

# Second Congress of Greek Mathematicians

## SCGM-2022

July 4 - 8, 2022

School of Applied Mathematical and Physical Sciences,  
National Technical University of Athens

### Scientific Programme

Monday, July 4th, 2022		morning
Lecture Hall, Administration Building		
09:00 10:30	Registrations	
10:30 11:30	Opening Ceremony	
11:30 12:30	Coffee Break	
12:30 13:30	Constantinos Dafermos, Brown University <i>Progress in Hyperbolic Conservation Laws</i>	

Monday, July 4 <sup>th</sup> , 2022		afternoon
Amphitheatre 1, SAMPS building		
Session: Analysis		
15:00 15:30	<i>A strong form of Plessner's theorem</i> <b>Myrto Manolaki</b> (University College Dublin)	
15:30 16:00	<i>Harmonic mappings and the Schwarzian derivative</i> <b>Iason Efraimidis</b> (Universidad Autónoma de Madrid)	
16:00 16:30	Coffee Break	
16:30 17:00	<i>Προς τα πίσω τροχιές σε ημιομάδες ολόμορφων συναρτήσεων</i> <b>Konstantinos Zarvalis</b> (Aristotle University of Thessaloniki)	
17:00 17:30	<i>Spherically Convex Functions and Schwarz Lemma</i> <b>Maria Kourou</b> (Julius-Maximilians University of Wuerzburg)	
17:30 18:00	<i>Closed range integral operators on Hardy spaces</i> <b>Konstantinos Panteris</b> (University of Crete)	
18:00 18:30	<i>Semigroups of analytic functions and an extension to Sarason's characterization of vanishing mean oscillation</i> <b>Vassilis Daskalogiannis</b> (Aristotle University of Thessaloniki & American College of Thessaloniki)	
18:30 19:00	<i>Invariant capacities in the unit ball of <math>C^n</math> and exceptional sets for Hardy Sobolev spaces</i> <b>Nikolaos Chalmoukis</b> (Saarland University)	

<b>Monday, July 4<sup>th</sup>, 2022</b>		<b>afternoon</b>
<b>Lecture Hall, Administration Building</b>		
<b>Session: Mathematics Education</b>		
<b>15:00</b> <b>15:10</b>	<i>Mathematics education and Mathematical communities</i> <b>Fragkiskos Kalavasis</b> (University of the Aegean), coordinator, Introduction	
<b>15:15</b> <b>16:45</b>	<p style="text-align: center;"><b><i>The impact of scientific journals in mathematics education communities: (fragile) bridgings of (seemingly) incongruent realities</i></b></p> <p><b>Andreas Moutsios-Rentzos</b>, chair</p> <ul style="list-style-type: none"> <li>• <b>Sonia Kafoussi</b> (University of the Aegean): <i>HMS-IJME: reflections upon establishing an international mathematics education journal in Greece.</i></li> <li>• <b>Marianna Tzekaki</b> (Aristotle University of Thessaloniki) &amp; <b>Charoula Stathopoulou</b> (University of Thessaly): <i>Research in mathematics education: A journal for the promotion of mathematics education research in Greece</i></li> <li>• <b>Dionysios Lappas</b> (National and Kapodistrian University of Athens): <i>Hellenic Mathematical Review: Educational and Didactical challenges.</i></li> <li>• <b>Manolis Kritikos</b> (Athens University of Economics and Business): <i>The scientific journal ASTROLAVOS in the educational and scientific community: history, impact and perspectives.</i></li> <li>• <b>Andreas Moutsios-Rentzos</b> (National and Kapodistrian University of Athens): <i>Euclides γ': a communicational bridge of teaching, learning and research communities in an emerging hybrid lifeworld.</i></li> </ul>	
<b>17:00</b> <b>18:30</b>	<p style="text-align: center;"><b><i>Critical Values and Thinking in Mathematics Education</i></b></p> <p><b>Anna Chronaki</b>, chair</p> <ul style="list-style-type: none"> <li>• <b>Penelope Kalogeropoulou</b> (Monash University, Australia): <i>Values in Mathematics Education through an intervention program lens.</i></li> <li>• <b>Stephanos Keisoglou</b> (Mathematics Educator): <i>Critical thinking meets mathematical competitions.</i></li> <li>• <b>Stami Tsikopoulou</b> (Mathematics Educator): <i>Mathematical Problems and Human Values. Thoughts on how Euclid A and Little Euclid address students.</i></li> <li>• <b>Zoi Dipla</b> (Educator): <i>Playing and making common spaces for learning mathematics.</i></li> <li>• <b>Anna Chronaki</b> (University of Thessaly &amp; University of Malmo, Sweden): <i>Critical issues concerning values, competences and mathematical thinking for the citizen subject of our precarious times.</i></li> </ul>	

