author of this paper, N. Đurović, is the initiator and coordinator of the process of establishing and the author of the *Elaboration on the Need for Establishing an Interdisciplinary Study Programme of Conservation and Restoration at the Faculty of Fine Arts in Cetinje*. She is also the head of SPCR since its establishment. A key role in supporting the establishment of SPCR was played by the rectors of the University of Montenegro Predrag Miranović and Danilo Nikolić, as well as the ministers of culture of Montenegro Branislav Mićunović, Janko Ljumović, and Aleksandar Bogdanović, and their

Following this, the Ministry of Culture prepared a comprehensive analysis of the human resources structure within the system of protection and preservation of cultural heritage, which confirmed the identified risks.<sup>11</sup> Subsequently, the Government of Montenegro adopted a decision to establish a new study programme.<sup>12</sup>

After several decades of the absence of formal education in conservation in Montenegro, the Study Programme in Conservation and Restoration was accredited in 2021 at the Faculty of Fine Arts in Cetinje, through cooperation between the University of Montenegro and the Ministry of Culture of Montenegro. Within this programme, a segment of conservation science is also being developed.<sup>13</sup>

The study programme is organised according to contemporary interdisciplinary approaches to conservation education. In addition to the Faculty of Fine Arts, which is the programme holder, three other faculties of the University of Montenegro are involved in its implementation: the Faculty of Natural Sciences and Mathematics, the Faculty of Metallurgy and Technology, and the Faculty of Architecture. The programme is academic in nature and is structured at two levels – undergraduate studies (3 years) and master's studies (2 years). The programme is academic in nature and includes two modules: the Module in Conservation and Restoration of Paintings and Polychrome Sculpture, and the Module in Conservation and Restoration of Sculpture and Objects of Applied Arts (metal, stone, ceramics, glass, paper, parchment, textiles, and wood). Professional practice is carried out in major national cultural institutions through cooperation with the Centre for Conservation and Archaeology of Montenegro, the National Museum of Montenegro, and the State Archives of Montenegro, while cooperation is also being developed with several local museum institutions.

The system of cultural heritage protection requires highly educated professionals trained in accordance with contemporary professional principles. In the field of conservation and restoration of cultural heritage, a wide range of activities related to research, protection, preservation,

conservation, restoration, and revitalisation of movable and immovable cultural assets (works of fine and applied arts, wall paintings and mosaics, iconostases, stone sculpture, archaeological remains and artefacts, museum and gallery collections, library and archival holdings, etc.) is carried out by conservator-restorers who are educated through the specialised study programme in conservation and restoration. The broader social mission of establishing this study programme on an interdisciplinary basis is to bring together relevant professors and experts from the conservation profession, as well as from the natural, technical, technological, humanities, and artistic sciences, in order to jointly initiate a new field of scientific research and innovation in the area of cultural heritage protection.

The intention is to establish a Laboratory for the comprehensive analyses of heritage materials, which currently does not exist in Montenegro. In this way, through the application of contemporary analytical methods, alongside historical and art-historical expertise and comprehensive conservation research and measures, the working processes in the field of cultural heritage protection would be fully modernised and enhanced.

This will result in the creation of an entirely new field of scientific research and innovation in Montenegro. Young researchers from the four partner faculties (as well as other interested participants) will be able, through undergraduate, master's, and doctoral research, to choose topics within the as-yet unexplored field of cultural heritage. At the same time, the aim is to encourage and revitalise the network of researchers employed in national and local cultural institutions, who have so far worked individually, and to connect them into a unified scientific research network for the protection of cultural heritage.

### **Development of Cooperation Between the Faculty of Fine Arts, the Faculty of Metallurgy and Technology, and the Institute for Medicines in Podgorica**

The multidisciplinary nature of the Study Programme in Conservation and Restoration at the Faculty of Fine Arts in Cetinje is also reflected in the phase of conservation analyses and the examination of techniques and materials of artworks that are the subject of students' work. Students are trained to plan the necessary analyses, carry them out, and interpret the obtained results. The principles of research and documentation in conservation are studied within the curriculum in the second year of undergraduate studies (basic research methods) and in the first year of graduate

collaborators, directors of the Directorate for Cultural Heritage Lidija Ljesar, Aleksandar Dajković, and Dobrila Vlahović (N. Đ).

