Zavod za varstvo kulturne dediščine Slovenije Institute for the Protection of Cultural Heritage of Slovenia

Scuola universitaria professionale della Svizzera italiana Dipartimento ambiente costruzioni e design

SUPSI



University of Ljubljana Academy of Fine Arts and Design

umjetnosti

Sveučilište u Zagrebu Akademija likovnih

Institute for the protection of Cultural Heritage of Slovenia (IPCHS), Restoration centre Ljubljana and Regional office of Nova Gorica

University of Applied Sciences and Arts of Southern Switzerland (SUPSI), Master program in Conservation Restoration

University of Ljubljana, Academy of Fine Arts and Design (ALUO), Department for Restoration

University of Zagreb, Academy of Fine Arts (ALU), Department for Conservation and Restoration of Works of Art

ORGANISE

Summer school

Gradisce pri Divači (Slovenia), Church of St. Helen **Conservation-restoration of wall paintings**

2-27 August 2021

1 week on-line (2-6. 8.) + 2 weeks on site (9-20. 8.) + 1 week on-line (23-27. 8.)



1 General information

Introduction

The aim of the Summer school is to design and implement a conservation plan for the preservation of the internal wall paintings, after the conservation intervention realized on the exterior of the building.

The church of St Helen

At its core, the church of St Helen (Sveta Helena) in Gradišče is an example of early gothic architecture, probably built in the late 14th century. In the middle of the 16th century, a significantly larger presbytery was added, and thus, accordingly, the nave's walls had been risen. As the inscription "1653" on the front portal documents and witnesses, a last major renewal and upgrade occurred in the middle of the 17th century; it was in fact during that time that the current rectangular windows in the presbytery and nave, as well as the bell-cote, were added.

The nave is richly decorated with wall paintings. The iconographic composition is conventional for a smaller medieval church. On the triumphal arch one could once admire the *Annunciation*, which it is not preserved; on the nave's south wall there are scenes from the *Passion of Christ*, while on the nave's north wall the *Adoration of the Magi* is depicted, supplemented by scenes of people's daily lives of the period as well as some animal anecdotal motives. Although the author of the wall paintings is unknown, similarities in style and iconography of other wall paintings found in the nearby church in Hrastovlje, dated to 1490, allow us to make an undoubtable connection with the painter Johannes from Kastav (Janez iz Kastva). Most probably the church in Gradišče was painted by one of Janez's assistants or associates with whom he might have already worked in Hrastovlje. A feature of significant interest of the church in Gradišče is the graffiti found on the frescoes, which can be placed into the first half of the 16th century.

Decay phenomena

The wall paintings, at first visual inspection, show major signs of decay phenomena like:

- Pulverization of the pictorial surface.
- Abrasion of the pictorial surface.

- Some areas have detached parts between painted plaster and support, particularly in the lower north wall area, near the entrance.

The big losses of the cycle, particularly in the upper part of the north wall, in the parts near the windows and in the south and west wall, have already been filled and plastered in previous restoration interventions.

There are no documents regarding applications of protective or consolidating agents in the past restorations.

Renovations

The renovation of the roof's stone tiles was concluded in 2005. Since 2017 the static load of the church has been constantly and systemically monitored. In August 2018, the roof was reconditioned through the installation of a steel reinforcing mesh and bars, while in 2019,

windows with a UV protection foil were installed. The local community of Gradišče and the municipality of Divača strive to and aspire for a complete restoration of the church's exterior in autumn of 2021.

Partners and roles

The project will be developed through collaboration between the:

- Institute for the Protection of Cultural Heritage of Slovenia (IPCHS / ZVKDS),
 - responsible persons: Ajda Mladenović, IPCHS Restoration centre and Marta Bensa, IPCHS Regional Office Nova Gorica
 - role: co-organization, logistics, financial management, management of involvement of domestic professionals, provision of scaffolding, electricity and materials for workshop.
- University of Ljubljana, Academy of Fine Arts and Design (UL ALUO), Department for Restoration
 - Responsible person: Blaž Šeme, conservator-restorer and asst. professor
 - Role: selection of students from UL ALUO and invite a student from ALU Zagreb; will provide experts/professors from UL for demonstrations/lectures; may provide (to a limited extent) some equipment and materials for documentation, testing, interventions/treatments; can help in establishing contact between SUPSI (and ALU Zg) and ALUO regarding Erasmus+ support for lecturers and students.
- University of Applied Sciences and Arts of Southern Switzerland (SUPSI), Master program in Conservation Restoration
 - Responsible persons: Giacinta Jean, head of conservation-restoration study program and Alberto Felici, conservator restorer and lecturer.
 - SUPSI will provide the presence of Alberto Felici on site for two weeks / year and will select students from Switzerland to take part in the Summer school. One additional week of Alberto Felici will be paid by IPCHS.
- University of the Arts, Bern (HKB), Master of Arts in Conservation-Restoration
 - Responsible person: Jonas Roters, Co-Leader of the major-program conservation-restoration of architecture and furnishings
 - selection of students from HKB and lecture
- University of Zagreb, Academy of Fine Arts (ALU), Department for Conservation and Restoration of Works of Art
 - Responsible persons: Neva Pološki, conservator-restorer and assoc. professor, Suzana Damiani, conservator-restorer, professor
 - o number of students: 1 (male)
 - Role: may provide some equipment and materials (2 smaller daylights, UV lamp, *Dinolite* digital microscope, some treatment materials ...), providing funds regarding student's and professor's costs for participating on the summer school (Erasmus+, Academic Mobility, Student Choir of the University of Zagreb), presentation of the Department for Conservation and Restoration of Works of Art (Suzana Damiani), Presentation of the Case Study (Neva Pološki).

Participants

The Summer school could be attended by a maximum number of 10 students, coming from the University of Ljubljana (3), from the University of Zagreb (1), from the Conservation restoration degree program of SUPSI and associated school of the Swiss Conservation-Restoration Campus (5) and from selected young professionals / or employee of the ZVKDS (1) to offer participants a stimulating international environment in which develop theoretical knowledge, methodological discussion and practical skills.

Practical information

Travel and lodging

From Switzerland students will travel by SUPSI minivan, they will be independent for transports.

Lodging for the two weeks' time (8-21 August) will be provided by the IPCHS.

A conference room in Matavun, where the Skocjan caves park has infrastructure and is only 5 km away from the church, will be provided for common working activities and meetings. The room is 70 m^2 and can host 60 persons in cinema mode / 40 persons in class mode.

Materials and instruments

SUPSI will provide: UV Lights, Digital microscope, Laptops.

IPCHS will provide materials, scaffoldings, lights and tools to work on site (as portable instruments and sampling tools, data loggers, and laser if possible).

ALUO Ljubljana may provide some equipment and /or materials to work on site.

ALU Zagreb may provide some equipment and /or materials to work on site.

Timeline

2021 February	Definition and approval of the project
2021 April	Selection of the students
2021 May	Defined planning of phase 1 (day by day)

The conservation-restoration intervention will be developed in four phases from august 2021 to August 2023/24.

Activities and general program

The Summer school will offer on-site activities and on-line lessons:

- lectures on the methodological and interdisciplinary approach for the conservation of wall paintings and on intervention techniques (around 20% of the schedule); lectures in phases 2 and 3 will include lecture on mortars and grouts, etc.;
- direct experience and work on site (80% of the schedule);
- visits on nearby sites to see other wall paintings of the area that are of comparable age and character to the wall paintings of St. Helen church and, if possible, other conservation-restoration projects;
- presentation of the work carried out during summer school to the local population in order to share the significance of the site and the steps to be taken to guarantee its preservation.

Preparatory work

- Collecting all the existing information on the history of the church, its transformations and past restoration interventions (IPCHS, Regional office Nova Gorica).

- Shoot professional photographs before the intervention (IPCHS, Regional office Nova Gorica).
- Assessing environmental conditions and material analyses (Katja Kavkler from IPCHS put 4 data loggers to measure relative humidity and temperature on December 24th 2020).

Phase 1 (2-27 August 2021 / 1 week on-line + 2 weeks on site + 1 week on-line) <u>Aim</u>

Understand the conservation condition of the wall paintings, develop a conservation concept and define intervention needs and urgencies to be addressed.

