



Sveučilište u Zagrebu / University of Zagreb
Tekstilno-tehnološki fakultet
 Faculty of Textile Technology



Textile Science Research Center (TSRC)

POPULARIZATION OF SCIENCE



Science for cultural heritage

September 20th 2018.

9:00-16:00

Place: Technical Museum Nikola Tesla, small hall,
Savska street 18, Zagreb

Textile Science Research Centre - TSRC / Technical Museum Nikola Tesla
 University of Zagreb Faculty of Textile Technology



Place: Technical Museum Nikola Tesla, Small hall, Savska street 18, Zagreb

Date: September 20th 2018, 9:00-16:30

Organizing institution: University of Zagreb Faculty of Textile Technology,
Textile Science Research Centre (TSRC)

Textile Science Research Centre (TSRC) established in 2008 at the University of Zagreb Faculty of Textile Technology celebrates 10 anniversary and popularize a topic

SCIENCE FOR CULTURAL HERITAGE

SCIENCE FOR CULTURAL HERITAGE

9,00-9,30	Registration
	Welcome
9,30-9,45	Lectures
9,45-10,00	CROATIAN TEXTILES THROUGHOUT HISTORY I. SOLJAČIĆ, R. ČUNKO
10,00-10,15	SCIENCE, GLAGOLITIC SCRIPT AND TEXTILES D. ŽUBRINIĆ
10,15-10,30	COMPLEX STRUCTURES OF HISTORIC FABRICS S. KOVAČEVIĆ, I. SCHWARZ, S. BRNADA
10,30-10,45	CROATIAN „TKANICE“ IN HARMONY OF WEAVE AND COLOUR Ž. KNEZIĆ, Ž. PENAVA, A. KNEZIĆ, J. LULIĆ ŠTORIĆ
10,45-11,00	INTERDISCIPLINARY APPROACH TO ANALYSIS AND ATTRIBUTIONS OF HISTORIC CLOTH ARTEFACTS N. K. SIMONČIĆ
11,00-11,30	Break
Section - PhD STUDENTS & YOUNG RESEARCHERS	
11,30-11,45	METAL THREADS ON THE LITURGICAL ATTIRES OF THE ZAGREB CATHEDRAL K. ŠIMIĆ
11,45-12,00	"KORET" IN THE TEXTILE HERITAGE OF THE DUBROVNIK REPUBLIC S. ŠKARO
12,00 -12,15	TRADITIONAL SLAVONIAN TECHNIQUES OF GOLD EMBROIDERY AND GLASS SLIDES IN CONTEMPORARY FASHION DESIGN D. BEGOVIĆ, J. KONČIĆ
12,15-12,30	TEXTILE PARTICLE GENERATION – TEST METHOD FOR NONWOVENS MODIFIED FOR USE ON WOVEN MATERIALS R. MALINAR, S. FLINČEC GRGAC
12,30-12,45	CONCLUSIONS
PROMOTION OF THE TSRC MONOGRAPHY	
	INTRODUCTION B. DIVJAK, Minister of Science and Education
	TEXTILE SCIENCE RESEARCH CENTRE - 10 Anniversary S. BISCHOF, T. PUŠIĆ
	MODERNISATION OF THE TEXTILE SCIENCE RESEARCH CENTRE INFRASTRUCTURE (MI-TSRC) S. BISCHOF
13,30-14,30	Lunch
14,30 -16,00	WORKSHOP & EXHIBITION
	Workshop COLORINA - PREHISTORIC TEXTILE PRINTING D. KOS, A. SUTLOVIĆ, T. KARAVIDOVIĆ, V. LJUBIĆ Students innovations, Companies- exhibitions

More about lectures.....

CROATIAN TEXTILES THROUGHOUT HISTORY

Ivo SOLJAČIĆ, Ružica ČUNKO

Together with food and shelter textiles belong to one of the essential and basic needs of men. Therefore, textiles were produced throughout history and even before recorded history. Hand-made textiles in the territory of modern Croatia were produced far before the recorded history of the area. When Croats came to their modern homeland, the influences of the culture they found here and their Slavic heritage, which they brought from their old homeland, were mixed to produce a new and unique culture. This was reflected in the manufacture of textiles as well.

