

Daily Schedule for AUS-ICMS25

Time	Day 1, February 20
08:00 – 09:30	Registration
09:30 – 10:00	Opening Ceremony
10:00 – 11:00	Plenary I
11:00 – 11:30	Coffee Break
11:30 – 12:30	Plenary II
12:30 – 12:40	Photo Op
12:40 – 14:00	Lunch Break
14:00 – 16:00	Session A
16:00 – 16:30	Coffee Break
16:30 – 18:00	Session B

Time	Day 2, February 21
08:00 – 09:00	Registration
09:00 – 10:00	Plenary III
10:10 – 10:30	Coffee Break
10:30 – 12:30	Session C
12:30 – 14:00	Lunch Break
14:00 – 16:00	Session D
16:00 – 16:30	Coffee Break
16:30 – 18:00	Session E
19:00 – 22:00	Gala Dinner

Time	Day 3, February 22
08:00 – 09:00	Registration
09:00 – 10:00	Session F
10:00 – 10:30	Coffee Break
10:30 – 12:30	Session G
12:30 – 14:00	Lunch
14:00 – 16:00	Session H

SPECIAL SESSIONS

- SS1** - Algebraic Topology and Applications
- SS2** - Applied and Computational Analysis
- SS3** - History of Mathematics
- SS4** - Mathematics Education
- SS5** - Modeling and Simulation of Biological Systems
- SS6** - Operator Theory and Harmonic Analysis
- SS7** - Rings, Monoids, Module Theory and Graphs from Rings
- SS8** - Statistical Learning and Data Science
- SS9** - Statistics and Data Science for Digital Finance on
Tokenomics

GENERAL SESSIONS

- GS1** – Algebra, Number Theory & Applications
- GS2** - Analysis
- GS3** - Applied Mathematics & Differential Equations
- GS4** – Graph Theory, Coding Theory & Cryptography
- GS5** - Computational Mathematics & Numerical Analysis
- GS6** – Statistics & Machine Learning

DAY 1: Thursday, February 20, 2025

Time	DETAILED SCHEDULE										
8:00 - 9:30	Registration Main Building, Mezzanine, Dining Hall										
9:30 - 10:00	Opening Main Building, Hall A										
10:00 - 11:00	Plenary I Keynote Speaker: Dr. Kathryn Hess Bellwald Title: Topological Insights in Neuroscience Main Building, Hall A										
11:00 - 11:30	Coffee Break Main Building, Mezzanine, Dining Hall										
11:30 - 12:30	Plenary II Keynote Speaker: Dr. Martin Bohner Title: Generalized Periodicity Main Building, Hall A										
12:30 - 12:40	Photo Op Infront of Chemistry Building										
12:40 - 14:00	LUNCH Physics Gazebo										
14:00 - 16:00	SESSION A										
Rooms	CHM113	CHM226	CHM227	NAB004	NAB005	NAB006	NAB007	NAB008	NAB009	NAB010	
	SS6		SS1				SS7	SS4			
16:00 - 16:30	Coffee Break Chemistry Rotunda										
16:30 - 18:00	SESSION B										
Rooms	CHM113	CHM225	CHM226	CHM227	NAB004	NAB005	NAB006	NAB007	NAB008	NAB009	NAB010
	SS6	SS2	Cengage Presentation	SS1				SS7	SS4	GS6	GS2

DAY 2: Friday, February 21, 2025

Time	DETAILED SCHEDULE										
8:00 - 9:00	Registration Main Building, Mezzanine, Dining Hall										
9:00 - 10:00	Plenary III Keynote Speaker: Dr. Edriss Titi Title: Rigorous Analysis and Numerical Implementation of Nudging Data Assimilation Algorithms Main Building, Hall A										
10:00 - 10:30	Coffee Break Chemistry Rotunda										
10:30 - 12:30	SESSION C										
Rooms	CHM113	CHM225	CHM226	CHM227	NAB004	NAB005	NAB006	NAB007	NAB008	NAB009	NAB010
	SS6	SS2	SS8	SS1	GS4	SS5	SS9	SS7	SS3	GS6	GS3
12:30 - 14:00	LUNCH Physics Gazebo										
14:00 - 16:00	SESSION D										
Rooms	CHM113	CHM225	CHM226	CHM227	NAB004	NAB005	NAB006	NAB007	NAB008	NAB009	NAB010
	SS6	SS2	SS8	SS1	GS4	SS5	SS9	SS7	GS5	GS6	GS3
16:00 - 16:30	Coffee Break Chemistry Rotunda										
16:30 - 18:00	SESSION E										
Rooms	CHM113	CHM225	CHM226	CHM227	NAB004	NAB005	NAB006	NAB007	NAB008	NAB009	NAB010
		SS2	McGraw Presentation	SS1				GS1		GS6	GS3