<b>Monday, July 4<sup>th</sup>, 2022</b> <span style="float: right;"><b>afternoon</b></span> <b>Multimedia room, NTUA Library (basement)</b>	
<b>Session: Geometry and Topology</b>	
<b>16:30</b> <b>17:10</b>	<i>Mean curvature flow and homotopy classes of maps between spheres</i> <b>Andreas Savas-Halilaj</b> (University of Ioannina)
<b>17:20</b> <b>18:00</b>	<i>An isometric flow of <math>G_2</math> structures</i> <b>Panagiotis Gianniotis</b> (National and Kapodistrian University of Athens)
<b>18:00</b> <b>18:30</b>	<b>Break</b>
<b>18:30</b> <b>19:10</b>	<i>Progress on compact homogeneous Einstein manifolds</i> <b>Andreas Arvanitoyeorgos</b> (University of Patras)
<b>19:20</b> <b>19:40</b>	<i>A class of Einstein submanifolds of Euclidean space</i> <b>Christos-Raent Onti</b> (University of Cyprus)
<b>19:40</b> <b>20:00</b>	<i>On the Bonnet Problem for Surfaces in 4-Dimensional Space Forms</i> <b>Kleanthis Polymerakis</b> (Aristotle University of Thessaloniki)

<b>Monday, July 4<sup>th</sup>, 2022</b> <span style="float: right;"><b>afternoon</b></span> <b>Lecture room 001, new SAMPS building</b>	
<b>Session: Probability and Statistics</b>	
<b>16:30</b> <b>17:30</b>	<i>From multiway ANOVA to Alon's conjecture: complexity of coordinate-wise inference algorithms for crossed random effect models</i> <b>Omiros Papaspiliopoulos</b> (Bocconi University, Milano)
<b>17:30</b> <b>18:00</b>	<i>Anomaly identification under sequential sampling and sampling constraints</i> <b>Georgios Fellouris</b> (University of Illinois at Urbana-Champaign)
<b>18:00</b> <b>18:30</b>	<i>Nonparametric and high-dimensional functional graphical models</i> <b>Eftychia Solea</b> (ENSAI)
<b>18:30</b> <b>19:00</b>	<i>Piecewise Deterministic Monte Carlo and the Speed Up Zig-Zag sampler</i> <b>Giorgos Vasdekis</b> (University of Warwick)

<b>Monday, July 4th, 2022                      afternoon</b> <b>Lecture room 103, new SAMPS building</b>	
<b>Session: Foundations, Philosophy of Mathematics</b>	
<b>16:00</b>	<i>Groups definable in the disjoint union of structures</i>
<b>16:30</b>	<b>Pantelis Eleftheriou</b> (University of Leeds)
<b>16:30</b>	<i>Some model theory of the tilting correspondence</i>
<b>17:00</b>	<b>Konstantinos Kartas</b> (University of Oxford)
<b>17:00</b>	<i>Pathwise-random trees and models of second-order arithmetic</i>
<b>17:30</b>	<b>Georgios Barbalias</b> (Chinese Academy of Science)
<b>17:30</b>	<i>Δυναμικά κριτήρια μη-ταξινόμησης με αναλλοίωτες ομολογίας και συνομολογίας</i>
<b>18:00</b>	<b>Aristotelis Panagiotopoulos</b> (Carnegie Mellon University)
<b>18:00</b>	<i>The distributivity of Pi over Sigma: from Martin-Loef types and Bishop sets to categories</i>
<b>18:30</b>	<b>Iosif Petrakis</b> (Ludwig Maximilians Universität München)
<b>18:30</b>	<i>First-order sentences in random groups</i>
<b>19:00</b>	<b>Ρίζος Σκλήνος</b> , (Chinese Academy of Science)
<b>19:00</b>	<i>Decidability results of subtheories of polynomial rings and formal power series</i>
<b>19:30</b>	<b>Δήμητρα Χομπιτάκη</b> (Πανεπιστήμιο Κρήτης)
<b>19:30</b>	<i>Χτίζοντας τις μαθηματικές θεωρίες</i>
<b>20:00</b>	<b>Δήμητρα Χριστοπούλου</b> (Εθνικό και Καποδιστριακό Πανεπιστήμιο Αθηνών)