*Main textile raw materials used were plant fibres, flax and hemp in the plains of the north and broom fibre (*spartium junceum*) at the seaside. Wool was the main fibre in the mountainous regions, where sheep breeding was prevalent. Weaving was done on vertical looms in prehistory and ancient times, while Croats introduced looms with horizontal warp with their coming into the area. Simple fabrics in plain weave were most often produced (linen and wool cloth), but also decorated fabrics manufactured in numerous other weaves and techniques and even lace. Hand-made textiles prevailed for centuries and most of textiles in Croatia were produced in this way almost to the mid-twentieth century.*

Textile manufacture started in Dubrovnik around 1400s and lasted until 1600s.. High-quality wool cloths, protected by original quality mark were produced in Dubrovnik during the period and were sold throughout the Balkans and even in Venice. Textile manufacture was developed in the other parts of Croatia in the 18th century and lasted until the 19th century, when industrial manufacture of textiles replaced it. The period after the First World War was characterised by the rapid development of textile industry so that by the end of the 20th century textile industry represented 19.4% of the overall export of the country and was the biggest exporter in the sector of industry and mining in Croatia.

SCIENCE, GLAGOLITIC SCRIPT AND TEXTILES

Darko ŽUBRINIĆ

Croatian glagolitic culture is connected to various sciences: History of Scripts, Linguistics, History of Literature, History of Culture, Church History, Biblical sciences, History of Law, Political sciences, Demography, Onomastics, etc. Glagolitic script is also related to arts such as Painting (including Painting Therapy), Calligraphy, Typography (including Computer Typesetting) and Design. In Croatia, we can witness an interaction between the Glagolitic Script and textiles appearing in fashion, carpets and advertisements.

COMPLEX STRUCTURES OF HISTORIC FABRICS

Stana KOVAČEVIĆ, Ivana SCHWARZ, Snježana BRNADA

As one of the oldest crafts in history of humankind, woven fabrics are the basis of the cultural and ethnographic heritage of every nation. Depending on the area of origin, woven fabrics were produced and decorated with different types of raw materials, weaves, densities, yarn fineness, colours and weaving techniques. Every historical period and region adds something specific and unique, making each fabric distinctive and recognizable. Despite the lack of highly sophisticated equipment to produce complex structures, historical woven fabrics were characterized by exceptional structural complexity. Some of the fabrics made with complex weaving methods are: Velvet and Velour fabrics with soft relief surfaces; Brocade and Lamé fabrics with exceptional beauty and structure with gold and/or silver weft threads; Gros de tours silk fabrics with extremely high densities; Lamps fabrics made by interlacing several fabrics; Taffeta silk fabric of exceptional density decorated with ornamental wefts, and many others.

CROATIAN „TKANICE“ IN HARMONY OF WEAVE AND COLOUR

Željko KNEZIĆ, Željko PENAVALA, Ana KNEZIĆ, Jasenka LULIĆ ŠTORIĆ

The braid, as part of the garment, has ambiguous function. It serves to interconnect parts of garments, or to fasten them to the body. It is often noticeable decorative detail showing status, social or national affiliation. Depending on the environment, the material possibilities and the tradition, dyed flax, wool, silk, or cotton yarn (thread) was used in the making. They are most often hand-woven with special devices. With harmony of embroidery, color, density and fineness of yarn different shapes are achieved. Inspired by the original patterns of Croatian braids in this paper, several samples were shown by a computer program. The design of woven patterns is greatly accelerated by computers and appropriate programs that can show the look on the monitor, and fast realization requires hand (or automatic) weaving machines special equipped with electronic devices, with a pre-colored weft and base.