Preparatory week on-line 2-6 August 2021

- General presentation of the partners, participants and organization:
 - o presentation of IPCHS (Ajda Mladenović, IPCHS),
 - o presentation of SUPSI (Giacinta Jean, SUPSI),
 - o presentation of HKB (Jonas Roters HKB),
 - o presentation of ALUO (Blaž Šeme, ALUO),
 - o presentation of ALU Zagreb (Suzana Damiani, ALU),
- Presentation and introduction about the site and history of the church / Slovenian wall paintings / Wall painting monuments of the Karst region (Marta Bensa, Minka Osojnik, IPCHS)
- Techniques and materials of Slovene wall paintings (Martina Kikelj, IPCHS).
- Prepare a base line graphic documentation on the base of the professional rectified photos to be used for future mapping (using AutoCad).
- Lectures on the methodological and interdisciplinary approach for the conservation of wall paintings (Alberto Felici, SUPSI)
- Data collection and data management (Alberto Felici, Giulia Russo, Stefania Luppichini, SUPSI)
- Visual glossary (Giulia Russo, SUPSI)
- Scientific investigation for the study of wall paintings (Francesca Piqué, Patrizia Moretti, SUPSI)
- Environmental monitoring and conditions of the church (Katja Kavkler, IPCHS)

Work on site 9-20 August 2021

Activities:

- Presentations held by the professors (Neva Pološki, ALU) Case Study: Medieval Wall Paintings in the Church of St. Mary of Pond in Gologorica, etc.; Researches and treatments.
- Observation, description and mapping of the technical executions and materials, former interventions and decay phenomena of the wall paintings (drawings and visual glossary);
- Assessing the need for scientific analyses and carry out analyses to get information on the following aspects:

Environmental information: IR thermo camera and Data logger information

Composition of the painting layers, mortars and pictorial layers (binders, aggregates, pigments):

- Non-invasive: multispectral images¹, XRF, Portable FT-IR, portable Raman;
- Invasive: samples for observations with optical and electronic microscope, cross sections and thin sections, FTIR and Raman microscopes, dissolving tests.
- Alteration products (mainly salts) and composition of previous treatments:
- Non-invasive: portable FT-IR, multispectral images;
- Invasive sampling will be carried out between 9th and 20th August, only some analyses will be done during the summer school. Interpretation of the results will be continued by students in 2022. The number of samples and measurement points will be decided in agreement between the course leaders. Evaluation of conservation needs and treatment tests on specific areas;
- Execution of emergency interventions if needed;
- Writing the draft of a final assessment report for the conservation-restoration of the wall paintings. The final report will be concluded the week after the end of the work on site.
- Presentation of the work carried out during the Summer school to the Culture Heritage Ministry's officers.

Follow-up week 23-27 August 2021 (on-line and from home)

- Discussion of analytical results and further steps to be taken.
- Writing up the final report "Condition assessment of the wall paintings" and complete documentation of the activities carried out.

Phase 2 (July / August 2022 3 weeks)

<u>Aim</u>

Plan and implement the conservation-restoration interventions in order to write a final intervention proposal for the long term conservation of the wall paintings.

Steps:

- Control of the conditions of the wall paintings.
- Plan the needed treatment (cleaning and consolidation).
- Writing an intermediate report containing a full description (with graphic and photographic documentation) of the work done on site and an intervention plan for the future conservation-restoration measures.

Phase 3 / Phase 4 (July - August 2023 / July - August 2024)

<u>Aim</u>

Implement the conservation-restoration interventions defined in the project. Steps:

- Control of the conditions of the wall paintings.
- Execution of the needed treatment (fillings and retouching).

¹ Diffuse visible radiation, visible raking radiation, Ultraviolet radiation that induces visible fluorescence, Reflected ultraviolet radiation, Ultraviolet false colour, Reflected infrared radiation, Infrared false colour

- Writing a final report containing a full description (with graphic and photographic documentation) of the work done on site and indication for further monitoring and maintenance procedures.

