



**UNIVERSITY OF ELBASAN “ALEKSANDËR XHUVANI”,
ALBANIA**

In Cooperation with

UNIVERSITY OF PRISTINA, KOSOVO

and

ILIRIAS RESEARCH INSTITUTE

**FIFTH WESTERN BALKAN CONFERENCE ON MATHEMATICS
AND APPLICATIONS**

(5th WBCMA)

October 3-4, 2025, Elbasan, Albania

Conference website: <http://wbcma2025.ilirias.com/>
https://uniel.edu.al/images/studio_ne_ue/Fakulteti_i_shkencave_te_natyres/njoftime/Call_for_papers_5th_WBCMA_2025.pdf

FIFTH WESTERN BALKAN CONFERENCE ON MATHEMATICS AND APPLICATIONS (5th WBCMA) will be held in Elbasan, Albania, during October 3-4, 2025.

This conference will provide an interactive forum for presentations and discussions on Mathematics and its applications in different fields of science.

We welcome participants from all over the world who are interested in developing professional research, exploring, and sharing their achievements in these fields.

The primary goal of the conference is to promote research and developmental activities in both pure and applied mathematics through peer-reviewed contributions and invited plenary lectures.

This conference will contribute to strengthening regional and international cooperation, particularly within the Western Balkans, by bringing together mathematicians from the region and beyond.

The contact with senior professors provides support for emerging researchers, enabling them to present work on the same stage as established researchers.

This will be an opportunity to promote the applications of mathematics across disciplines, engaging fields such as engineering, physics, and data science.

The conference should serve as an ideal forum for establishing national and international relationships between researchers.

Honorary Committee

- Naim L. Braha, University of Pristina, Kosovo
- Agron Tato, Polytechnic University of Tirana, Albania
- Hari Mohan Srivastava, University of Victoria, Canada

Scientific, Editorial, and Organizing Committee of the Conference

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- Bederiana Shyti, University of Elbasan “Aleksandër Xhuvani”, Albania
- Dhurata Valera, University of Elbasan “Aleksandër Xhuvani”, Albania
- Elvin Rada, University of Elbasan “Aleksandër Xhuvani”, Albania
- Sokol Kaliaj, University of Elbasan “Aleksandër Xhuvani”, Albania
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- Mimoza Shkëmbi, University of Elbasan “Aleksandër Xhuvani”, Albania
- Zamir Selko, University of Elbasan “Aleksandër Xhuvani”, Albania
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- Astrit Ferizi, University of Pristina, Kosovo
- Ekrem Halimi, Univeristy of Gjilan, Kosovo
- Ilmi Hoxha, University of Gjakova, Kosovo
- Faton Merovci, University of Mitrovica, Kosovo
- Alit Ibrahim, State University of Tetovo, North Macedonia
- Armend Shabani, University of Prishtina, Kosovo
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- Hemen Dutta, Department of Mathematics, Gauhati University, India
- Mikail Et, Firat University, Turkiye, Turkiye
- Mircea Ivan, Universitatea Tehnica Din Cluj-Napoca Str. Memorandumului nr. 28 Cluj-Napoca, cod postal 400114 Jud. Cluj, Romania, Romania
- Ugur Kadak, Gazi University, Turkiye, Turkey
- Mihai Postolache, Department of Mathematics and Computer Science, University Politehnica of Bucharest, 060042 Bucharest, Romania, Romania
- Abdellah Rababah, Department of Mathematics, Jordan University of Science and Technology, 22110 Irbid, Jordan,
- Yilmaz Simsek, Adeniz University Faculty of Science Department of Mathematics, Antalya, Turkiye
- Ilir Snopche, Universidade Federal Do Rio de Janeiro, Brazil
- Adem Kilicman, University Putra, Malaysia
- Jeff Connor, Department of Mathematics, Ohio University, Athens, Ohio, USA
- Bipan Hazarika, Department of Mathematics, Gauhati University, Guwahati, 781014, India

