

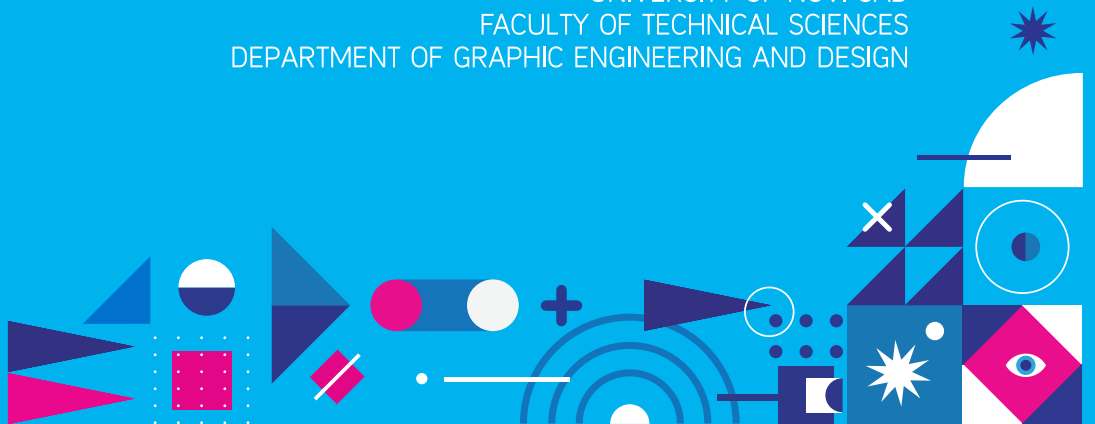
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GRID
2024

PROGRAM

12th INTERNATIONAL SYMPOSIUM ON
GRAPHIC ENGINEERING AND DESIGN

UNIVERSITY OF NOVI SAD
FACULTY OF TECHNICAL SCIENCES
DEPARTMENT OF GRAPHIC ENGINEERING AND DESIGN



Thursday 14 November, 2024

09:00–10:00 **Participants Registration**

CONFERENCE HALL

10:00–11:00 **CEREMONIAL ACADEMY AND SYMPOSIUM OPENING**

CEREMONIAL ACADEMY FOR 25 YEARS OF GROWTH OF GRAPHIC ENGINEERING AND DESIGN

Ceremonial lectures and the presentation of plaques and certificates of appreciation

Greetings by:

**Rector of the University of Novi Sad prof. dr Dejan Madić
Dean of Faculty of Technical Science, prof. dr Boris Dumnić**

Welcome from the organization committee:

Chairman of Organizational Committee prof. dr Magdolna Pál

Symposium opening by:

Provincial Secretary prof. dr Branko Markoski

11:00–11:30 **Coffee break – Canteen (ground floor)**

PLENARY SESSION: CONFERENCE HALL

- 11:30-12:00 UNVEILING INNOVATIONS, CONFRONTING CHALLENGES, AND SHAPING THE FUTURE OF SUSTAINABLE PACKAGING SOLUTIONS IN THE EPOCH OF ENVIRONMENTAL TRANSFORMATION
prof. dr Urška Vrabič-Brodnjak
- 12:00-12:30 CURRENT TRENDS IN PACKAGING
prof. dr Emine Arman Kandirmaz
- 12:30-13:00 TRANSFORMING THE CLASSROOM WITH DESIGN THINKING
prof. dr Charles Weiss
- 13:00-14:00 Lunch break - Canteen (ground floor)

FOYER OF THE CENTRAL UNIVERSITY BUILDING

- 14:00-14:45 Ball Packaging contest winner announcement
Opening the student project exhibition
Poster section

PARALLEL SESSIONS

SESSION 1A: CONFERENCE HALL – Education and digital media

Chairpersons: Tomislav Cigula and Neda Milić Keresteš

- 14:45 **MODERN ENGINEERING EDUCATION IN GRAPHIC TECHNOLOGY AT UNIVERSITIES**
Jiong Liang, Huaming Wang, Xi Wang
- 15:00 **OBJECTIVE VIDEO QUALITY COMPARISON OF USER-GENERATED CONTENT PLATFORMS**
Jaroslav Svoboda
- 15:15 **DIGITIZATION OF TYPOGRAPHIC CULTURAL HERITAGE AND ITS APPLICATION IN INTERACTIVE WEB PRESENTATION**
Luka Ramljak, Sara Čurić, Maja Turčić, Tomislav Hudika, Maja Rudolf
- 15:30 **ANALYSIS OF SELF-REGULATED LEARNING APPLICATIONS BASED ON VISUAL APPEARANCE AND FREQUENCY OF USE**
Marija Toure, Helena Gabrijelčič Tomc, Klementina Možina