"Informacija o kadrovskim kapacitetima organa i ustanova koje se bave zaštitom i očuvanjem kulturne baštine", Ministry of Culture of Montenegro, 2018. <https://www.gov.me/dokumenta/3db8f61c-a7e5-4560-be22-41a7951fa889> (Accessed October 28, 2025.).

<sup>12</sup> Conclusions of the Government of Montenegro, September 27, 2018.

<sup>13</sup> The process of preparing accreditation forms for basic and master studies was carried out at the Faculty of Fine Arts (Commission: Prof. MA Nataša Đurović, MA Dobrila Vlahović, MA Aleksandar Dajković and Biljana Brajović, in cooperation with the dean's collegium of FFA).

studies (advanced research methods). Theoretical work and, for the time being, partially practical work on analyses, conducted within the Conservation Atelier at the Faculty of Fine Arts, is complemented by cooperation with other faculties and institutes in Montenegro. The conservation and restoration ateliers are continuously being equipped with the necessary instruments and tools, while cooperation has been established for more advanced analyses with other faculties of the University of Montenegro – primarily the Faculty of Metallurgy and Technology in Podgorica – as well as with institutes that possess scientific equipment, such as the Institute for Medicines and Medical Devices of Montenegro (CinMED) in Podgorica.

Special acknowledgement for initiating this cooperation is owed to Professor Željko Jaćimović, PhD, from the Faculty of Metallurgy and Technology of the University of Montenegro, who is also a lecturer in the Study Programme in Conservation and Restoration, as well as to Mr. David Kočović, Head of the Laboratory at the Institute for Medicines and Medical Devices of Montenegro (CinMED). The Institute is equipped with instruments for XRF (X-ray fluorescence spectroscopy) and XRD (X-ray diffraction) analyses of samples, which enabled the examination of inorganic components of samples submitted from the Faculty of Fine Arts. By combining analyses of cross-sections of samples prepared at the Faculty of Fine Arts with spectroscopic analyses providing data on the chemical elements and molecules present, conducted at the CinMED Institute, investigations were carried out within the framework of four master's theses defended in 2024 and 2025. The first results of the cooperation related to the analysis of material from a 15th-century stone capital discovered at the archaeological site of Žabljak Crnojevića,<sup>14</sup> and to the analysis of fragments of wall paintings from the site of St. Vračevi, Slatina, Municipality of Danilovgrad,<sup>15</sup> as part of final theses for the Study Programme in Conservation and Restoration in 2024. The analysis of the stone sample was carried out using the X-ray diffraction (XRD) method

and showed that the material is pure calcium carbonate. In addition to characterising the material from which the capital was made, this result also confirmed the homogeneity of the material, with no traces of degradation. Regarding the wall painting fragments from the site of St. Vračevi, Municipality of Danilovgrad, surface observation under magnification using a portable digital microscope was combined with material analysis of the samples. X-ray diffraction analysis of the plaster sample serving as the support of the wall painting showed that the sample is a mixture of calcium carbonate and silicon dioxide. This result confirms the traditional composition of the plaster and, in addition to providing data on its composition, represents the first concrete outcome of the cooperation aimed at introducing scientific analyses as a mandatory component of conservation investigations through master's theses at the Faculty of Fine Arts in Cetinje.