- Feng Qi, Tianjin Polytechnic University, Henan Polytechnic University, China
- Douglas R. Anderson, Department of Mathematics and Computer Science, Concordia College, Moorhead, Minnesota 56562, USA, USA
- Salah Mecheri, Taibah University, Medina, Saudi Arabia
- Kotaro Tanahashi, Department of Mathematics, Tohoku Medical and Pharmaceutical University; Sendai 981- 8558, Japan
- Muharem Avdispahic, Department of Mathematics, University of Sarajevo, Bosnia and Herzegovina
- Huseyin Cakalli, Department of Mathematics, Maltepe University in Istanbul, Turkey
- Eglantina Kalluçi, University of Tirana, Albania
- Eriola Sila, University of Tirana, Albania
- Besiana Çobani, University of Tirana, Albania
- Vishnu Narayan Mishra, Indira Gandhi National Tribal University, India
- Akli Fundo, Polytechnic University of Tirana, Albania
- Lulëzim Hanelli, Polytechnic University of Tirana, Albania
- Alfred Daci, Polytechnic University of Tirana, Albania
- Saimir Tola, Polytechnic University of Tirana, Albania
- Endri Raço, Polytechnic University of Tirana, Albania
- Adrian Naço, Polytechnic University of Tirana, Albania
- Sandër Kovaçi, Polytechnic University of Tirana, Albania
- Luela Prifti, Polytechnic University of Tirana, Albania
- Shkëlqim Kuka, Polytechnic University of Tirana, Albania
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- Denisa Salillari, Polytechnic University of Tirana, Albania
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- Alvara Berdilla, Polytechnic University of Tirana, Albania
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- Lorena Zeqo, University of Korça “Fan S. Noli”, Albania
- Eljona Tasho, University of Korça “Fan S. Noli”, Albania
- Miftar Ramosaço, University of Vlora “Ismail Qemali”, Albania
- Arben Baushi, University of Vlora “Ismail Qemali”, Albania
- Llambrini Sota, University of Vlora “Ismail Qemali”, Albania
- Lindita Mukli, University of Durrës “Aleksandër Moisiu”, Albania
- Anjeza Pasku, University of Durrës “Aleksandër Moisiu”, Albania
- Robert Kosova, University of Durrës “Aleksandër Moisiu”, Albania
- Siditë Duraj, University of Shkodra “Luigj Gurakuqi”, Albania
- Marjana Nikolla, Agricultural University of Tirana, Albania
- Kastriot Zoto, University of Gjirokastra “Eqrem Çabej”, Albania
- Krisanthi Naka, University of Gjirokastra “Eqrem Çabej”, Albania
- Romeo Mano, University of Gjirokastra “Eqrem Çabej”, Albania

INVITED SPEAKERS

Paolo Leonetti - Università degli Studi dell'Insubria, Department of Economics, Varese (Italy).

Erdal Karapinar - Department of Mathematics, Atılım University, Incek, Ankara, Turkey

Irfan Siap - Mohammad Bin Fahd University Al Khobar, Kingdom of Saudi Arabia.

Yilmaz Simsek - Department of Mathematics, Akdeniz University, Turkey

Enrique Jorda Mora - Universitat Politècnica De Valencia, Spain

Drazen Adamovic - University of Zagreb, Department of Mathematics, Croatia

Bipan Hazarika - Department of Mathematics Gauhati University Guwahati, Assam, India

CONFERENCE PROGRAM

DAY I –October 03, 2024

(Local time in Albania **GMT+1**)

09:00-10:00	Registration of participants	Main Hall of the University Library University of Elbasan “Aleksandër Xhuvani”, Albania
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Conference Room: The University Library, Room 003,
University of Elbasan “Aleksandër Xhuvani”, Albania

PLENARY SESSION			
10:00	Welcome Speech	Dr. Dhurata Valera Head of Mathematics Department, Faculty of Natural Sciences, University of Elbasan “Aleksandër Xhuvani”	
	Greetings	<ul style="list-style-type: none">• Prof. Dr. Elvira Fetahu Rector of the University of Elbasan “Aleksandër Xhuvani”, Albania• Assoc. Prof. Dr. Bederiana Shyti Dean of the Faculty of Natural Sciences, University of Elbasan “Aleksandër Xhuvani”, Albania• Prof. Dr. Agron Tato Polytechnic University of Tirana, Albania• Prof. Dr. Fatmir Hoxha The State University of Tirana, Albania• Prof. Dr. Naim Braha University of Prishtina, Kosova• Prof. Dr. Paolo Leonetti Università degli Studi dell'Insubria, Varese (Italy)• Prof. Dr. Yilmaz Simsek Akdeniz University, Antalya, Turkey	
11:00 – 11:30	Coffee break		
SESSION 2			
Moderators: Agron Tato, Paolo Leonetti			
Time	Speakers	Title	Presentation
11:30-12:10 Invited Speaker	Yilmaz Simsek	On generating functions for specific families containing special numbers and polynomial	Oral