SESSION 1B: MULTIFUNCTION ROOM (ground floor) – Printing quality

Chairpersons: Marina Vukoje and Saša Petrović

- 14:45 **EVALUATION OF TEXTILE PRINTS PRINTED WITH INKJET PRINTER**
Ana Mendizza, Raša Urbas
- 15:00 **ENVIRONMENTALLY FRIENDLY WATER-BASED INKJET INK PRODUCTION AND DETERMINING PRINTABILITY**
Arif Ozcan, Serdem Coskun, Emine Arman Kandirmaz
- 15:15 **DIFFERENT METHODS FOR PRODUCING COLOR REPRODUCTIONS ON 3D PRINTED OBJECTS**
Matej Pivar, Jon Brce, Deja Muck
- 15:30 **INVESTIGATION OF BIO-BASED PAPER COATINGS CONTAINING NATURAL PIGMENT AND THEIR HEAT RESISTANCE PROPERTIES**
Arif Ozcan, Dogan Tutak, Lutfi Ozdemir, Omer Bunyamin Zelzele

15:45–16:00 **Coffee break – Canteen (ground floor)**

PARALLEL SESSIONS

SESSION 2A: CONFERENCE HALL – Novel technologies and artificial intelligence

Chairpersons: Jaroslav Svoboda and Ivana Jurič

- 16:00** **ARTIFICIAL INTELLIGENCE OR MAN: COLORIZATION OF BLACK AND WHITE PHOTOGRAPHS**
Lidija Mandić, Jesenka Pibernik, Maja Strgar Kurečić, Ana Agić Cmrk
- 16:15** **TRANSFORMING OFFSET PRINTING WITH DIGITAL TWINS AND AI: INSIGHTS FROM RESEARCH INITIATIVES**
Chris Trochoutsos, Alexandros S. Kalafatelis and Panagiotis Trakada
- 16:30** **AI EFFECTIVENESS OF BACKGROUND REMOVAL FOR DIFFERENT DEPTHS OF FIELD IN PRODUCT IMAGES**
Josip Bota, Rebeka Šćulac
- 16:45** **RESTORATION OF OLD PHOTOGRAPHS USING AI APPLICATIONS**
Ivana Tomić, Nataša Bajšanski, Jelena Vladušić, Ivana Jurič

SESSION 2B: MULTIFUNCTION ROOM (ground floor) – Packaging

Chairpersons: Arif Ozcan and Stefan Đurđević

- 16:00** **INFLUENCE OF ULTRASONIC TREATMENT ON THE MECHANICAL AND SURFACE PROPERTIES OF POTATO STARCH-BASED FILMS WITH VARIOUS GLYCEROL CONTENT**
Zuzanna Żotek-Tryznowska, Arkadiusz Jeznach, Ewa Bednarczyk, Mariusz Tryznowski
- 16:15** **DEVELOPMENT OF FILMS CONTAINING POLYLACTIC ACID/HALLOYSITE NANOTUBES IN BANANA ACTIVE PACKAGING**
Aslı Beyler Çiğil, Hatice Birtane
- 16:30** **IMMOBILIZATION OF ANTHOCYANINS BY BACTERIAL NANOCELLULOSE IN PRODUCTION OF INDICATORS FOR PH-CONTROLLED SMART PACKAGING**
Sanja Mahović Poljaček, Tamara Tomašegović, Sonja Jamnicki Hanzer, Maja Strižić Jakovljević, Ivana Murković Steinberg, Iva Žuvić, Gregor Lavrič, Urška Kavčič, Igor Karlovits
- 16:45** **PACKAGING AS A PART OF ENERGY EFFICIENCY STRATEGIES IN FOOD COLD SUPPLY CHAINS**
Igor Karlovits

