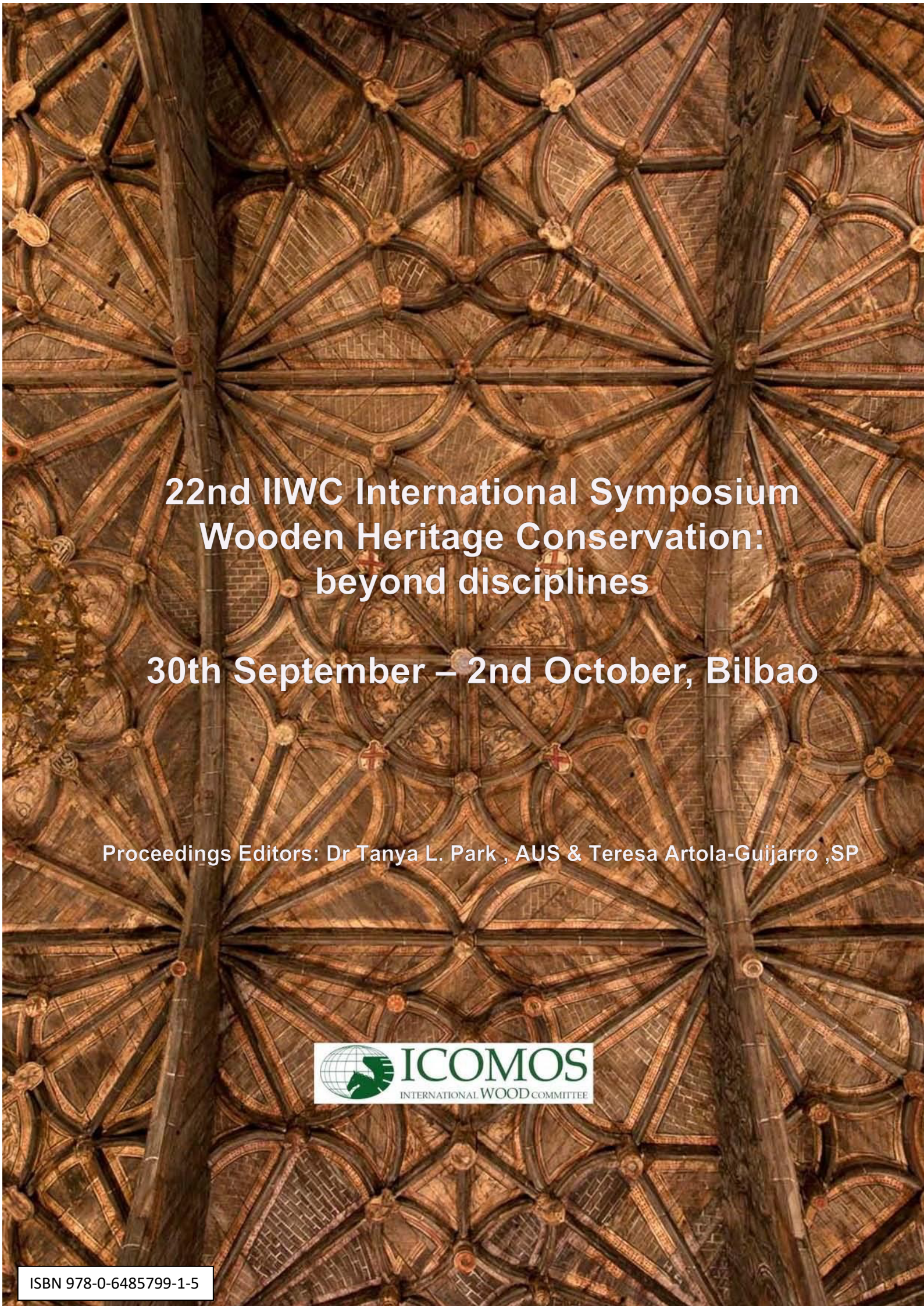

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Conservation of Wooden Tserkvas in Ukraine: A New Initiative

Yuri Yanchyshyn[1] and Myron Stachiw[2]