DAY 3: Saturday, February 22, 2025

Time	DETAILED SCHEDULE										
8:00 - 9:00	Registration Chemistry Rotunda										
9:00 - 10:00	SESSION F										
Rooms	CHM113	CHM225	CHM226	CHM227	NAB004	NAB005	NAB006	NAB007	NAB008	NAB009	NAB010
		SS2		SS1							
10:00 - 10:30	Coffee Break Chemistry Rotunda										
10:30 - 12:30	SESSION G										
Rooms	CHM113	CHM225	CHM226	CHM227	NAB004	NAB005	NAB006	NAB007	NAB008	NAB009	NAB010
		SS2	Wiley Presentation	SS1							
12:30 - 14:00	LUNCH Physics Gazebo										
14:00 - 16:00	SESSION H										
Rooms	CHM113	CHM225	CHM226	CHM227	NAB004	NAB005	NAB006	NAB007	NAB008	NAB009	NAB010
		SS2									

DAY 1: February 20, 2025

Special Session A: Algebraic Topology (SS1)			
Chair: Sadok Kallel			
Thursday February 20			
Room: CHM227			
Time	ID	Title	Speaker
14:00 – 14:50	1228	Many Partitions of Mass Assignments	Pavel Blagojevic
15:00 – 15:50	1250	Equivariant Bordism In Dimension 2 And the Evenness Conjecture of Equivariant Unitary Bordism	Andres Angel

Special Session A: Math Education (SS4)			
Thursday February 20			
Chair: Jason Johnson			
Room: NAB008			
Time	ID	Title	Speaker
14:00 – 14:25	1033	The Impact of Interactive Digital Content Based on the Model in Developing Producing Educational Aids Skills	Feras Shatat
14:25 - 14:50	1195	Online Platforms for Conceptual Teaching? The Case of MyMathLab	Haitham Solh
14:50 - 15:15	1148	Uncertainties in Measuring the Course Learning Outcomes: Fuzzy Sets Approach	Jalalidin Jaenbai
15:15 - 15:40	1239	A Preliminary Study on Mathematics Through a Cultural Lens: Surveying the Role of Ethnomathematics in Teaching	Jason Johnson
15:40 - 16:05	1210	Advancing Mathematical Proficiency and Teacher Preparation: Insights from The Mental Starters Assessment Project	Lise Westaway

Special Session A: Operator Theory and Harmonic Analysis (SS6)			
Thursday February 20			
Chair: Alexey Karapetyants			
Room: CHM113			
Time	ID	Title	Speaker
14:00-14:20	1197	Multilinear Sobolev Inequalities for Fractional Integrals Defined by Measure, and Related Topics	Alexander Meskhi
14:25-14:45	1087	Atomic Decomposition for the Bourgain-Brezis-Mironescu Space	Luigi D'onofrio
14:50-15:10	1090	Strong and Weak Associated Reflexivity of Certain Function Classes	Vladimir Stepanov
15:15-15:35	1251	Commutants of certain Classes of Toeplitz Operators	Issam Louhichi
15:40-16:00	1248	Hausdorff Operators on an Interval: Boundedness in Weighted Lebesgue Spaces	Alexey Karapetyants

Special Session A: Rings, Monoids, Module Theory, and Graphs from Rings (SS7)			
Thursday February 20			
Chair: John Meakin			
Room: NAB007			
Time	ID	Title	Speaker
14:00 – 14:25	1131	Monoids Of Modules	Roger Wiegand
14:25 – 14:50	1145	Direct Projective Modules and Their Generalizations	Ashok Ji Gupta
14:50 – 15:15	1098	Study On Variants of Chain Condition in Modules and Rings	Manoj Kumar Patel
15:15 – 15:40	1093	Schreier And *-Modules	Ahmad Yousefian Darani
15:40 – 16:00	1146	Prime-Coefficient Graphs from The Gaussian Ring of Integers Modulo N	Mohamad Jawad Kaddoura

Sponsor Session B			
Chair: Saadia Khouyibaba			
Thursday February 20			
Room: CHM226			
Time	ID	Title	Speaker
16:30 – 5:00	3002	Cengage Presentation	

Special Session B: Algebraic Topology (SS1)			
Chair: Sadok Kallel			
Thursday February 20			
Room: CHM227			
Time	ID	Title	Speaker
16:30 – 17:20	1229	Pseudo-Anosov Maps and Integer Permutations	Ahmad Rafiqi
17:30 – 18:00	1222	Hochschild-Serre Spectral Sequence for Lie Conformal Algebras	Noufe Aloudah

