

Vasyl Stefanyk Precarpathian National University, Ivano-Frankivsk, Ukraine  
Selçuk University, Konya, Turkey  
Institute of Mathematics of the National Academy of Sciences of Ukraine, Kyiv, Ukraine  
Pidstryhach Institute for Applied Problems of Mechanics and Mathematics  
of the National Academy of Sciences of Ukraine, Lviv, Ukraine  
Interdepartmental Research Center “Lamberto Cesari”, Perugia, Italy



# **INTERNATIONAL ONLINE WORKSHOP ON APPROXIMATION THEORY**

## **PROGRAM**

March 19–21, 2021  
Ivano-Frankivsk, Ukraine

**FRIDAY, MARCH 19, 2021**

**14:00 Eastern European Time (EET, UTC+2)**

**14:00-14:30** – OPENING CEREMONY

**14:30-16:45** – PLENARY SESSION

**Chair Andrii ZAGORODNYUK**

**14:30-15:10**

**Ioan RAȘA**, Universitatea Tehnica Cluj-Napoca, Romania  
ULAM STABILITY FOR COMPOSITION OF OPERATORS

**15:15-15:55**

**Gianluca VINTI**, University of Perugia, Italy  
APPROXIMATION BY SAMPLING TYPE OPERATORS AND APPLICATIONS

**16:00-16:40**

**Andrii SHYDLICH**, Institute of Mathematics of NASU, Ukraine  
DIRECT AND INVERSE THEOREMS OF APPROXIMATION OF FUNCTIONS GIVEN  
ON HEXAGONAL DOMAINS BY THE TAYLOR-ABEL-POISSON MEANS

**16:45-16:55** – COFFEE BREAK

**16:55-18:25** – PLENARY SESSION

**Chair Clemente CESARANO**

**16:55-17:35**

**Ali ARAL**, Kirikkale University, Turkey  
ON MODIFIED MELLIN-GAUSS-WEIERSTRASS CONVOLUTION OPERATORS

**17:40-18:20**

**Harun KARSLI**, Bolu Abant Izzet Baysal University, Turkey  
URYSOHN TYPE OPERATORS AND THEIR ASYMPTOTIC PROPERTIES

**SATURDAY, MARCH 20, 2021**

**11:40 Eastern European Time (EET, UTC+2)**

**11:40-13:55** – PLENARY SESSION

**Chair Andrii SHYDLICH**

**11:40-12:20**

**Takao KOMATSU**, Zhejiang Sci-Tech University, China

BRACHED CONTINUED FRACTIONS AND Z INDEX OF THE TREE GRAPH

**12:25-13:05**

**Khrystyna KUCHMINSKA**, Pidstryhach Institute for Applied Problems  
of Mechanics and Mathematics of NASU, Ukraine

APPROXIMATION OF ANALYTIC FUNCTIONS BY MANY-DIMENSIONAL  
CONTINUED FRACTIONS

**13:10-13:50**

**Dmytro SKOROKHODOV**, Oles Honchar Dnipro National University, Ukraine

THE LANDAU-KOLMOGOROV PROBLEM ON A FINITE INTERVAL  
IN THE TAIKOV CASE

**13:55-14:05** – COFFEE BREAK

**14:05-16:20** – PLENARY SESSION

**Chair Dmytro SKOROKHODOV**

**14:05-14:45**

**Clemente CESARANO**, Uninettuno University, Italy

GENERALIZED HERMITE POLYNOMIALS IN THE DESCRIPTION  
OF FRACTIONAL CALCULUS AND OTHER APPLICATIONS

**14:50-15:30**

**Vijay GUPTA**, Netaji Subhas Institute of Technology, India

SOME OLD AND NEW METHODS CONCERNING CONVERGENCE  
OF LINEAR POSITIVE OPERATORS

**15:35-16:15**

**Borislav Radkov DRAGANOV**, Sofia University “St. Kliment Ohridski”, Bulgaria

SIMULTANEOUS APPROXIMATION BY OPERATORS

**16:20-16:30** – COFFEE BREAK

**16:30-18:50** – SECTION SESSION

**Chair Oleg KOVALENKO**

**16:30-16:55**

Anatolii Serdyuk, **Igor SOKOLENKO**, Institute of Mathematics of NASU, Ukraine  
ON ASYMPTOTIC ESTIMATES FOR THE WIDTHS OF CLASSES  
OF FUNCTIONS OF HIGH SMOOTHNESS