2 Daily plan

2-6 August		
-	Microsoft Teams	
MSTeams are created by ALUO Ljubljana, there will be rooms for the different working		
groups - the insti	ructions for use will be sent	
DAY 1	9.00–10.30	
Monday, 2. 8.	 Introduction of the partners and participants 	
8.00-17.00	- Presentation of the summer school (short PPT of each institution):	
	Ajda Mladenovič (IPCHS); Giacinta Jean (SUPSI); Blaž Šeme	
	(ALUO); Jonas Roters (HKB); Suzana Damiani (ALU)	
	10.45–12.30	
	- Presentation and introduction about the site and history of the	
	church (Marta Bensa IPCHS, Minka Osojnik IPCHS)	
	- Available documentation (Marta Bensa IPCHS, Minka Osojnik	
	IPCHS)	
	- Group forming	
	12.30–13.30 Lunch Break	
	13.30–14.00	
	- Lecture: Examples of mapping: Materials and techniques,	
	previous interventions, decay phenomena (Alberto Felici, Giulia	
	Russo, Stefania Luppichini SUPSI)	
	15.30–16.15	
	- Group work: Prepare a base line graphic documentation on the	
	base of the professional rectify photos to be used for future	
	mapping (AutoCad)	
	16.30–17.00	
	- Feedback – groups exchange information	
	r cousacit groupe exchange information	
DAY 2	9.00–10.00	
Tuesday, 3. 8.	- Lecture: The methodological and interdisciplinary approach for the	
8.00-17.00	conservation of wall paintings (Alberto Felici, SUPSI)	
	10.15–12.30	
	- Group work: Prepare a base line graphic documentation	
	12.30–13.30 Lunch Break	
	13.30–14.30	
	- Lecture: Data collection and data management (Giulia Russo,	
	Stefania Luppichini, SUPSI)	
	14.30–16.15	
	- Group work: Prepare a base line graphic documentation	
	16.30–17.00	
	 Feedback – groups exchange information 	
	recubación groups exchange information	
DAY 3	9.00–10.00	
Wednesday,	- Lecture: Techniques and materials of Slovene wall paintings	
4. 8.	(Martina L. Kikelj, IPCHS)	

	10.15–12.30
	- Group work: Prepare a base line graphic documentation
	12.30–13.30 Lunch Break
	13.30–14.30
	- Lecture: Wall painting monuments of the Karst region (Minka
	Osojnik, Andrej Jazbec, IPCHS)
	14.30–16.15
	- Group work: Prepare a base line graphic documentation
	16.30–17.00
	 Feedback – groups exchange information
DAY 4	9.00–10.00
Thursday, 5. 8.	- Lecture: Regular condition monitoring and risk assessment as a
-	basis for preventive and planned conservation: the case of
	medieval wall paintings in Slovenia (Blaž Šeme, ALUO)
	· · · · · · · ·
	10.15–12.30
	- Group work: Prepare a base line graphic documentation
	12.30–13.30 Lunch Break
	13.30–14.30
	- Lecture: Scientific investigation for the study of wall paintings
	(Francesca Piquè, Patrizia Moretti, SUPSI)
	14.30–16.15
	- Group work: Prepare a base line graphic documentation
	16.30–17.00
	 Feedback – groups exchange information
DAY 5	9.00–10.00
Friday, 6. 8.	- Lecture: Environmental monitoring and conditions of the Gradisce
	church (Katja Kavkler, IPCHS)
	10.15–12.30
	- Group work: Prepare a base line graphic documentation
	12.30–13.30 Lunch Break
	13.30–14.30
	- Lecture and discussion: Preserving the authentic - basic
	principle or empty phrase? (Jonas Roters, HKB)
	14.30–16.00
	- Group work: Prepare a base line graphic documentation
	16.15–17.00
	- Feedback – groups exchange information (finished mapping and
	fist ideas about visual glossary)
Sunday, 8. 8.	Travel and arrival
January, 51 01	See Practical Information
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9-15 August	
WEEK 2 on-site	
DAY 1 Monday, 9. 8. 8.00-17.00 12.30 -13.30 Lunch Break	 On site: LECTURE 1: Short presentation of all partners – introduction of participants Practical work on site: Individual observation of the church exterior and of the wall painting inside. Feedback on individual observations, Group forming Observation, description and mapping of the technical executions and materials and decay phenomena of the wall paintings Visual glossary: definition and organization Feedback – groups exchange information
DAY 2 Tuesday, 10. 8. 8.00-17.00 12.30 -13.30 Lunch Break	 Conference room (Promotion and congress centre »Pr Nanetovh«, Matavun 8, 6215 Divača): LECTURE 2: Non-invasive and invasive analyses of paint layers, mortars and degradation products of originals and former interventions in the Church of St. Helen (Katja Kavkler, IPCHS) LECTURE 3: Presentation of restoration works at church of Virgin Mary in Dolenja vas (Minka Osojnik, Andrej Jazbec, IPCHS) Practical work on site: Discussion on the results of the diagnostic investigations UV light observation Observation, description and mapping of the technical executions and materials and decay phenomena of the wall paintings Feedback – groups exchange information on the on the daily activities carried out
DAY 3 Wednesday, 11.8. 8.00-17.00 12.30 -13.30 Lunch Break	 Practical work on site: Thermography (Katja Kavkler IPCHS) – depends on the weather (flexible activity) Observation, description and mapping of the technical executions and materials and decay phenomena of the wall paintings Feedback – groups exchange information on the on the daily activities carried out Conference room: LECTURE 4: Case Study: Medieval Wall Paintings in the Church of St. Mary of Pond in Gologorica; Researches and treatments (Neva Pološki, ALU) LECTURE 5: Microorganisms: mechanisms of biodeterioration, but not only! (Cristina Corti, SUPSI) + practical exercises
DAY 4 Thursday, 12. 8. 8.00-17.00 12.30 -13.30 Lunch Break	 Practical work on site: Observation, description and mapping of the technical executions and materials and decay phenomena of the wall paintings Discussion: the conservation needs, concept of the intervention