Special Session B: Math Education (SS4)			
Thursday February 20			
Chair: Jason Johnson			
Room: NAB008			
Time	ID	Title	Speaker
16:30 – 16:55	1241	Charting New Frontiers: Confronting the Challenges of Weaving the History of Mathematics into UAE Educational Framework	Jason Johnson
16:55 – 17:20	1219	9th -Grade Students' Difficulties in Solving Systems of Equations with Three Variables in Abu Dhabi High Schools	Nadeia Alalawi
17:20 – 17:45	1215	Improving Educational Accessibility for Mathematics Students in the Middle East	Rajani Rani Gupta
17:45 – 18:10		Group Discussion	

Special Session B: Applied and Computational Analysis (SS2)
Thursday February 20
Chair: Amjad Tuffaha
Room: CHM225

Time	ID	Title	Speaker
16:30-17:10	1245	Sustained oscillations in hyperbolic-parabolic systems	Athanasios Tzavaras
17:10-17:50	1261	On Some Inverse Boundary Value Problems Arising from Cardiac Electrophysiology	Elena Beretta
17:50 – 18:30	1262	Algorithm Development for Solution of Dynamic Poroelasticity equations based on the Spectral Method	Dana Bliyeva

Special Session B: Operator Theory and Harmonic Analysis (SS6)
Thursday February 20
Chair: Issam Louhichi
Room: CHM113

Time	ID	Title	Speaker
16:30-16:50	1052	On Quadrature-Difference Methods for Solving Periodic Linear and Nonlinear Singular Integro-Differential Equations	Alexander Fedotov
16:55-17:15	1091	Rectangular Hardy Operator in Weighted Lebesgue Spaces	Elena Ushakova
17:20-17:40	1119	Series Expansions of Solutions of Parabolic Differential-Difference Equations	Andrey Muravnik
17:45-18:05	1111	Carleson-Type Embeddings with Closed Range	Konstantin Dyakonov
18:10-18:30	1205	On the Commuting Problem of Toeplitz Operators on the Harmonic Bergman Space	Hasan Iqtaish

Special Session B: Rings, Monoids, Module Theory, and Graphs from Rings (SS7)
Thursday February 20
Chair: Kuncham Syam Prasad
Room: NAB007

Time	ID	Title	Speaker
16:30 – 16:55	1232	Characterization Of Generalized Lie-Type Derivations on Rings and Algebras	Mohammad Ashraf
16:55 – 17:20	1025	Inverse Semigroups and Leavitt Path Algebras	John Meakin
17:20 – 17:45	1153	On Different Classes of Prime Hyperideals in Hyperlattices	Harikrishnan Panackal
17:45 – 18:10	1201	Some Commutativity Results in Nearings	Kedukodi Babushri Srinivas Darani
18:10 – 18:35	1169	Zero-Divisor Graphs of Semirings	Omar Almaimouni

Session B: Statistics & Machine Learning (GS6)			
Thursday February 20			
Chair: Mujo Mesanovic			
Room: NAB009			
Time	ID	Title	Speaker
16:30 – 16:50	1234	Unbiased Parameter Estimation for Partially Observed Diffusion	Elsiddig Awadelkarim
16:50 – 17:10	1117	LLM-Enhanced Deep Reinforcement Learning for Automated Trading	Rahul Tak
17:10 – 17:30	1042	Enhancing Pde Solutions with Machine Learning as Series Methods	Habib Ullah
17:30 – 17:50	1149	RPA- Driven Transformation in the UAE Motor Insurance Sector: An Assessment of Efficiency, Customer Experience, and Market Positioning	Dhivya Justin

Session B: Analysis (GS2)			
Thursday February 20			
Chair: Mohammad Alakhrass			
Room: NAB 010			
Time	ID	Title	Speaker
16:30 – 16:50	1083	Quasi Hyperharmonic Functions in Axiomatic Harmonic Spaces.	Mohammad Alakhrass
16:50 – 17:10	1037	Generalized Mittag-Leffler-Confluent Hypergeometric Functions in Fractional Calculus with Integral Operator	Firas Ghanim
17:10 – 17:30	1200	Boundedness Of Coupled Pseudo-Differential Operators on Schwartz Space	Kanailal Mahato
17:30 – 17:50	1125	A Mathematical Analysis of a System of Caputo-Fabrizio Fractional Differential Equations for Cancer Combination Treatment	Nasrin Eghbali