**17:00-17:25**

**Sergii VAKARCHUK**, Alfred Nobel University, Ukraine  
Mykhailo VAKARCHUK, Oles Honchar Dnipro National University, Ukraine  
ON THE WIDTHS OF CLASSES OF FUNCTIONS OF TWO VARIABLES

**17:30-17:55**

**Mykhaylo PAHIRYA**, Uzhhorod National University, Ukraine  
REPRESENTATION OF A ONE CLASS FUNCTION OF TWO VARIABLES  
BY BICONTINUED FRACTIONS

**18:00-18:25**

**Tamara ANTONOVA**, Lviv Polytechnic National University, Ukraine  
ON APPROXIMATION OF RATIOS OF MULTIPLE HYPERGEOMETRIC FUNCTIONS  
BY BRANCHED CONTINUED FRACTIONS

**18:30-18:45**

**Vira BABENKO**, Drake University, United States  
Vladyslav BABENKO, Mariya POLISCHUK,  
Oles Honchar Dnipro National University, Ukraine  
OPTIMAL RECOVERY OF MONOTONE OPERATORS IN PARTIALLY ORDERED  
SEMI-LINEAR METRIC SPACES

**SUNDAY, MARCH 21, 2021**

**11:40 Eastern European Time (EET, UTC+2)**

**11:40-13:00 – SECTION SESSION**

**Chair Khrystyna KUCHMINSKA**

**11:40-11:55**

**Andrii ZAGORODNYUK**, Vasyl Stefanyk Precarpathion National University, Ukraine  
ON HYPERCICLISITY OF COMPOSITION OPERATORS IN SPACES  
OF ANAYTIC FUNCTIONS

**12:00-12:15**

**Viktor SAVCHUK**, Institute of Mathematics of NASU, Ukraine  
Maryna SAVCHUK, Igor Sikorsky Kyiv Polytechnic Institute, Ukraine  
VORONOVSKAYA-TYPE THEOREM FOR FEJER MEANS  
OF BOUNDED HARMONIC FUNCTIONS

**12:20-12:35**

**Metin TURGAY**, Sadettin KURSUN, Tuncer ACAR, Selçuk University, Turkey  
KANTOROVICH MODIFICATIONS OF EXPONENTIAL SAMPLING SERIES  
FOR MULTIVALUED FUNCTIONS

**12:40-12:55**

Volodymyr MIKHAILET, Institute of Mathematics of NASU, Ukraine  
**Oksana TSYHANOK**, Igor Sikorsky Kyiv Politechnic Institute, Ukraine  
ON TAUBERIAN CONDITIONS FOR CONVERGENCE  
OF ABSTRACT AND TRIGONOMETRIC SERIES

**13:00-13:10 – COFFEE BREAK**

**13:10-14:30 – SECTION SESSION**

**Chair Marian DMYTRYSHYN**

**13:10-13:25**

**Rahul SHUKLA**, P.N. AGRAWAL, Indian Institute of Technology Roorkee, India  
Behar BAXHAKU, University of Prishtina, Kosovo  
P-SUMMABILITY METHOD APPLIED ON AN INTEGRAL TYPE OPERATOR BASED  
ON MULTIVARIATE Q-LAGRANGE POLYNOMIALS

**13:30-13:45**

Sadettin KURŞUN, Metin TURGAY, Selçuk University, Turkey  
**Osman ALAGÖZ**, Bilecik Şeyh Edebali University, Turkey  
Tuncer ACAR, Selçuk University, Turkey  
APPROXIMATION PROPERTIES OF MULTIVARIATE EXPONENTIAL  
SAMPLING SERIES