17:00–17:15 **Coffee break – Canteen (ground floor)**

PARALLEL SESSIONS

SESSION 3A: CONFERENCE HALL – Graphic materials and process efficiencies

Chairpersons: Josip Bota and Nada Miketić

- 17:15 **DEVELOPMENT AND RECYCLABILITY OF STAINLESS STEEL-BASED NATURAL CONDUCTIVE INK FOR SUSTAINABLE RFID TAG ANTENNAS**
Müjgan Naycı Duman, Ahmet Akgül, Mehmet Oktav, Şükrü Cem Özakhun
- 17:30 **SUSTAINABLE FOOD PACKAGING MATERIALS BASED ON HEMICELLULOSE COATED PAPERS**
Petronela Nechita, Mirela Roman, Marian-Silviu Năstac
- 17:45 **IMPROVEMENT OF TRADITIONAL PAPERS SURFACE AND AS USE FINE ART PAPER**
Öznur Özden, Yeter Beriş
- 18:00 **REINFORCEMENT OF 3D PRINTED PLA WITH CARBON FIBER REINFORCED COMPOSITE AND INVESTIGATION OF MECHANICAL PROPERTIES**
Yağın Boztoprak, Timurhan Eser, Mehmet Barış Daryal, Sabahattin Deniz

SESSION 3B: MULTIFUNCTION ROOM (ground floor) – Ecology

Chairpersons: Igor Karlovits and Miljana Prica

- 17:15 **RECOVERY OF SILVER FROM PRINTED ELECTRONIC WASTE**
Sabahattin Deniz
- 17:30 **REMOVAL OF INK DYE FROM WASTEWATER USING ADSORPTION BY NANOCELLULOSE BASED HYDROGELS**
Hatice Birtane, Aslı Beyler Çiğil
- 17:45 **GREEN RECYCLING OF TONER PRINTED PAPERS BY ENZYME DEINKING**
Elif Ural, Emine Arman Kandirmaz
- 18:00 **ADSORPTION PROCESS OF CYAN PRINTING DYE ONTO ACTIVATED CARBON: OPTIMIZATION AND KINETIC STUDIES**
Vesna Gvoić, Milena Ristić, Miljana Prica
- 20:00 **Gala dinner – Restaurant “Brunch Lounge”, at the Faculty of Technical Sciences**

Friday 15 November, 2024

PARALLEL SESSIONS

SESSION 1A: CONFERENCE HALL – Design and research methods

Chairpersons: Helena Gabrijelčič Tomc and Jelena Vladušić

- 10:00** **STOP MOTION AS A TOOL TO PRESENT, PROMOTE AND COMMUNICATE PRODUCT DESIGN**
Athina Tziarou, Athanasios Manavis, Nikolaos Efkolidis, Panagiotis Kyratsis
- 10:15** **AI-ENHANCED DESIGN AND LEGAL FOOTPRINT FROM INTELLECTUAL PROPERTY PERSPECTIVE**
Tomislav Hudika, Nika Bošković, Anita Rubinić-Puller, Tihomir Katulić
- 10:30** **DEVELOPMENT OF FEMALE ARTIST IDENTITY IN THE 19TH CENTURY: AN EXAMINATION IN THE CONTEXT OF PRINT ART**
Yeter Beriş
- 10:45** **WOMEN IN PRINT: FIVE CENTURIES**
Katalin Orgovan, Csaba Horvath, Nora Obermayer

SESSION 1B: ONLINE – VIDEOCONFERENCE ROOM 1-16, 1st floor

Chairpersons: Savka Adamović and Rastko Milošević

- 10:00** **PREPARATION OF ECO-FRIENDLY INKS FOR PRIMARY & SECONDARY PACKAGING**
Madhan S, Nimala JP, Kanchana M
- 10:15** **THE UTILISABILITY OF HORNBEAM WOOD SAWDUST WITH CALCITE FILLER IN POLYESTER-BASED COMPOSITE MATERIALS**
Ilyas Kartal, Neşe Çakır
- 10:30** **TO ANALYSE THE FACTORS AFFECTING INK MIGRATION IN THE OFFSET LITHOGRAPHIC PRINTING PROCESS**
Madhura Mahajan, Dr. A. Arulmozhi
- 10:45** **EVALUATION OF THE MIGRATION POTENTIAL OF COLORANTS AND ADDITIVES IN PAPERBOARD FOOD PACKAGING MATERIALS**
Sonja Jamnicki Hanzer
- 11:00–11:15** **Coffee break – Canteen (ground floor)**