Tuesday, July 5th, 2022      morning	
Amphitheatre 1, SAMPS building	
<b>Session: Analysis</b>	
09:30 10:10	<i>The Dirichlet problem with Sobolev boundary data for the Laplace equation in rough domains</i> <b>Mihalis Mourgoglou</b> (University of the Basque Country)
10:10 10:50	<i>Directional square functions</i> <b>Ioannis Parissis</b> (University of the Basque Country and Ikerbasque)

Tuesday, July 5th, 2022      morning	
Multimedia room, NTUA Library (basement)	
<b>Session: Geometry and Topology</b>	
09:30 10:10	<i>Realising sets of integers as mapping degree sets</i> <b>Christoforos Neofytidis</b> (The Ohio State University)
10:20 11:00	<i>On the forgotten definition of homology of a space via configuration space of charged particles</i> <b>Stephan Klaus</b> (University of Mainz and Mathematisches Forschungsinstitut Oberwolfach)

Tuesday, July 5th, 2022      morning	
Lecture room 001, new SAMPS building	
<b>Session: Probability and Statistics</b>	
09:00 10:00	<i>Mean field limits for weakly interacting diffusions: phase transitions, multiscale analysis and inference</i> <b>Grigorios A. Pavliotis</b> (Imperial College, London)
10:00 10:30	<i>Model-free bounds in finance: a journey through probability, statistics and optimization</i> <b>Antonios Papapantoleon</b> (Technical University, Delft)
10:30 11:00	<i>Mean field analysis and scaling limits for neural networks: typical events and fluctuations</i> <b>Konstantinos Spiliopoulos</b> (Boston University)

<b>Tuesday, July 5th, 2022</b>		<b>morning</b>
<b>Lecture Hall, Administration Building</b>		
11:00 11:30	<b>Coffee Break</b>	
<b>Plenary Talks</b>		
11:30 12:30	Dimitris Koukoulopoulos, University of Montreal <i>Random walks in number theory</i>	
12:30 13:30	Efstratia Kalfagianni, Michigan State University <i>Geometric structures of 3-manifolds and quantum invariants</i>	
<b>Tuesday, July 5<sup>th</sup>, 2022</b>		<b>afternoon</b>
<b>Lecture Hall, Administration Building</b>		
<b>Plenary Talk</b>		
15:00 16:00	Ioannis Emiris, National Kapodistrian University of Athens <i>On the number of Euclidean embeddings of rigid graphs</i>	
16:00 16:30	<b>Coffee Break</b>	
<b>Tuesday, July 5<sup>th</sup>, 2022</b>		<b>afternoon</b>
<b>Amphitheatre 1, SAMPS building</b>		
<b>Session: Analysis</b>		
16:30 17:00	<i>Dimension reduction for incompressible subsets of <math>l_p</math></i> <b>Alexandros Eskenazis</b> (CNRS Sorbonne Université & University of Cambridge)	
17:00 17:30	<i>Improving and maximal inequalities for primes in progressions</i> <b>Christina Giannitsi</b> (Georgia Institute of Technology)	
17:30 18:00	<i>The size of a common tile of several lattices</i> <b>Effie Papageorgiou</b> (University of Crete)	
18:00 18:30	<i>The distribution of reduced quadratic irrationals arising from continued fraction expansions</i> <b>Maria Siskaki</b> (University of Illinois at Urbana-Champaign)	
18:30 19:00	<i>Codimension one multiplier operators</i> <b>Odysseas Bakas</b> (Basque Center for Applied Mathematics)	