DAY 2: February 21, 2025

Special Session C: Statistics and Data Science for Digital Finance on Tokenomics (SS9)			
Friday February 21			
Chair: Stephen Chan/ Jeffrey Chu			
Room: NAB006			
Time	ID	Title	Speaker
10:30 - 10:50	1108	Digital Assets in War - A Double-Edged Sword	Jeffrey Chu
10:50 - 11:10	1107	Stylized Facts of Metaverse Non-Fungible Tokens	Durga Chandrashekhar
11:10 - 11:30	1203	Ethereum Blockchain Analytics: What We Learn on Token Price from Geometric Deep Learning Models	Yuzhou Chen
11:30 - 11:50	1109	Reaction Times to Economic News in High-Frequency Trading: An Analysis of Latency and Informed Trading Ahead of Macro-News Announcements	Joerg Osterrieder
11:50 - 12:10	1074	Predicting Financial Trends Using Text Mining and NLP	Fulvio Raddi

Special Session C: Algebraic Topology (SS1)			
Chair: Pavle Blagojevic			
Friday February 21			
Room: CHM227			
Time	ID	Title	Speaker
10:30 - 11:20	1253	Applications of Homotopy Theory in Physics	Hisham Sati
11:30 - 12:20	1230	Homotopy Theory for Topological Quantum Computing	Urs Schreiber

Special Session C: Applied and Computational Analysis (SS2)			
Friday February 21			
Chair: Edriss Titi			
Room: CHM225			
Time	ID	Title	Speaker
10:30 - 11:10	1258	Enhancing Red Sea Forecasting: Integrating Data Assimilation, Uncertainty Quantification, and Artificial Intelligence	Ibrahim Hoteit
11:10 - 11:50	1270	On the desingularization of time-periodic vortex motion in bounded domains	Zineb Hassainia

Special Session C: History of Mathematics (SS3)			
Friday February 21			
Chair: Saadia Khouyibaba			
Room: NAB008			
Time	ID	Title	Speaker
10:30 - 10:55	1245	The Origin of Bicomplex Numbers in Cockle's Tesserines	Daniele Struppa
10:55 - 11:20	1115	Algebraic Accounts of Division and Ratio Focus on Some Arabic Sources	Eleonora Sammarch
11:20 - 11:45	1061	The Mathematics of the Astrolabe and its History	Graziano Gentili
11:45 - 12:10	1062	Experience and Knowledge in the 17th Century, Royal Society Scientists and IBN Tufayl	Luisa Simonutti
12:10 - 12:35	1270	Exploration of al Khwarizmi's work on Quadratic Equations	Saadia Khouyibaba

Special Session C: Operator Theory and Harmonic Analysis (SS6)			
Friday February 21			
Chair: Fernando Leon-Saavedra			
Room: CHM 113			
Time	ID	Title	Speaker
10:30-10:50	1097	Algebraic Properties of Dimovski Spaces for Operational Calculus	Arran Fernandez
10:55-11:15	1217	A Partial Solution to Ricceri's Conjecture	Francisco Javier Garcia-Pacheco
11:20-11:40	1220	Frequent Hypercyclicity of Some Non-Convolution Operators	Fernando León-Saavedra
11:45-12:05	1135	Convolutions on Lie Groups, Generic Bessel Potential Spaces and Applications	Roland Duduchava
12:10-12:30	1246	Direct and Inverse Problems for the Poisson Equation with Equality of Flows on a Part of Boundary	Makhmud Sadybekov

Special Session C: Rings, Monoids, Module Theory, and Graphs from Rings (SS7)			
Friday February 21			
Chair: Andreas Reinhart			
Room: NAB007			
Time	ID	Title	Speaker
10:30 - 10:55	1130	Prime Ideals in Noetherian Rings	Sylvia Weigand
10:55 - 11:20	1055	Polynomial Krull Domains	Giulio Peruginelli
11:20 - 11:45	1001	Polynomial And Power Series Rings Over a Generalized Krull Ring	Gyu Whan Chang
11:45 - 12:10	1138	Homological Characterizations Of G-Krull Domains And G-Dedekind Domains	Hwankoo Kim
12:10 - 12:35	1076	Equations And Characterizations for Intermediate Rings	Ali Jaballah

Special Session C: Statistical Learning and Data Science (SS8)

Friday February 21

Chair: Ayman Alzaatreh

Room: CHM226

Time	ID	Title	Speaker
10:30 - 10:55	1249	Refining Bayesian Analyses with Improper Priors Using K-fold Cross-Validation	Luai Al-Labadi
10:55 - 11:20	1120	A Compositional Data Analysis of Physical Activity Patterns of School-Aged Children in UAE	Rafiq Hijazi
11:20 - 11:45	1242	Support Vector Machine Control Chart for Multivariate Data	Mahmoud Awad
11:45 - 12:10	1020	Accommodating Spatial Outliers in Spatial Regression Model with Applications On COVID-19 Data	Ali Mohammed

Session C: Graph Theory, Coding Theory and Cryptography (GS4)