INTERDISCIPLINARY APPROACH TO ANALYSIS AND ATTRIBUTIONS OF HISTORIC CLOTH ARTEFACTS

Nina Katarina SIMONČIĆ

The starting point of the presentation is clothing artefact (official uniform) from the Republic of Dubrovnik in the 17th century. This study case will point out the importance of an interdisciplinary approach in the process of clothing and textiles analysis and attribution. For this purpose, it is a particularly important contribution of the young scientific field of research - material culture of fashion history, which is primarily developed within the field of history and art history. Since the 1980s, this field of research was complemented by other scientific approaches that helped in a precise analysis of the historical textile and clothing artifacts. At the center of the presentation is a historical artefact, with the intention to point out and clarify the importance of the inductive method. The analysis will start with the correlation of the stylistic characteristics and technological features. The second phase will be explaining how the term transforms their meaning over time. At the end, the precious indications of social and cultural reasons for applying the artefact will be elaborated.

METAL THREADS ON THE LITURGICAL ATTIRES OF THE ZAGREB CATHEDRAL

Kristina ŠIMIĆ

Treasury of the Zagreb cathedral preserves valuable fund of liturgical vestments through all the long centuries of its existence. The oldest item „Ladislav's cloak" is chasuble from distant 11th century. Metal threads are integral part of most liturgical vestments giving grandeur to the clothes which were worn during the Mass celebration. There are different types of metal threads but the basic two forms are independent metal threads and yarns created from one or more metal threads with a textile yarn. Independent threads are in the form of metal strips so called lamela of different widths or wires of various diameters. Combined textile metallic yarn is made of metal thread or two spiral wrapped around the textile yarn that is thus found in the center as the core of the yarn known as srma. Textile yarn is most commonly made of silk or cotton, and can be made of wool or linen. Metal thread was made of gold, silver or copper alloy, while recently it is most commonly made of aluminum.

"KORET" IN THE TEXTILE HERITAGE OF THE DUBROVNIK REPUBLIC

Sandra ŠKARO

It is of great importance to recognize and study textile heritage of Dubrovnik Republic, a valuable archive legacy preserved in its continuity from the 13th Century until 1808, a unique example in the world. "Koret" as textile heritage of Dubrovnik Republic is a women's clothing item mentioned in archive documents of Dubrovnik from early 14th century and is held as such until the fall of the Republic in 1808. Alternative names for "koret" were "busto", "kora", "prsnik". "Koret" is actually a form of corset - the type of upper garment that in some way forms a torso, rarely comfortable, has changed its shape through the centuries. The oldest document in which the "koret" is mentioned is "Diversa Notariae", 2. 04. 1503 - "Inventory of Petruša, daughter of Mr. Nikola Beneša". "Koret" development within a certain period of Dubrovnik Republic, types of textile materials from which it could have been made and the techniques of making will be presented in a lecture.

TRADITIONAL SLAVONIAN TECHNIQUES OF GOLD EMBROIDERY AND GLASS SLIDES IN CONTEMPORARY FASHION DESIGN

Damir BEGOVIĆ, Jasminka KONČIĆ

The collection EX-vonia was created in the course of work on his graduate thesis titled Migrations and Fashion in the Context of Sustaining National Identity at University of Zagreb Faculty of Textile Technology, under mentorship of Assoc. prof. art Jasminka Končić. The collection was awarded first prize at a prestigious competition for young fashion designers iD Dunedin New Zealand and pronounced the best graduate collection at DIPMOD_4 fashion show in Zagreb. In the light of current massive emigration and economic decline of his native region, the designer addresses the loss of cultural identity through migration. His collection EX-vonia unambiguously reflects the current situation in the country and was inspired by haute couture which symbolizes the affluent West and traditional Slavonian folk costumes as homage to designer's origins.

The collection is based on unique traditional goldwork and silverwork embroidery techniques, which were applied using contemporary methods in the construction of hybrid garments such as pelerines, scarves, belts and corsets, whereas anatomically shaped garments are made of fabrics with enlarged goldwork digital print. The central piece of the collection is a red coat embellished with rhinestones and diversely relieved leather patterns. The collection EX-vonia aims to exhibit the opulence of clothing materials and garment silhouettes reinterpreted through the codes of contemporary fashion language.