**13:50-14:05**

Inna KAL'CHUK, Yuriy KHARKEVYCH, Lesya Ukrainka Volyn National University, Ukraine  
**Kateryna POZHARSKA**, Institute of Mathematics of NASU, Ukraine  
APPROXIMATION OF FUNCTIONS FROM THE LIPSCHITZ CLASSES  
BY THEIR CONJUGATE POISSON INTEGRALS

**14:10-14:25**

**Md NASIRUZZAMAN**, University of Tabuk, Saudi Arabia  
APPROXIMATION BY PARAMETRIC EXTENSION OF SZASZ-MIRAKJAN-  
KANTOROVICH OPERATORS INVOLVING THE APPELL POLYNOMIALS

**14:30-14:40** – COFFEE BREAK

**14:40-16:00** – SECTION SESSION

**Chair Roman DMYTRYSHYN**

**14:40-14:55**

**Marian DMYTRYSHYN**, Vasyl Stefanyk Precarpathian National University, Ukraine  
BEST APPROXIMATIONS BY ANALYTIC VECTORS RELATIVE TO OPERATORS  
WITH DISCRETE SPECTRUM

**15:00-15:15**

**Türkan YELIZ GÖKÇER**, TOBB University of Economics and Technology, Turkey  
Ismail ASLAN, Hacettepe University, Turkey  
APPROXIMATION BY DISCRETE OPERATORS OF MAX-MIN KIND

**15:20-15:35**

**Iryna BILANYK**, Ternopil Volodymyr Hnatiuk National Pedagogical University, Ukraine  
Dmytro Bodnar, Olha Voznyak, West Ukrainian National University, Ukraine  
MULTIDIMENSIONAL ANALOGUE OF THRON'S THEOREM ABOUT TWIN  
PARABOLIC CONVERGENCE REGIONS FOR CONTINUED FRACTIONS

**15:40-15:55**

**Oleg KOVALENKO**, Oles Honchar Dnipro National University, Ukraine  
OSTROWSKI TYPE INEQUALITIES FOR SETS AND FUNCTIONS  
OF BOUNDED VARIATION

**16:00-16:10** – COFFEE BREAK

**16:10-17:50 – SECTION SESSION**

**Chair Andrii ZAGORODNYUK**

**16:10-16:25**

**Ismail ASLAN**, Hacettepe University, Turkey

**Türkan YELİZ GÖKÇER**, TOBB University of Economics and Technology, Turkey

APPROXIMATION BY DISCRETE OPERATORS OF MAX-PRODUCT KIND

**16:30-16:45**

**Natalya Hoyenko**, Pidstryhach Institute for Applied Problems

of Mechanics and Mathematics of NASU, Ukraine

**Oleksandra MANZIY**, Volodymyr Hladun, Levko Ventyk,

Lviv Polytechnic National University, Ukraine

ON CONVERGENCE OF AN EXPANSION OF FUNCTION  $F_4(1,2;2,2;z_1,z_2)$

INTO A BRANCHED CONTINUED FRACTION

**16:50-17:05**

**Mohd QASIM**, Baba Ghulam Shah Badshah University Rajouri, India

CONVERGENCE OF GENERALIZED LUPAS- BETA OPERATOR

**17:10-17:25**

**Anton Kuz**, Mykhailo Symotyuk, Pidstryhach Institute for Applied Problems

of Mechanics and Mathematics of NASU Ukraine

CONVERGENCE OF THE CONTINUED FRACTION FOR THE RATIO OF CONFLUENT

HYPERGEOMETRIC FUNCTIONS OVER THE FIELD OF P-ADIC NUMBERS

**17:30-17:45**

**Roman DMYTRYSHYN**, Vasyl Stefanyk Precarpathian National University, Ukraine

APPROXIMATION OF ANALYTIC FUNCTIONS OF SEVERAL VARIABLES BY

MULTIDIMENSIONAL REGULAR C-FRACTIONS WITH INDEPENDENT VARIABLES

**17:50 – CLOSING**