Friday February 21

Chair: Carlos Fonseca

Room: NAB004

Time	ID	Title	Speaker
10:30 - 10:50	1079	Minimal Weighted Acyclic Graphs	Carlos Fonseca
10:50 - 11:10	1048	Weighted Topological Index of Graphs	Zahid Raza
11:10 - 11:30	1123	Extremal Chemical Trees for Exponential Augmented Zagreb Index	Sourav Mondal
11:30 - 11:50	1122	On Szeged-Type Indices of Zeolite BCT Framework	Kavin Jacob
11:50 - 12:10	1047	Face Degree Indices of Benzinoid Hydrocarbons	Thirsha R
12:10 - 12:30	1236	ℓ -intersection Pairs of Constacyclic and Conjugacyclic Codes	Ramakrishna Bandi

Special Session C: Modeling and Simulation of Biological Systems (SS5)

Friday February 21

Chair: Filippo Castiglione

Room: NAB005

Time	ID	Title	Speaker
10:30 - 10:55	1252	New Optimal Control Approach to Contain Epidemic in Case of Limited Resources	Abdessamad Tridane
10:55 - 11:20	1164	Agent-Based Modeling to Enhance <i>In Vitro</i> Studies of Tuberculous Granuloma Formation	Enrico Mastrostefano
11:20 - 11:45	1110	Detection of Parkinson's disease through EEG brain signals using Open- Look, Listen and Learn	Ali Aldujaili
11:45 - 12:10	1213	Stability of Threshold Boolean Networks	Hadeel Kittaneh

Session C: Applied Mathematics & Differential Equations (GS3)			
Friday February 21			
Chair: Rima Cheaytou			
Room: NAB 010			
Time	ID	Title	Speaker
10:30 - 10:50	1039	Error Analysis of The Vector Penalty-Projection Methods for The Time-Dependent Stokes Equations with Open Boundary Conditions	Rima Cheaytou
10:50 - 11:10	1066	Periodic Sequences Generating Equivalent Classes in The Unit Circle	Mostafa Zahri
11:10 - 11:30	1116	Solving The Fully Fuzzy Riccati Matrix Equation in Linear Quadratic Regulator Problems Using Gradient and Least Square Iterative Methods	Ahmed Elsayed
11:30 - 11:50	1070	Study On Mass Loading Sensitivity in Buffer Layered Piezo – Magnetic Fiber-Reinforced Composite Structure Analyzing Shear Wave Propagation	Aditya Kanaujiya
11:50 - 12:10	1071	Mathematical Analysis on Vibrations of Piezo-Electro-Magnet-Thermoelastic Composite Nano-Beams Under Three Phase Lag Model	Abhishek Singh
12:10 - 12:30	1113	Mathematical Analysis of Surface Wave Vibration In FGPM Composite Structure	Sanjeev Sahu

Session C: Statistics & Machine Learning (GS6)			
Friday February 21			
Chair: Iman Al Hashmi			
Room: NAB 009			
Time	ID	Title	Speaker
10:30 - 10:50	1034	Lomax – Pearson Type Vii Distribution with Applications to Financial Stock Returns	Iman Al Hashmi
10:50 - 11:10	1022	Towards Robust Prediction Using the Elliptical Process for Regression	Abir Al Khabori
11:10 - 11:30	1008	The Impact of Audit and Reporting Standards on The Dynamic Model of Foreign Portfolio Investment	Ioana Vinasi
11:30 - 11:50	1049	Estimation For Conditional Moment Models Based on Martingale Difference Divergence	Kunyang Song
11:50 - 12:10	1050	Generation Of Non-Linear Synthetic Time Series of EEG Data Using Lstm Models	Bakr Rashid Majeed Al Qaysi
12:10 - 13:30	1059	Improved Cusum Control Chart for Process Variance Using Bayerian Method	Tahir Abbas

Special Session D: Statistics and Data Science for Digital Finance on Tokenomics (SS9)			
Friday February 21			
Chair: Joerg Osterrieder			
Room: NAB006			
Time	ID	Title	Speaker
14:00 - 14:20	1056	Does the Interplay Between Pollution and Economic Connectivity Impact Happiness? Evidence from European Countries	Alexandra-Anca Purcel
14:20 - 14:40	1139	Digital Innovations' Contribution to Reducing the Shadow Economy in Emerging EU Countries	Adrian Bojan
14:40 - 15:00	1142	The Impact of Corporate Governance on the Involvement in Corporate Social Responsibility Activities	Ruben Pop

Special Session D: Algebraic Topology (SS1)			
Chair: Andres Angel			
Friday February 21			
Room: CHM227			
Time	ID	Title	Speaker
15:00 - 15:50	4003	Cubes, Comonads and Calculus	Kathryn Hess
15:50 - 16:50	1176	Mapping Curves to Blowups	Ronno Das