1 Period Furniture Conservation and Kensington Preservation, New York City, USA
yuri@periodfurnitureconservation.com
2 Vernacular Architecture Forum, Connecticut Humanities Council, Foundation to Preserve Ukraine's Sacral Arts

Abstract

In the summer of 2019, a two-week educational workshop was conducted in Lviv, Ukraine, under the auspices of the Lviv Polytechnic National University, as a fundamental component of an expanding architectural conservation program. The goal of the workshop was to introduce 15 participants to the contemporary theory, methods, and practice of conservation assessment as it relates to wooden architecture. Its focus was on Ukraine's vernacular wooden churches, or "tserkvas" in Ukrainian – with more than 3,000 of which have survived to this day. In 2013, 16 outstanding examples of these Ukrainian log churches located in the Carpathian Mountains were designated by UNESCO to the World Heritage List, such as St. George Tserkva in Drohobych, built in the second half of the 17th Century.

Figure 1. Tserkva of St. George circa 16c. – Drohobych a UNESCO World Heritage Site

Introduction

These integrated works of architectural art distinguish themselves by their highly skilled joinery, innovative structural solutions used in their construction, and a wall of icons which separates the altar from the congregation, called an iconostasis. Many of these churches have painted interiors on some or all of the walls and distinctive, regional stylistic forms and many are in dire need of conservation.

Their uniqueness generated international scholarly interest beginning with the late 19th century by members of the Lviv Polytechnic National University faculty. Although conservation recommendations also began to be written in the 19th century, in truth these tserkvas were cared for mostly by local craftsmen, who were well versed not only who were well versed not only in the craft and traditions of church building, but also in the continued maintenance and repair of these buildings. The 20th century, unfortunately, was a period of significant disruption, with two major wars, border changes, and wholesale population migrations within the territory of present-day Ukraine. During the Soviet period, most tserkvas were closed or repurposed for such uses as granaries and warehouses.

In the years after World War II, various Soviet Ukraine governmental departments addressed the preservation of architectural monuments; however, it was not until 1969 that a separate department was formed to address the specific needs of the conservation and restoration of wooden architecture. Since then, more than 250 wooden churches have undergone some degree of restoration and conservation.

Despite these scholarly interests and conservation efforts, Ukraine's political and cultural instability and economic hardships since independence in 1991 limited the preservation of these tserkvas. Laboratories closed, preservation departments lost staff members, and worldwide advances in the field were not fully integrated into daily practice. Today, however, as a result of the 2004 Orange Revolution and the 2013-14 Revolution of Dignity the citizens of Ukraine are now deeply engaged in the process of re-defining their cultural identity, and re-assessing their history.

Recognizing this state of affairs, Professor Mykola Bevz, Head of the Department of Architecture and Conservation at the Lviv Polytechnic National University, and the guiding force in spearheading the tserkvas' UNESCO designation, saw the need to add wooden architecture and artifacts conservation to the university curriculum and to create a fully-equipped conservation laboratory.

Since he felt that Ukraine lacked the expertise for this undertaking, he began several conversations with western colleagues, among them Myron Stachiw, architectural historian, former head of the Fulbright Program in Ukraine, and Yuri Yanchyshyn, furniture conservator. These conversations led to the Fulbright foundation awarding a grant to Yuri Yanchyshyn who visited Ukraine in 2018 and taught at the Lviv Polytechnic. Students were introduced to the theory and practice of the conservation of wooden architecture and artifacts through a comprehensive series of lectures.

The 2019 summer workshop focused on introducing participants to contemporary conservation assessments on two structures: an 18th-century iconostasis and a late 17th-century log church.

The workshop also included a series of lectures by scholars and specialists detailing the history of wooden sacral architecture in Ukraine and its restoration; current international-accepted conservation practices and approaches; procedures of building archaeology; and field trips to several wooden churches in the region, including some undergoing structural conservation, such as replacing the bottom rows of degraded timbers by raising the entire church, or replacing of the shakes, called gonty, on a church belltower.

The investigation and assessment of the 18th century iconostasis of the Church of Nativity of the Blessed Virgin in the Village of Krups'ke, now located in the church/museum of St. Klymenta in Lviv, introduced participants to the inconostasis' unique history and methods of construction; iconography; and carved, painted, and gilded elements.

