



HELLENIC REPUBLIC  
**National and Kapodistrian  
University of Athens**  
— EST. 1837 —

## 4<sup>th</sup> Symposium on “Hypercompositional Algebra-new Developments and Applications”

### 1<sup>st</sup> day: Monday, 3.6.2024

9:45 Opening the event

10:15 Christos Massouros and Gerasimos Massouros, “Remarks and comments on the axioms of hypercompositional structures”

10:45-11:00 Break

11:00 Spyridon Vossos, Elia Vossos, Christos Massouros “The Linear Transformations which Unify the Newtonian Physics and Einsteinian Special Relativity and their Combination with FLRW metric for the Study of the Expansion of the Universe”

11:30 Kaique Roberto “Hyperalgebras and Abstract Theories of Quadratic Forms from a Functorial Point of View”

12:00 End of first day sessions

### 2<sup>nd</sup> day: Tuesday, 4.6.2024

10:00 Antonios Kalampakas, “Graph Hyperstructures”

10:30 Mohammad Hamidi and Florentin Smarandache, “Valued Fuzzy Superhypergraphs and Applications in Decision Making”

11:00-11:15 Break

11:15 Morteza Jafarpour, “Hypergroups arising from the standard particle physics”

11:45 Hashem Bordbar, “Categorical approach of Normal injective and Torsionable hypermodules”

12:15 End of the second day sessions

### 3<sup>rd</sup> day: Wednesday, 5.6.2024

10:00 Madeleine Al-Tahan and Šarka Hoškova Mayerova “Probabilistic polygroup theory”

10:30 Yasaman Delpak, “Homological Algebra in Abelian Categories”

11:00-11:15 Break

11:15 Charalampos Tsitouras “An algorithmic approach to the creation of hypercompositional structures”

11:45 Ali Sanjabi, “Study of Cayley digraphs on polygroups”

12:15-13:30 Break

13:30 Alessandro Linzi and Nicolo Cangiotti “Hypercompositional structures and relational monoids”

14:00 Jan Chvalina, Michal Novák, Bedřich Smetana, “Actions of Automata Created by Chains of Differential Neurons”

14:30 End of the third day sessions

**4<sup>th</sup> day: Thursday, 6.6.2024**

10:15 Violeta Fotea, “*Isomorphism classes of join spaces associated to chains*”

11:00 Burcu Nişancı Türkmen and Bijan Davvaz “*On  $\tau$ -supplements in subcategory  $R_S\text{hmod}$* ”

11:30-12:00 Piotr Błaszkiwicz, “*The class of Krasner quotient hyperfields is not elementary*”

12:00-13:30 Break

13:30 Fakhry Asad, “*Quasi filters and  $(m,n)$ -quasi filters on ordered semirings: First results*”

14:00 Anton Nuculović, “*Dependence relations, directed graphs and degree of influence*”

14:30 Engin Kaynar, Burcu Nişancı Türkmen, and Ergül Türkmen, “*A note on hyperrings and hypermodules*”

15:00 End of the fourth day sessions

**5<sup>th</sup> day: Friday, 7.6.2024**

10:00 Enrico Talloti, “*A new vulnerability in Elliptic Curve Cryptography*”

10:30 Irina Cristea, “*An overview of HX-groups*”

11:00 Andromeda Sonea- Patraşcu, “*Description of HX-groups using the C++ programming language*”

11.30 Round table and closing remarks