Special Session D: Operator Theory and Harmonic Analysis (SS6)			
Friday February 21			
Chair: Abdel Rahman Yousef			
Room: CHM 113			
Time	ID	Title	Speaker
14:00-14:20	1240	Improved Hardy Inequalities	Durvudkhan Suragan
14:25-14:15	1126	Slow Propagation Velocities in Schrödinger Operators with Large Periodic Potential	Houssam Abdul-Rahman
14:50-15:10	1247	On the Well-Posedness of the Local Boundary Value Problem for the Involutory Elliptic Equation	Allaberen Ashyralyev
15:15-15:35	1134	Almost Everywhere Convergence of Subsequences of Partial Sums of Fourier Series with Respect to Vilenkin Systems	George Tephnadze
15:40-16:00	1096	A Fractional Laplacian and its Extension Problem	Salem Ben Said

Special Session D: Rings, Monoids, Module Theory, and Graphs from Rings (SS7)			
Friday February 21			
Chair: Giulio Peruginelli			
Room: NAB007			
Time	ID	Title	Speaker
14:00 - 14:25	1054	One Absorbing Factorization Lattices	Andreas Reinhart
14:25 - 14:50	1129	ON Φ --(2, J)-Ideals of Commutative Rings	Eda Yıldız
14:50 - 15:15	1159	Generalized The Essential Ideal Graph of an N-Group	Kuncham Syam Prasad
15:15 - 15:40	1147	Power Order Graph of A Finite Group	Saba Al-Kaseasbeh
15:40 - 16:05	1099	The N-Total Graph of a Commutative Ring	Djamila Ait Elhadi

Special Session D: Statistical Learning and Data Science (SS8)			
Friday February 21			
Chair: Luai Al-Labadi			
Room: CHM226			
Time	ID	Title	Speaker
14:00 - 14:25	1082	Estimation of Multiple Linear Regression Model Parameters under Multicollinearity: A Comparative Study of New Ridge-Type Pretest and Shrinkage Estimators with Machine Learning Approaches. An Application to Marsh Grass Biomass.	Marwan Al-Momani
14:25 - 14:50	1133	A Non-Invasive Diagnostic Tool and Risk Calculator for Accurate Diagnosis of Thyroid Disorders	Areej Mohammed
14:50 - 15:15	1155	Lifecycle-Based Enhancement of Physical Asset Management in Utilities	Alya Alquraidi
15:15 - 15:40	1221	Relative Range Sequential Approach for Detecting Outliers	Dania Dallah

Special Session D: Applied and Computational Analysis (SS2)			
Friday February 21			
Chair: Belkacem Said Houari			
Room: CHM225			
Time	ID	Title	Speaker
14:00 - 14:40	1003	On a Thermoelastic Bresse System Free of the Second Spectrum: Existence and Stability	Salim Messaoudi
14:40 - 15:20	1257	Unification theory of periodic solutions to active scalar equations	Taoufik Hmidi
15:20 - 16:00	1260	PiTSBiCG Parallel in time Stable Bi-Conjugate Gradient method	Mohamed Riahi

Special Session D: Modeling and Simulation of Biological Systems (SS5)

Friday February 21

Chair: Abdessamad Tridane

Room: NAB005

Time	ID	Title	Speaker
14:00 - 14:25	1157	Modelling the Fear Factor as Delay Spatiotemporal Epidemic Model	Ghilmana Sarmad
14:25 - 14:50	1243	Dynamics of HIV-1 and DC4+ T Cells Interactions Via Pseudospectrum	Ksenija Doroslovacki
14:50 - 15:15	1167	Existence Chaos and Shrimps Like Periodic Islands in ISO-Spikes Biparametric Diagrams of a Tritrophic	Anupam Priyadarshi
15:15 - 15:40	1271	Leveraging Differential Expression Network Analysis to Address Key Questions in Cancer Immunotherapy	Ayham Zaitouny
15:40 - 16:05	1194	Numerical Simulation of Lung Tissue Freezing During Cryosurgery Using TPL Bioheat Model	Sushil Kumar

Session D: Computational Mathematics and Numerical Analysis (GS5)

Friday February 21

Chair: Aziz Takhirov

Room: NAB 008

Time	ID	Title	Speaker
14:00 - 14:20	1057	Pressure Poisson Splitting Scheme for Navier-Stokes Equations with Open Boundaries	Aziz Takhirov
14:20 - 14:40	1166	Block Generalized Minimal Residual Method	Sofia Sukmaniuk
14:40 - 15:00	1185	On The Improving of Tt-Cross Approximation Method	Dmitry Zheltkov
15:00 - 15:20	1186	Bayesian Anomaly Detection in Variable-Order and Variable-Diffusivity Fractional Diffusion Mediums	Hamza Ruzayqat
15:20 - 15:40	1005	Advancing Convolution Quadrature Methods for Numerical Stability and Theoretical Analysis In Differential Equations	Fadi Awawdeh
15:40 - 16:00	1124	Fundamental Solution-Based Network for Solving the Inverse Cauchy Problem of Homogeneous Differential Equations	Wen Li