12:10-12:40	Naim Braha	Some new Banach spaces by applying the generalized difference operator Δ_m	Oral
12:40- 14:00	Lunch time		
	SESSION 3		
Moderators: Elvin Rada, Faruk Özger			
Time	Speakers	Title	Presentation
14:00-14:40 Invited Speaker	Paolo Leonetti	Orbits which are "more than" dense"	Oral
14:40-15:00	Ekrem Aljimi	Some generalizations of statistical convergence results according to summability methods	Oral
15:00-15:20	Orhan Tug	Some properties of Hahn sequence spaces	Oral
15:20-15:40	Yaren Münüsoğlu	CR-fuzzy soft matrix and its application	Oral
15:40 – 16:00	Coffee break		
SESSION 4			
Moderators: Naim Braha, Ivan Minchev			
Time	Speakers	Title	Presentation
16:00-16:40 Invited Speaker	Drazen Adamovic	The center of affine vertex superalgebras at the critical level via W-algebras	Online
16:40-17:00	Mustapha Yebdri	Periodic solutions of a state-dependent delay differential equation	Oral
17:00-17:20	Faruk Özger Reşat Aslan	From Approximation Theory to Fractional Analysis: Approximating Operator Approach to Volterra Integral Equations	Oral
17:20-17:40	Sümeýra Bedir Görkem Lale, Muhammed Zakir Demirel	Validity Classification of Text-Based Logical Arguments Using AI	Oral
17:40-18:00	Elvin Rada	Advanced Fixed Point Theorems in Cone b-metric Banach Spaces via the Φ_p Operator with Applications.	Oral
End of the session			

DAY II –October 04, 2025
PARALLEL SESSIONS

Conference Room: The University Library, Room 003

SESSION 1			
Moderators: Eriola Sila, Dhurata Valera			
Time	Speakers	Title	Presentation
09:00-09:40 Invited Speaker	Irfan Isap	A Family of Nonlinear Cellular Automata and Its Applications	Online
09:40-10:00	Emin Durmishi Alit Ibraimi, Zoran Misajleski	Chain Connected Sets in Generalized Topological Spaces	Oral
10:00-10:20	Zamir Selko	A common fixed point theorem for F-contractions in extended cone b-metric spaces	Oral
10:20-10:40	Dhurata Valera , Vinoth Raman	Stochastic Modeling of Interconnected Global Risk Networks: A Comparative Review of Mathematical Frameworks for Predicting Cascade Effects in Economic, Environmental and Social Systems	Oral
10:40– 11:00	Coffee break		
		SESSION 2	
Moderators: Dhurata Valera, Sümeyra Bedir			
Time	Speakers	Title	Presentation
11:00-11:40 Invited Speaker	Bipan Hazarika	Henstock-Kurzweil integrals and its importance	Online
11:40-12:00	Mahmut Karakuş	Multiplier Cesàro Almost Convergent Spaces and Characterizations of Series in Banach Spaces via Cesàro Almost Summability Method	Online
12:00-12:20	Dib Karima	Sufficient Condition for Invariant Closed Sets with Respect to Differential Inclusions with Time Dependent Maximal Monotone Operators in Hilbert Spaces	Online
12:20-12:40	Rexhep Rada Erind Bedalli,	Academic performance prediction of students using data mining techniques	Oral