Both final theses were presented in the form of posters and presentations at the 1<sup>st</sup> International Scientific Conference on Cultural Heritage Protection, entitled Conservation and Restoration – From Tradition to Contemporaneity (*Konzervacija i restauracija – od tradicije do suvremenosti*), held at the Maritime Museum in Kotor on 7–8 November 2024.<sup>16</sup> In the following year, analyses were conducted on fragments of wall paintings from two churches in Kotor: from the exterior of the western façade of the Church of St. Anne and from the arcosolium of the Church of St. Paul. In these studies, the results of cross-section analyses were combined with XRF and XRD analyses of the samples.<sup>17,18</sup> The aim was to determine the composition of the plaster as the support of the wall paintings, to characterise the pigments, and to assess whether the paintings were executed in the fresco or secco technique. The results showed that the plaster was of traditional composition, consisting

14 Nikoleta ROLOVIĆ: *Proces konzervacije i restauracije kamenog kapitela*, final thesis for undergraduate studies, SP Conservation and Restoration, Faculty of Fine Arts Cetinje (mentor Prof. Siniša Bizjak), Cetinje 2024, in: Nataša Đurović (ed.): *Godišnja izložba Fakulteta likovnih umjetnosti Cetinje 2023/24*, Cetinje: UCG Fakultet likovnih umjetnosti, 2024, 114–115.

15 Milica BIGOVIĆ: *Konzervacija i restauracija fragmenata zidnog slikarstva s lokaliteta sv. Vračevi, Slatina, općina Danilovgrad*, završni rad na osnovnim studijama, SP Konzervacija i restauracija, Fakultet likovnih umjetnosti Cetinje (mentor prof. Milica Kotur), Cetinje 2024, in: Nataša Đurović (ed.): *Godišnja izložba Fakulteta likovnih umjetnosti Cetinje 2024/25*, Cetinje: UCG Fakultet likovnih umjetnosti, 2024, 106–107.

16 Danijela NIKČEVIĆ (ed.): *Konzervacija i restauracija – Od tradicije do suvremenosti*, Kotor: JU Pomorski muzej Crne Gore, 2024.

17 Boris POPOVIĆ: *Primjena savremenih metoda u istraživanju i zaštiti zidne slike s predstavom svetog Hristifora na zapadnoj fasadi crkve svete Ane u Kotoru*, final thesis for undergraduate studies, SP Conservation and Restoration, Faculty of Fine Arts Cetinje (mentor prof. Milica Kotur, co-mentor prof. Daniela Korolija Crkvenjakov), Cetinje 2025, in: Nataša Đurović (ed.): *Godišnja izložba Fakulteta likovnih umjetnosti Cetinje 2024/25*, Cetinje: Fakultet likovnih umjetnosti, 2025, 122–123.

18 Dragutin RADIMIR: *Interdisciplinarni pristup u istraživanju zidnog slikarstva u luneti arkosolijuma crkve Svetog Pavla u Kotoru u cilju uspostavljanja konzervatorsko-restauratorske metodologije*, final thesis for undergraduate studies, SP Conservation and Restoration, Faculty of Fine Arts Cetinje (mentor prof. Milica Kotur, co-mentor prof. Daniela Korolija Crkvenjakov), Cetinje 2025, in: Nataša Đurović (ed.): *Godišnja izložba Fakulteta likovnih umjetnosti Cetinje 2024/25*, Cetinje: Fakultet likovnih umjetnosti, 2025, 118–119.

of lime and sand, while the pigments were identified as mineral pigments, consistent with the period to which the wall paintings are dated. The assessment of the wall-painting technique was based on cross-sections of the samples, which revealed that the wall painting sample from the exterior façade of the Church of St. Anne was executed in the fresco technique, whereas the sample from the arcosolium of the Church of St. Paul indicated the use of the secco technique.

The discussion of the analytical results obtained from the samples was particularly important in such complex cases, as it was necessary to consider the representativeness of the sample in relation to the entirety of the surface examined.

These examples have demonstrated the necessity of interdisciplinary communication between conservators and chemists in order to interpret experimental results as accurately as possible and to place them within the context of the period, historical data, historical techniques, and the conservation history of the objects.