Session D: Applied Mathematics & Differential Equations (GS3)			
Friday February 21			
Chair: Ljiljana Cvetkovic			
Room: NAB 010			
Time	ID	Title	Speaker
14:00 - 14:20	1162	On The Euclidean Distance to Instability	Ljiljana Cvetkovic
14:20 - 14:40	1183	Predicting The Position of Matrix Pseudospectrum with Respect to A Given Complex Domain	Ljiljana Cvetkovic
14:40 - 15:00	1181	Optimizing Permeability Domain for Hydrogen Fuel Cells	Afrah Alzahrani
15:00 - 15:20	1184	Mathematical And Physical Aspects for The Solution Of The Initial-Value Problem For The System Describing Linear Thermodiffusion In The Thermal Stresses Theory	Jerzy Gawinecki
15:20 - 15:40	1225	Discrete-Time Replicator Dynamical Systems on Wardrop-Schur Optimal Transportation Networks	Armen Bagdasaryan
15:40 - 16:00	1226	The Price of Cognition and Evolutionary Dynamics Of Learning In Neural Networks Through Wardrop's Equilibria Approaches	Armen Bagdasaryan

Session D: Statistics & Machine Learning (GS6)			
Friday February 21			
Chair: Rachid Bentoumi			
Room: NAB 009			
Time	ID	Title	Speaker
14:00 - 14:20	1141	Exploring A New Theoretical Scheme to Construct Simple Asymmetric Bivariate Copulas: Application To Abu Dhabi Climatological Data	Rachid Bentoumi
14:20 - 14:40	1143	The Impact of Corporate Governance on The Involvement in Corporate Social Responsibility Activities"	Beatrice Larisa Dumnici
14:40 - 15:00	1144	Poisson-Charlier Polynomial Distribution and Its Applications	Yufan Feng
15:00 - 15:20	1152	Optimal Control of The False Discovery Exceedance in Large-Scale Directional Multiple Testing	Guozhu Tang
15:20 - 15:40	1175	The Background Stress Estimated from Stress Rotation Using a Bayesian Approach	Takaki Iwata
15:40 - 16:00	1223	A New Feature Selection Method for Qualitative Variables	Lama Sayegh

Session D: Graph Theory, Coding Theory and Cryptography (GS4)			
Friday February 21			
Chair: Maheshanand Bhaintwal			
Room: NAB 004			
Time	ID	Title	Speaker
14:00 - 14:20	1102	Locally Maximal Recoverable Codes	Maheshanand Bhaintwal
14:20 - 14:40	1170	Quantum Private Information Retrieval from Repairing Reed-Solomon Codes	Ramakrishna Bandi
14:40 - 15:00	1043	Comparative Analysis of Topology and Entropy Characterization in Amino Linked Covalent Organic Frameworks and Graph Energy Prediction	Aravindan Maaran
15:00 - 15:20	1044	Mathematical Techniques for Graph Descriptors, Entropies, Spectra, And Properties of Oxalate-Based Metal Organic Frameworks	Arokiya Doss C.I.
15:20 - 15:40	1045	Comparative Studies of Topological Indices of Chemical Structures	Celin Fiona J
15:40 - 16:00	1046	Topological Indices, Graph Entropies and Regression Models of Covalent Organic Frameworks	Jency Jose

Sponsor Session E			
Chair: Saadia Khouyibaba			
Friday February 21			
Room: CHM226			
Time	ID	Title	Speaker
16:30 – 5:10	3003	McGraw Hill Presentation	

Session E: Algebra, Number Theory and Applications (GS1)			
Friday February 21			
Chair: Irakli Chitaia			
Room: NAB 007			
Time	ID	Title	Speaker
16:30 - 16:50	1095	Nonspeedable Sets and Q1-Reducibility	Irakli Chitaia
16:50 - 17:10	1100	Further Results Related to The Numerical Radius of Block Matrices	Aliaa Burqan
17:10 - 17:30	1051	Exploring Kaprekar's Algorithm in Alternative Digit Arrangements	Lujain Khalil
17:30 - 17:50	1196	2-Uniform Covering Groups of Elementary Abelian 2-Groups	Dana Saleh