PARALLEL SESSIONS

SESSION 2A: CONFERENCE HALL – Design and Typography

Chairpersons: Raša Urbas and Sandra Dedijer

- 11:15 IDENTIFICATION OF GAZE PATTERNS IN THE OBSERVATION OF FONT-WEIGHT AND ILLUSTRATION SIZE ON THE PACKAGING USING EYE-TRACKING ANALYSIS
Teodora Gvoka, Gojko Vladić, Gordana Bošnjaković, Magdolna Pál, Katarina Maričić
- 11:30 TEMPORAL TYPOGRAPHY: THE IMPACT OF ANIMATION SPEED AND INTERPOLATION ON INFORMATION TRANSMISSION EFFICIENCY
Jurica Dolić, Jesenka Pibernik, Ivor Muftić, Lidija Mandić
- 11:45 THE INFLUENCE OF COLOR ON CAPTURING CUSTOMER ATTENTION IN ONLINE PURCHASES OF ORGANIC COSMETICS CASE
Sanja Cvetojević, Sandra Dedijer
- 12:00 FROM SKETCH TO ANIMATED 3D MODEL: THEATRICAL COSTUME DESIGN
Tamara Ilić, Bojan Banjanin, Ivan Pinčjer

SESSION 2B: ONLINE – VIDEOCONFERENCE ROOM 1-16, 1st floor

Chairpersons: Gojko Vladić and Bojan Banjanin

- 11:15 IDENTIFICATION TENDENCIES IN THE ONOMASTICS OF NON-ALCOHOLIC BEVERAGE PACKAGING DESIGN IN AKURE, NIGERIA
Ayorinde S. Oluyemi, Oluwafemi S. Adelabu, E. Bankole Oladumiye
- 11:30 EXPLORING GUIDANCE AND SIGNING SYSTEMS IN ENVIRONMENTAL GRAPHIC DESIGN AS INFORMATIONAL DESIGN: A STUDY USING GRAPHIC DESIGN EXAMPLES
Ekrem Çetin Bigat
- 11:45 CHAMPAGNE PACKAGING DESIGN WITH BRAND AWARENESS AND USER-CENTRIC CRITERIA: A CASE STUDY
Thomas Liokos , Giorgos Lychridas, Vasileios Kyratsis, Athanasios Manavis
- 12:00 MODERATION OF CONSUMERS' CONFUSION IN THE ATYPICALITY OF PACKAGING DESIGN THROUGH THE USE OF E-LABELING TOWARDS SUSTAINABLE CONSUMPTION
Ayorinde S. Oluyemi, Oluwafemi S. Adelabu , E. Bankole Oladumiye
- 12:15 TRANSFORMING GRAPHIC DESIGN – THE IMPACT OF AUGMENTED AND VIRTUAL REALITY ON USER INTERACTION, SECURITY AND PRODUCT PACKAGING OPTIMIZATION
JP Nirmała, R Ragava Raja, M Kanchana

MULTIFUNCTION ROOM (ground floor) - INDUSTRY SESSION (in Serbian language)

Chairman: Živko Pavlović

- 10:00 **CIRCULAR PACKAGING - ALUMINUM CANS**
Ball Packaging
- 10:30 **DIGITAL PRINTING MACHINE PRESENTATION**
ArtisJet
- 11:00 **INNOVATIONS IN DIGITAL PRINTING OF CARDBOARD PACKAGING**
Grafoadria

11:30-12:00 **Coffee break - Canteen (ground floor)**

- 12:00 **COMPANY PRESENTATION**
Konica Minolta
- 12:30 **BEYOND CMYK**
Xerox - Alfa digital
- 13:00 **UV LED PRINT & CUT TECHNOLOGY**
Difol

15:00-20:00 **GUIDED TOUR OF LOCAL MONASTERIES ALONG WITH A
WINE TASTING EXPERIENCE**
(organized for previously registered participants)

Saturday 16 November, 2024

GRID 1 SESSION (Faculty of Technical Sciences, N block, ground floor)

- 10:00 **ROUND TABLE**
- 12:00 **SYMPOSIUM CLOSING**

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