Figure 1. Church of St. Anne, Kotor. Photo by Boris Popović



Figure 2. Fresco of St. Christopher, western façade of the Church of St. Anne. Photo by Boris Popović

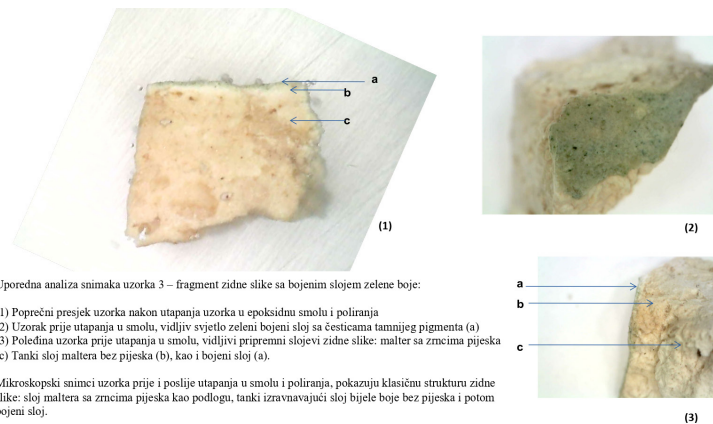
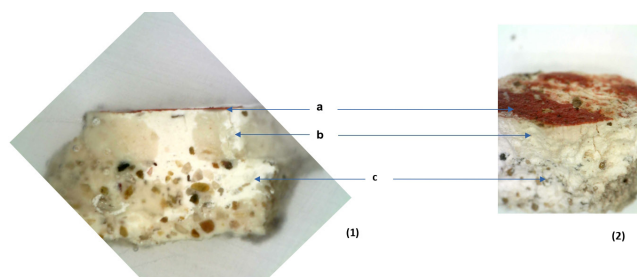


Figure 3. Microscopic analysis of a wall painting sample from the façade of the Church of St. Anne. Photo by Lidija Martinović



Figure 4. Arcosolium of the Church of St. Paul, Kotor. Photo by Dragutin Radimir



Usporedna analiza snimaka uzorka zidne slike sa bojnim slojem crvene boje:

- (1) Poprečni presjek nakon utapanja uzorka u epoksidnu smolu i poliranja  
 (2) Uzorak prije utapanja u smolu.

Na oba snimka vidljiva je stratigrafija zidne slike: malter sa zrcima pijeska (c) i tanki sloj maltera bez pijeska (b), kao i bojni sloj (a).

**Figure 5.** Microscopic analysis of a sample from the arcosolium of the Church of St. Paul. Photo by Lidija Martinović

The case studies addressed in the aforementioned master's theses, among other things, point to the need for the rich cultural heritage of Montenegro to be investigated using contemporary analytical methods, with the aim of establishing databases that would contribute to further research in the cultural and historical field, while also determining information on materials and techniques that are essential for the methodology of conservation and restoration interventions.

## Conclusion

Within the interdisciplinary study programme Conservation and Restoration, methods of examination and documentation in conservation are studied, and every undergraduate and master's thesis includes a section dedicated to research on the objects of conservation and restoration practice. In order to achieve this goal, in addition to the necessary scientific equipment, a crucial component is knowledge and experience in interpreting the analytical results of heritage materials within the context of heritage history, the history of artistic techniques, the history of conservation, art history, archaeology, and other humanities disciplines.

The initiative launched by the Faculty of Fine Arts in Cetinje for the needs of the Conservation and Restoration study programme represents the core around which new collaborations are developing, with the vision of establishing a Laboratory for Heritage Material Research in Montenegro and creating a new field of scientific research and innovation. This will enable researchers to work on topics within a previously unexplored area of cultural heritage.

Through the education of conservators who understand the importance of scientific analysis, the foundations of high-quality conservation and restoration practice are laid. The inclusion of natural and technical sciences and an interdisciplinary approach are essential to ensure that strategies for the protection of tangible cultural heritage are based on accurate and scientifically grounded diagnoses, and that the collected data are integrated into a comprehensive heritage protection strategy, thereby strengthening awareness of its importance.