	and criteria for the choice of materials and techniques
	<i>Afternoon excursion (2 hrs): church of Virgin Mary in Dolenja vas</i> (Andrej Jazbec, IPCHS)
DAY 5 Friday, 13. 8. 8.00-17.00 12.30 -13.30 Lunch Break	 Practical work on site: First trials: cleaning, fixing, first intervention treatments Assessment and documenting the trials carried out Feedback – groups exchange information on the on the weekly activities carried out
WEEKEND 14. 8. and 15. 8.	All day excursions: SATURDAY Holy Trinity Church, Hrastovlje (Marta Bensa, Anita Kavčič Klančar, IPCHS) The church is painted with Gothic frescoes by Johannes de Castua from 1490.The most famous is the Dance of Death or "Danse Macabre"; approx. 2 hrs + time for lunch Lipica Stud Farm Lipica is the oldest European stud farm continuously breeding one of the oldest cultural horse breeds. As such it has a remarkable significance as a cultural, historical and natural heritage for Slovenia and Europe; approx. 2 hrs SUNDAY Piran (Minka Osojnik, IPCHS) Visit of the medieval town, its town walls, church of Saint George, the bell tower, boat trip+ time for lunch
16-21 August WEEK 3 on-site	
DAY 1 Monday, 16. 8. 8.00-17.00 12.30 -13.30 Lunch Break	 Practical work on site: Assessment of the trials carried out (Katja Kavkler, IPCHS) First trials: cleaning, fixing, first intervention treatments Planning diagnostic insights
DAY 2 Tuesday, 17. 8. 8.00-17.00 12.30 -13.30 Lunch Break	 Practical work on site: Non-invasive: multispectral images, XRF, Portable FT-IR, portable Raman; Invasive: samples for observations with optical and electronic microscope, cross sections and thin sections, FTIR and Raman microscopes, dissolving tests First trials: cleaning, fixing, first intervention treatments (Katja Kavkler, IPCHS) First trials: cleaning, fixing, first intervention treatments Afternoon excursion (3 hrs): Visit to the Škocjan caves – the UNESCO world heritage site (optional)