TEXTILE PARTICLE GENERATION – TEST METHOD FOR NONWOVENS MODIFIED FOR USE ON WOVEN MATERIALS

Rajna MALINAR, Sandra FLINČEC GRGAC

Considering that textile dust can cause many problems in specific environments, there is a need for low particle release textiles. Usually this means using disposable textiles, but in effort to reduce amount of waste that such products generate, aim of our research was to investigate possibilities of using multiple use fabrics as an alternative. For purposes of this study, standard method for testing particle release from nonwovens had to be adapted in order to acquire reliable data on testing woven fabrics. Statistical analysis showed considerably more precise results after prolongation of testing time from 5 minutes (standardised) to 30 min (modified). Examination of particle release from cotton fabric after multiple washing and drying cycles showed increase in smaller particles count (<1 µm) but also decrease of larger particles (>5 µm) after 10 cycles.

TEXTILE SCIENCE RESEARCH CENTER - 10 YEARS

Sandra BISCHOF, Tanja PUŠIĆ

2018 Open Door of the Textile Science Research Centre, along with the program of popularization of science, will be presented by the Monograph, which summarizes the activities of the TSRC in the first ten years, as well as its development within the University of Zagreb Faculty of Textile Technology.

Modernisation of TSRC Infrastructure (MI-TSRC)

SANDRA BISCHOF

TSRC excellence and recognition is proved by a project Modernisation of TSRC Infrastructure (MI-TSRC) KK.01.1.1.02.0024, funded by European Social Fund (ESF). The project will provide establishment the Laboratory for advanced materials and advanced technologies, which is essential for further development of materials and technologies, the increase in number of innovations, and the transfer of knowledge into the academic and economic sectors. This will result in increased competitiveness of the companies we cooperate with or will cooperate with in the period to come.

WORKSHOPS & EXHIBITIONS

WORKSHOP COLORINA - PREHISTORIC TEXTILE PRINTING

Dora KOS, Ana SUTLOVIĆ, Tena KARAVIDOVIĆ, Valerija LJUBIĆ

The influence of colour on our life force, mood and colour hue choices in happy, festive and sad moments is important to people from prehistoric times to the present day. The use of natural dyes is related to the emergence of the first art in the younger palaeolithic, i.e. painting the caves with dyes of mineral origin. The use of natural dyes of plant and animal origin is related to dyeing of textiles. With dyes from insects, snails, berries, bark, leaves and plant roots were dyed textiles made of wool, silk and leather. In addition to the color effects, textiles and leather, as well as body, ceramic objects, breads, etc., were decorated with pintaderas. Workshop "Prehistoric Textile Printing" is the result of cooperation in the field of experimental archeology and textile chemistry. Workshop participants will get acquainted with the history of textile dyeing and using replicas of ceramic and wooden pintaderas for print natural dyes on the fabric.

EXHIBITIONS

Innovations

Faculty of Textile Technology students

Students will present innovative products, measuring systems and devices created under the mentorship of TTF professors at the Master Study of University of Zagreb Textile Technology Faculty.

Instruments & laboratory accessories

Companies

The logo for Mikrolux features a stylized Greek letter mu (μ) in a dark blue color, followed by the word "ikrolux" in a grey, sans-serif font.The logo for Ru-Ve consists of a purple hexagon containing the letters "Ru" stacked above "Ve" in white. To the right of the hexagon, the text "Ru-Ve" is written in a purple, rounded, sans-serif font.The logo for Crescat features the word "Crescat" in a dark red, serif font. Below the text is a stylized, golden-brown brushstroke that tapers to the left.The logo for Anton Paar is set against a red rectangular background. It features a white stylized atom symbol on the left and the text "Anton Paar" in white, bold, sans-serif font on the right.The logo for PRIMA lab features the word "PRIMA" in a bold, blue, sans-serif font, followed by "lab" in a smaller, white, sans-serif font. Below this, the text "a member of the Metrohm group" is written in a small, grey, sans-serif font.