Figure 2, Church of St. Klymenta 1895 - iconostasis circa 18 c.

Careful investigation revealed that this iconostasis was composed of elements from several different iconostases, contrary to perceived historical interpretation. This practice was not unusual, whereby iconostases and their parts were re-sited to other churches for various reasons. Among these was the replacement of older churches with new buildings and new iconostases. The replacement iconostases were then often reconfigured and combined with elements from other iconostases to fit the new architectural space. The iconostasis in St. Klymenta is one such example. A comparison of photographs of the installation in the church in Krups'ke with that of the re-installation in the church of St. Klymenta in Lviv. A comparison illustrates that the latter reproduced the configuration of the Krups'ke installation reasonably accurately. However, it became clear that the original Krups'ke installation was a combination and reconfiguration of iconostasis elements from more than one source, as illustrated by measured drawings completed by workshop participants.

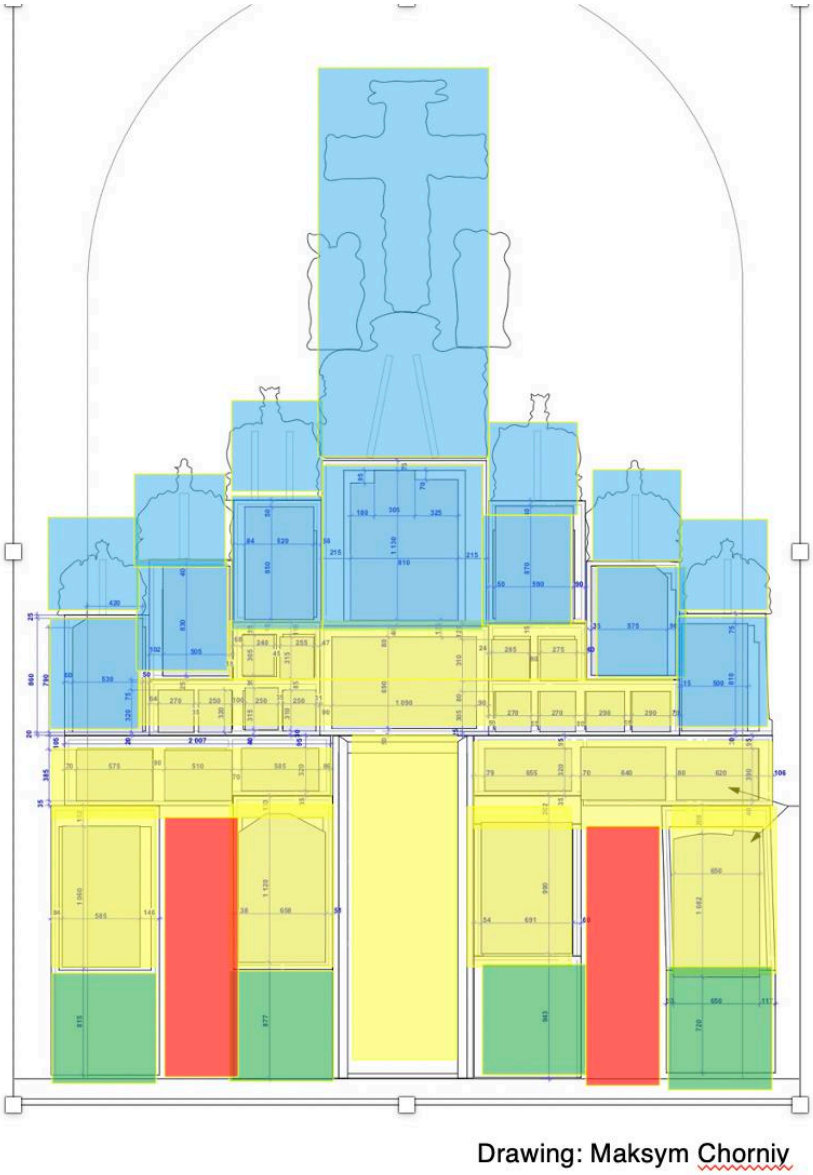

Figure 3, Church of St. Klymenta - this iconstasis is a combination & reconfiguration of iconostasis elements from various sources.