DAY 3	Practical work on site:
Wednesday,	 First trials: cleaning, fixing, first intervention treatments
18. 8.	• First thats, cleaning, fixing, first intervention treatments
8.00-17.00	
12.30 -13.30	
Lunch Break	
DAY 4	Dreaties werk en site.
Thursday, 19. 8.	Practical work on site:
8.00-17.00	First trials: cleaning, fixing, first intervention treatments
12.30 -13.30	 Feedback on the non-invasive diagnostic insights
Lunch Break	 Feedback on the finalization of the documentation collected
	Afternoon excursion (2 hrs): church of Holy Lady of Assumption, Vremski Britof (Andrej Jazbec, Minka Osojnik, IPCHS)
DAY 5	Presentation of the results by the students to the local community,
Friday, 20. 8.	representatives of the Ministry of Culture of Slovenia and interested
	professional and laic public
	Conference room:
	10.00-10.15
	Welcome speeches (representative of the Ministry of Culture of Slovenia,
	representative of IPCHS, mayor of Municipality of Divača)
	10.15-11.00
	Presentation of the Summer school and its results
	Church of St. Helen:
	11.30-13.00
	Presentation on site – discussion, questions
	Refreshment
Saturday, 21. 8.	Return home
23-27 August	
WEEK 4 on-line	
DAY 1	Follow-up week
Monday, 23. 8.	- Discussion of analytical results and further steps to be taken.
8.00-17.00	- Writing up the final report "Condition assessment of the wall
	paintings and proposal for a conservation treatment" and complete
	documentation of the activities carried out.
DAY 2	Follow-up
Tuesday, 24. 8.	Feedback – groups exchange information
8.00-17.00	r ocabacit groups exchange information
DAY 3	Follow-up
Wednesday,	Feedback – groups exchange information
25. 8. 8.00-17.00	
DAY 4	Follow-up
Thursday, 26. 8.	Feedback – groups exchange information
8.00-17.00	
DAY 5	Follow-up
Friday, 27. 8.	Feedback – groups exchange information
8.00-17.00	

3 Practical information

3.1 ACCOMODATION

Work on site 9-20 August 2021

Sunday 8th Avgust In the late afternoon SUPSI group arrives in Slovenia, Dolnje Ležeče 19 (Divača)

Location 1	9. 8. – 20. 8. (Practical sessions)
Venue:	Zenja apartment (Dolnje Ležeče 19), 6215 Divača, Slovenia
Meeting point:	Church of St. Helen, Gradišče pri Divači
Apartments	https://www.zenja.si/apartmaji/
	From the church the location is 3 minutes by car and around 15 minutes by walk (1,2 km).
Description:	The apartment in Dolnje Ležeče for 5 students is composed with entrance and bathroom in a ground floor and a big sleeping room and bathroom in 2nd floor. There are towels and bed sheets. Nearby common room and kitchen have the cutlery and all the necessary equipment for cooking and eating, also a Italian coffee makers. The Supsi students can have breakfast and dinner in the kitchen of Dolnje Ležeče, the students can have a lunch break in the same kitchen.



1. Location of the church and the Zenja apartment



2. Zenja apartment (Dolnje Ležeče 19), 6215 Divača, Slovenia

Sunday 8th Avgust In the late afternoon students from ALUO and ALU arrive in a house in Dolnje Vreme 1, Divača

Location 2	9. 8. – 20. 8. (Practical sessions)
Venue:	House (Dolnje Vreme 1), 6215 Divača, Slovenia
Meeting point:	Church of St. Helen, Gradišče pri Divači
Small house	From the church the location is 8 minutes by car (6 km)
Description:	The house is situated in a small village, where 2 female students can sleep
	in 1 room, 2 male students in another small room. There are 2 bedrooms, 1
	bathroom and a kitchen with a big fridge. The kitchen has the cutlery and
	the necessary equipment for cooking and eating. Every student must bring
	towels, bed sheets and light blankets.



3. Location of the church and the Zenja apartment



4. House (Dolnje Vreme 1), 6215 Divača, Slovenia

3.2 THINGS YOU NEED TO KNOW

- Participants need to follow relevant Covid Restrictions for travel measures that will be imposed at the time of the on-site workshop.
- Students in Apartment Zenja must pay the tourist tax 2 €/night/person by themselves.
- Common cash deposit: **100** € per person this money will be shared for coffee, tea and snacks on site, extra fuel costs, entrance tickets etc.
- There is an option to order lunch during lunch break on site from a nearby restaurant.
- Students must provide for the food during 2 weeks by themselves.
- Bring some of your own face masks to prevent Covid-19 transmission. Some masks and hand sanitizer will also be available on site.
- Bring protection spray for mosquitoes and ticks.
- Bring swimsuit and bath towel, sunscreen for the trip to the coast.
- Notify us if anyone is vegetarian or vegan and if they have allergies.
- The nearest shops (supermarkets, pharmacies etc.) are in Divača.

Additional questions concerning practical information should be addressed to:

<u>marta.bensa@zvkds.si</u>

or will be discussed during week 1 (on-line week).