	Ermal Arapi, Marsila Bello		
12:40- 14:00	Lunch time		
SESSION 3			
Moderators: Yilmaz Simsek, Elvin Rada			
Time	Speakers	Title	Presentation
14:00-14:40 Invited Speaker	Erdal Karapinar	A friendly discussion on the recent advances in fixed point theory In this talk we shall discuss recently obtained results in the context of metric fixed point theory. We shall consider some concrete results and question the contributions and novelty	Online
14:40-15:00	Ilmi Hoxha	On p-quasi (m,n)-hyponormal operators	Oral
15:00-15:20	Elona Fetahu	Three-dimensional dam break flow: Small time behaviour	Oral
15:20-15:40	Pranvera Lleshanaku Dhurata Valera	Number theory and cryptography: classical foundations and future challenges	Oral
15:40-16:00	Coffee break		
SESSION 4			
Moderators: Paolo Leonetti, Elvin Rada			
Time	Speakers	Title	Presentation
16:00-16:40 Invited Speaker	Enrique Jordá	Ergodic properties of multipliers related to random walks	Online
16:40-17:00	Ivan Minchev	Title: A geometry of cubic discriminants in eight dimensions	Oral
17:00-17:20	Stela Ceno Dhurata Valera	Properties for the generalized φ -metric space.	Oral
17:40-18:00	Juan Eduardo Nápoles Valdes	Local differential operators: Current status and prospects.	Online
End of the Session			

DAY II –October 04, 2025

Conference Room: The University Library, Room “Martin Camaj”

SESSION 1			
Moderators: Yaren Münüsoğlu, Stela Ceno.			
Time	Speakers	Title	Presentation
09:00-09:20	Ezgi Polat Yilmaz Simsek	Functional Equations of Generating Functions for combinatorial numbers and polynomials	Oral
09:20-09:40	Neslihan Kilar	On Asymptotic Expression and Inequality of Peters-type Simsek Numbers	Oral
09:40-10:00	Ilir Demiri Egzona Iseni, Shpetim Rexhepi,	Some Results on Convergence and Convolution of Functions Belonging to the Spaces S_0 , L_1 , and L_2	Online
10:00-10:20	Salih Aytar	On the maximization of profit function with polygonal fuzzy numbers	Online
10:20-10:40	Salih Aytar	A Study on the Rough Convergence of Fuzzy Interval Sequences	Online
10:40 – 11:00	Coffee break		
SESSION 2			
Moderators: Mustafa Yebdri, Zamir Selko.			
Time	Speakers	Title	Presentation
11:00-11:20	Florion Cela	Hausdorff group topologies on the full permutation group $S(X)$ and on its subgroups.	Oral
11:20-11:40	Ledia Subashi Florion Cela	On the Symmetrization of Quasi-Partial b-Metric Spaces	Oral
11:40:12:00	Mimoza Shkembi Ina Gjolla	A uniform convergence theorem for the ordered integrals of Riesz space –valued functions defined on time scales.	Oral
12:00-12:20	Gautam Chandra Ray Bibha Rani Talukdar Saurabh Mardi Hilloljyoti Singha	Assessing the impact of covid 19 on psychosocial well-being in rural and urban Assam, India	Online

12:20-12:40	Bibha Rani Talukdar Gautam Chandra Ray	Non-parametric evaluation of psycho social well-being among college students	Online
12:40- 14:00	Lunch time		
SESSION 3			
Moderators: Orhan Tug, Ekrem Ajlimi			
Time	Speakers	Title	Presentation
14:00-14:20	Arben Baushi	Preparing new teachers, are universities properly fulfilling their mission of preparing new teachers in general and mathematics teachers in particular?	Oral
14:20-14:40	Ledia Shopi	Mathematical Modeling for Teaching in the Pre-University System	Oral
14:40-15:00	Reşat Aslan	Approximation properties of Stancu-Kantorovich type operators which include Beta function	Online
15:00-15:20	Nadeem Rao	Dunkl-Type Fractional Integral Linked to Szász Operators: A Numerical Study	Online
End of the Session			

POSTER SESSION

**Main Hall of the University Library
University of Elbasan “Aleksandër Xhuvani”, Albania**

Authors	Title
Arianit Peci Blerina Zanaj Adis Puška	Application of Fuzzy MCDM Methods in the Evaluation and Selection of Drones for the Spraying Process on Agricultural Farms
Genti Progri, Bederiana Shyti	3d path optimization with obstacles using a hybrid neural network – genetic algorithm control with a composite fitness function (nn-ga-hybrid fitness)
Entela Progri, Blerina Papajani	Comparative analysis of oscillations supported in Python programming
Genti Progri, Dhurata Valera	Monitoring system for real-time camera control environments using ESP32-CAM and Flask

CONFERENCE CONCLUSIONS

October 04, 2025

18:00-18:15

The University Library, Rooms 003