Session E: Applied Mathematics and Differential Equations (GS3)			
Friday February 21			
Chair: Mohammad Al-Refai			
Room: NAB 010			
Time	ID	Title	Speaker
16:30 - 16:50	1064	Gronwall Type Inequalities for Normalized Fractional Integrals with Mittag-Leffler Kernels with Applications	Mohammed Al-Refai
16:50 - 17:10	1238	Stability Analysis of Charged Neutron Stars and Darmois Junction Conditions	Abdur Rehman Jami
17:10 - 17:30	1158	Structure Preserving Reduced-Order Model for Parametric Cross-Diffusion Systems	Jad Dabaghi
17:30 - 17:50	1235	Role Of Temperature-Dependent Features in Wave Propagation Through Transversely Isotropic Micropolar Thermoelastic Media	Rajani Rani Gupta
17:50 - 18:10	1172	Analysis Of Numerical Solution of Functional Differential Equations	Rupal Aggarwal
18:10 - 18:30	1231	Rate Of Approximation by Generalized Sampling Operators	Sathish Kumar A

Session E: Statistics & Machine Learning (GS6)			
Friday February 21			
Chair: Samir Safi			
Room: NAB 009			
Time	ID	Title	Speaker
16:30 - 16:50	1085	Identification And Estimation of Change Points in Factor Models for High-Dimensional Time Series Data	Xialu Liu
16:50 - 17:10	1086	Beyond Linear Regression: Enhancing Predictive Accuracy in Stock Price Prediction Using Ensemble Methods	Samir Safi
17:10 - 17:30	1092	Berry-Essen Bounds for Degenerate U-Statistics with Application to The Distance Correlation	Qi-Man Shao
17:30 - 17:50	1103	A Two-Stage Approach for Bayesian Network Structure Discovery Under Data Uncertainty	Hyeongmin Park
17:50 - 18:10	1132	Bayesian Approach for Hidden Markov Regression Model	Wonbin Jung

Special Session E: Applied and Computational Analysis (SS2)

Friday February 21
Chair: Amjad Tuffaha
Room: CHM225

Time	ID	Title	Speaker
16:30 - 17:10	1259	Boundary Layer Separation	Tej Eddine Ghoul
17:10 - 17:50	1269	Efficient and optimally convergent discontinuous finite element approach on general meshes	Aymen Laadhari

Special Session E: Algebraic Topology (SS1)

Friday February 21
Chair: Andres Angel
Room: CHM227

Time	ID	Title	Speaker
16:30 - 17:20	1014	A General Notion of Coherent Systems	Alexander H.W. Schmitt
17:30 – 18:00	1204	An Approach of Derived (Co) Limits to Homology Theories	Nikita Goloub

DAY 3: February 22, 2022

Special Session F: Algebraic Topology (SS1) Saturday February 22 Chair: Ronno Das Room: CHM227			
Time	ID	Title	Speaker
9:10 – 10:00	1088	Torsion in the Group of Self-Homotopy Equivalences of a CW-Complex	Mahmoud Ben Khalifa

Special Session F: Applied and Computational Analysis (SS2) Saturday February 22 Chair: Amjad Tuffaha Room: CHM225			
Time	ID	Title	Speaker
9:00 - 9:40	1263	Well-Posedness, Absolute Boundary Stabilization and Numerical Results for a Nonlinear Timoshenko-Ehrenfest Type System	Abdelaziz Soufyane

Special Session F: Applied and Computational Analysis (SS2) Saturday February 22 Chair: Edriss Titi Room: CHM225			
Time	ID	Title	Speaker
10:30 – 11:10	1266	On systems of reaction–diffusion equations with a balance law: the sequel	Mokhtar Kirane
11:10 – 11:50	1206	Timoshenko Energy decay rate with Physics-Informed Neural Networks (PINNs)	Makram Hammouda

Special Session G: Algebraic Topology (SS1) Saturday February 22 Chair: Ronno Das Room: CHM227			
Time	ID	Title	Speaker
10:30 - 11:00	1178	Classification of COVID-19 via Homology of CT-SCAN	Muhammad Imran Qureshi
11:00 - 11:30	1233	Topologically Autoencoding Cognitive Maps	Maxim Beketov
11:45 - 12:15	1227	Persistent Cobordism (Topological Characteristic of Networks Dissimilarity).	Konstantin Sorokin

Sponsor Session: H Saturday February 22 Chair: Saadia Khouyibaba Room: CHM226			
Time	ID	Title	Speaker
12:00 – 12:20	3001	Wiley Presentation	

Special Session H: Applied and Computational Analysis (SS2) Saturday February 22 Chair: Abdelaziz Soufyane Room: CHM225			
Time	ID	Title	Speaker
14:00 - 14:40	1265	TBA	Nader Masmoudi
14:40 - 15:20	1268	On the Westervelt - Pennes Model of Nonlinear Thermo-Acoustics	Belkacem Said Houari
15:20 – 16:00	1256	Weighted Sobolev Estimates for Incompressible Fluid Interface	Omar Lazar