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#### Sažetak

#### Uspostava metodologije konzervatorskih znanstvenih istraživanja u Crnoj Gori – inicijativa Fakulteta likovnih umjetnosti Cetinje i Univerziteta Crne Gore

Zaštita baštine kao iznimno važan resurs svake države jedan je od prioriteta u kojem se isprepliću obrazovanje, znanost, povijest, ekonomija i drugi društveni segmenti. Konzervatorska istraživanja, kao obvezan dio konzervatorske prakse, zahtijevaju specifična znanja, znanstvenu opremu i sustav suradnje između konzervatora i znanstvenika, kako iz prirodnih, tako i iz humanističkih znanosti. Put prema postizanju tog cilja vodi preko sustava obrazovanja, u povezanosti sa sustavom zaštite baštine. Tradicija obrazovanja konzervatora u Crnoj Gori imala je svoj svijetli period osnivanjem i radom Kulturološkog fakulteta na Cetinju, koji je imao najsuvremeniji multidisciplinarni program i iznjedrio generacije vrsnih konzervatora, ali je ukinut 1988. godine. Nakon višedesetljetnog nedostatka formalnog konzervatorskog obrazovanja u Crnoj Gori, u suradnji Univerziteta Crne Gore i Ministarstva kulture Crne Gore, 2021. godine akreditiran je studijski program Konzervacije i restauracije na Fakultetu likovnih umjetnosti na Cetinju, a u sklopu tog programa razvija se i segment konzervatorske znanosti. Kako bi se ovaj segment studijskog programa realizirao, uspostavljena je suradnja s fakultetima i institutima koji imaju potrebnu znanstvenu opremu, ponajprije s Metalurško-tehnoškim fakultetom Univerziteta Crne Gore i Institutom za lijekove i medicinska sredstva Crne Gore (CinMED) u Podgorici. Prvi rezultati povezani su s diplomskim radovima iz konzervacije pokazujući spremnost svih sudionika na suradnju. Predmet analiza bili su anorganski materijali sa značajnih lokaliteta: kameni kapitel iz 15. stoljeća pronađen na arheološkom lokalitetu Žabljak Crnojevića; fragmenti zidnog slikarstva s lokaliteta sv. Vračevi u Slatini (općina Danilovgrad); te zidno slikarstvo dviju kotorskih crkava, freske na vanjskoj strani zapadnog pročelja crkve sv. Ane i freske u arkosoliju crkve sv. Pavla, gdje su kombinirani rezultati analiza poprečnih presjeka s XRF i XRD analizama uzoraka. Na ovim primjerima pokazala se nužnost interdisciplinarne komunikacije konzervatora i kemičara kako bi se što pravilnije interpretirali eksperimentalni rezultati i stavili u kontekst vremena, povijesnih podataka, starih tehnika i konzervatorske povijesti predmeta. Primjeri obrađeni u navedenim diplomskim radovima pokazuju potrebu da se bogata kulturna baština Crne Gore istražuje suvremenim analitičkim metodama kako bi se formirale baze podataka. Namjera je uspostaviti laboratorij za sveobuhvatne analize baštinskog materijala, koji trenutačno ne postoji u Crnoj Gori. To će rezultirati stvaranjem potpuno novog područja znanstveno-istraživačkog rada i inovacija te omogućiti istraživačima rad u dosad neistraženom području kulturne baštine. Istodobno, nastojalo bi se potaknuti i oživjeti mrežu istraživača zaposlenih u nacionalnim i lokalnim institucijama kulture, koji su do sada djelovali pojedinačno, te ih povezati u jedinstvenu znanstveno-istraživačku mrežu za zaštitu kulturne baštine.

**KLJUČNE RIJEČI:** *konzervatorska znanstvena istraživanja, Fakultet likovnih umjetnosti Cetinje, obrazovanje konzervatora, Laboratorij za istraživanje predmeta baštine*