



INTERNATIONAL CONFERENCE
**APPLIED CATEGORY THEORY
 GRAPH-OPERAD-LOGIC**
in memoriam Zbigniew Oziewicz



International Conference Applied Category Theory Graph-Operad-Logic

Professor Zbigniew Oziewicz in memoriam
 August 24th, 25th, 26th and 27th, 2021
 (GMT-5) Mexico City time, México

		Tuesday 24th		Wednesday 25th		Thursday 26th		Friday 27th	
Eje temático	Influence and Inspiration, Zbigniew Oziewicz in Mexico		Noncommutative Geometry, Differential Calculus		Lie Group Symmetry, Quantum Group Symmetry		Quantum Mechanics, Leptones, Quarks, Fundamental Interactions		
Schedule	Speaker	Conference Title	Speaker	Conference Title	Speaker	Conference Title	Speaker	Conference Title	
9:00 – 09:30	Mtro. Jorge Alfredo Cuéllar Ordaz, Director FESC, UNAM	Opening Ceremony	Andrzej Borowiec	Noncommutative Differential Calculus - 25 Years Later	Hanna Makaruk	SU(n) and Quantum SU(n) Symmetries in Physical Systems	Ruggero Maria Santilli	Possible Application To Quantum Computers Of The Einstein-Podolsky-Rosen Argument That "Quantum Mechanics Is Not A Complete Theory."	
09:30 – 10:00	Larissa Sbitneva	Remembering 25 years of activities with Professor Zbigniew Oziewicz in Mexico							
10:00 – 10:30		Dalia Cervantes, Hilda María Colín and Jesús Cruz		Some Aspects of Zbigniew Oziewicz's Interpretation of Classical Thermodynamics	Danail Brezov	The Order of Finite Generation of SO(3) and Optimization of Rotation Sequences	Michael Heather and Nick Rossiter	Particle Physics viewed from Category Theory	
10:30 – 11:00	Jesús Cruz Guzmán	Zbigniew Oziewicz: A Journey Through Fundamental Problems in Physics	Victor Abramov	Non-commutative Differential Calculus and its Applications	Varsha, S Aishwarya, Syam Prasad Kuncham and Babushri Srinivas Kedukodi	Path Norms on a Matrix	Ricardo Gaitán Lozano	El Modelo Estándar de la Física de Partículas	
11:00 – 11:30	Hilda María Colín-García, Larissa Sbitneva and Zbigniew Oziewicz		Benefits of Using the Virtual Classroom for the Training Process of Students to Promote their Interest in Science and Research	Jacob Mostovoy	Leibniz Algebras and Differential Graded Lie Algebras	Syam Prasad Kuncham, Tapatee Sahoo, Babushri Srinivas Kedukodi and Harikrishnan Panackal	On Absorbing Ideals of N-groups	Silverio Joel Sánchez Pérez	Dimensiones paralelas
11:30 – 12:00	COFFEE BREAK AND CULTURAL ACTIVITIES								
Eje temático	Category Theory, Graphs, Logic		Abstract Algebra, Non-commutative Calculus		Clifford Algebra, Spheroidal Quaternions		Computability, Models of Computation		
12:00 – 12:30	Louis H. Kauffman	Calculus and Non-Commutative Worlds	Gouwu Meng	Kepler problem and Jordan Algebra	Garret Sobczyk	Spheroidal Quaternions	Guillermo Morales-Luna	Superdense coding and multiparty communication protocols using quantum systems of several levels	
12:30 - 13:00			Liudmila Sabinina	Recent Results on the Theory of binary Lie Algebras					