The method of attaching the necessary framework built to stabilize the free-standing iconostasis in its new location, unfortunately, introduced undesirable elements to its further preservation. One example of this is the improper attachment of the icons and original framework to the new supporting structure. In doing so, the properties of expansion and contraction of wooden elements were not taken fully into account. The installers had used inflexible joining fasteners, potentially leading to future splits in the icons and original wood framework. Our recommendations were to replace these rigid joining plates with ones that would have slots to allow for wood movement.

This exercise of observation and careful documentation prepared workshop participants for the more significant challenge of the Church of Theophany, erected in the late 17th century in the village of Kuhayiv.

Figure 4, Tserkva of the Theophany circa 17c. – village of Kuhaiv

The tripartite, horizontal log structure with three, open log towers was constructed of hewn and rounded oak timbers with variously notched corner joints. The roof surfaces were originally covered with long, riven, feather-edged and grooved shakes called gonty, mentioned previously.

The church in Kuhayiv is no longer in active use by the congregation, as a new masonry church was constructed nearby nearly a decade ago. The old church has suffered extensive environmental damage over the past century, hastened by its disuse in the past decade.

Workshop participants encountered a building covered with tarps applied five years ago to prevent further water infiltration. This procedure proved to be unsuccessful.

The issue of pronounced water penetration has always been a prominent concern with these complex constructions of multiple roof towers. By the early 20th century, the two end towers had already begun to lean inward due to structural damage resulting from water penetration. The construction of connecting roof crickets between the towers appeared to offer a solution, as shown in this early 20th c. photograph. However, restoration of the church in the 1970s and 1980s to its original configuration included removal of these roof crickets. Unfortunately, this removal was not accompanied by adequate preventive measures against further water penetration in the valleys between adjacent towers, and resulted in additional deterioration and inward leaning of the towers.

This neglected preventive measure also contributed significantly to the deterioration of the walls below the valleys. An additional aspect of water damage was revealed by the bowing and distortion of the church's walls as a result of the settlement of the building's underpinnings and sills. Other damage included extensive insect infestation, which is still active and results in further damage to the timbers.

Measured drawings executed by workshop participants when compared to earlier renderings and images documented the continued settlement and sagging of the structure. Further observations revealed that the structure had been raised multiple times to replace sills and lower timbers using traditional methods over the past three centuries, as documented by large peg holes in the wall logs used to attach vertical timbers on the interior and exterior of the structure. The structure was then lifted using wedges and levers from below utilizing notches in the vertical timbers.

Comparison of the existing structure with historic photographs also indicated that the earlier 19th-century sacristy had been removed and replaced in the mid-20th century.

As part of the investigation of the exterior of the structure, participants were introduced to microscopic wood identification, and such identification was performed on two representative timbers of the log walls; both were determined to be white oak.

Interior investigation focused on the iconostasis and the painted interior walls. This investigation involved a systematic visual examination, multiple excavations, ultraviolet light analysis, and documentation employing photographs, sketches, and measured drawings.

During the late 20th century restoration, the interior walls were covered by canvas and painted, as indicated by an inscription on the canvas made at that time. Selective removal of this canvas wall covering and excavations revealed earlier polychrome painting and stenciling over a white-wash layer. A scanning electron microscope analysis of this whitewash layer revealed an initial oil-based zinc white, barium sulphate and kaolin layer, followed by an oil-based calcite layer.

The iconostasis of this church provided another example of the re-siting and marriage of elements of at least two iconostases, illustrated by the missing end columns and mitered joints, and the misaligned rows of icons and doorways through the iconostasis into the apse.

Excavation on elements of the iconostasis revealed original silvering and polychromy beneath multiple paint layers, or in the case of the deacon's doors, of original polychromy hidden beneath later paint layers. Preliminary UV analysis revealed restoration overcoat layers on selective icons.

These preliminary findings call for more advanced future analyses. The 2019 workshop was a pilot program – a first attempt at organizing a workshop such as this in Ukraine. Planned future workshops will address these limitations and assist in planning a more comprehensive and analytical approach to the process of conservation assessment.

photos – M. Chornij

Figure 5, Church of the Theophany circa 17c. – village of Kuhaiv *iconostasis: a marriage of various elements.*