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13:00 – 13:30	Carlos César Jiménez	A Philosophical Honing of Quantum Natural Language Processing (QNLP)	Tapatee Sahoo, Harikrishnan Panackal, Babushri Srinivas Kedukodi and Syam Prasad Kuncham	On the relative finite dimension in modules over rings	Eckhard Hitzer	Special Affine Quaternion Domain Fourier Transform	Valentina Harizanov	Approximately Computable Structures
13:30 – 14:00	Miguel Pérez-Gaspar and Everardo Bárcenas	Sobre Independencia Axiomática de una Lógica tres-valuada	Harikrishnan Panackal	A Review on the Recent Developments in Probabilistic Normed Spaces	Juan Bory-Reyes and Marco Antonio Pérez-de la Rosa	Solutions of Inhomogeneous Generalized Moisil-Teodorescu Systems in Euclidean Space	Francisco Hernández Quiroz	Striking a Balance Between Cumulative Knowledge and Speed of Proofs in Classical Propositional Calculus
14:00 – 14:30	Fernando R. Velázquez Quesada	Multigraphs of Multigraphs: Modeling Hierarchical Structures and Scale-change	Guadalupe Rafael Molina Rincon	On the Leavitt Path Algebras of a Class of Random Graphs	Carlos Efraín Quintero Narvaez and Dalia Cervantes Cabrera	Clifford Algebras in Quantum Computing	Lourdes del Carmen González Huesca	Back to Basics: (Co)inductive Types and (Co)recursion Principles
14:30 – 15:00	Peter Rowlands	Mathematics and Physical Meaning in Relativistic Quantum Mechanics	Fernando Izaurieta	Usando ondas gravitacionales para explorar la presencia astrofísica	Pablo Enrique Moreira Galván	Complete system of solutions for some Maxwell's equations	David Spivak	Dynamic Rewiring as Learning
15:00 – 15:30	Alberto Fragio	Zbigniew Oziewicz, Karl Popper y el Mito del Marco	Jerzy Kocik	The algebraic loop of relativistic velocities refined	Arkadiusz Jadczyk	From Grassmann to Clifford	Francisco N. Martínez-Aviña	Modeling Paraconsistent Theories of Computation in Toposes
15:30 – 16:00	LUNCH AND CULTURE ACTIVITIES							
Eje temático	Theory of Relativity		Homology, Dualities, Manifolds		Topological Quantum Field Theories		Quantum Lie Operations, Geometric Algebra	
16:00 – 17:00	Bill Page	Concepts of Relative Acceleration	Józef Przytycki	Skein Modules and Algebras of Links in 3-Manifolds	Robert Owczarek	Vortices, knots, Chebyshev polynomials, Frobenius algebras, topological quantum field theories	Vladislav Khartchenko	Quantum Lie Operations as Q-operad
17:00 – 17:30	Robert Yamaleev	Evolution Equations of Relativistic Dynamics Along Geodesic Lines of Hyperbolic and Elliptic Spaces	Giovanni P. Gregori	Golden Ratio, Variational Principles, Cyclic and Wave Phenomena, Quanta	Valeriy Dvoeglazov	Negative-Energy 4-Spinors and Masses in the Dirac Equation	Perla C. Lucio-Peña	Quantum Hyperbolic Planes
17:30 – 18:00	Grzegorz M. Koczan	Relative Binary, Ternary and Pseudo-binary 4D Velocities in the Special Relativity: Part I. Covariant Lorentz transformation	Juan Antonio Pérez	Some Categories of Alexandroff Spaces	Gustavo Amílcar Saldaña	Yang-Mills Theory in Non-commutative Geometry	David Antonio Pérez Carlos, Augusto Espinoza Garrido, Alejandro Gutiérrez Rodríguez and Zbigniew Oziewicz	Weak Gravitational Fields in the Geometric Algebra Approach
18:00 – 18:30	Mariana Espinosa-Aldama	The Space-Time Theories Exploratorium	Adrián Vazquez-Marquez	Parametric Hopf Adjunctions	Miguel Socolovsky	Feynman Propagator for Closed Timelike Curves in the Kerr Metric	Closing session	Open discussion
18:30 – 19:00	Romuald Brazis	Classical Relativity and Quantum Relativity versus Special Relativity	Enrique Bojorquez	Points: Classical Perspectives and Quantum Refraction	Micho Durdevich			