<b>Tuesday, July 5<sup>th</sup>, 2022</b> <span style="float: right;"><b>afternoon</b></span> <b>Multimedia room, NTUA Library (basement)</b>	
<b>Session: Geometry and Topology</b>	
<b>16:50</b> <b>17:10</b>	<i>On local density and local weak density of the hyperspace of sets with finitely many components</i> <b>Foteini Sereti</b> (University of Western Macedonia)
<b>17:20</b> <b>18:00</b>	<i>A report on the Dimension Theory in Topology and the dimension Dind of A. V. Arhangel'skii for finite <math>T_0</math>-topological spaces</i> <b>Dimitrios Georgiou</b> (University of Patras)
<b>18:00</b> <b>18:30</b>	<b>Break</b>
<b>18:30</b> <b>19:10</b>	<i>Simplicial volumes and Euler characteristics of (aspherical) manifolds</i> <b>Georgios Raptis</b> (University of Regensburg)
<b>19:20</b> <b>20:00</b>	<i>Topological Rigidity of Quoric Manifolds</i> <b>Stratos Prasadis</b> (University of the Aegean)

<b>Tuesday, July 5<sup>th</sup>, 2022</b> <span style="float: right;"><b>afternoon</b></span> <b>Lecture room 001, new SAMPS building</b>	
<b>Session: Probability and Statistics</b>	
<b>16:30</b> <b>17:30</b>	<i>Statistical Distances: A Global Framework for Inference</i> <b>Marianthi Markatou</b> (University at Buffalo)
<b>17:30</b> <b>18:00</b>	<i>Quantitative Uniform Stability of the Iterative Proportional Fitting Procedure</i> <b>George Deligiannidis</b> (University of Oxford)
<b>18:00</b> <b>18:30</b>	<i>Noise-Induced Randomization in Regression Discontinuity Designs</i> <b>Nikos Ignatiadis</b> (Stanford University)

<b>Tuesday, July 5<sup>th</sup>, 2022</b>		<b>afternoon</b>
<b>Lecture room 003, new SAMPS building</b>		
<b>Session: Differential Equations</b>		
<b>16:30</b> <b>17:10</b>	<i>Analogies between minimal partitions and entire solutions of the vector Allen-Cahn equation</i> <b>N. Alikakos</b> (University of Athens)	
<b>17:15</b> <b>17:45</b>	<i>The fractional porous medium equation on manifolds with conical singularities</i> <b>N. Roidos</b> (University of Patras)	
<b>17:45</b> <b>18:00</b>	<b>Break</b>	
<b>18:00</b> <b>18:30</b>	<i>The monotonicity formula of the stochastic mean curvature flow of graphs</i> <b>D. Antonopoulou</b> (Chester University, UK)	
<b>18:30</b> <b>19:00</b>	<i>Regularisation of differential equations by noise</i> <b>K. Dareiotis</b> (University of Leeds, UK)	
<b>19:00</b> <b>19:30</b>	<i>A non-local free boundary problem arising in a model of cell polarization</i> <b>A. Logioti</b> (University of Bonn, Germany)	
<b>19:30</b> <b>20:00</b>	<i>Layer dynamics for the one-dimensional <math>\varepsilon</math>-dependent Cahn-Hilliard/Allen-Cahn equation</i> <b>K. Tzirakis</b> (IACM/FORTH & University of Crete)	

<b>Tuesday, July 5<sup>th</sup>, 2022</b>		<b>afternoon</b>
<b>Lecture Hall, Administration Building</b>		
<b>Session: Mathematics of Computer Science</b>		
<b>16:30</b> <b>17:30</b>	<i>Random Walks over Chains of Blocks</i> <b>Aggelos Kiayias</b> (University of Edinburgh)	
<b>17:30</b> <b>18:00</b>	<i>Towards post-quantum cryptography</i> <b>Katerina Sotiraki</b> (UC Berkeley)	
<b>18:00</b> <b>18:30</b>	<i>Multiplicative Updates for Symmetric-cone Factorizations</i> <b>Antonios Varvitsiotis</b> (Singapore University of Technology and Design)	
<b>18:30</b> <b>19:00</b>	<i>Truthful mechanisms for scheduling problems</i> <b>Giorgos Christodoulou</b> , (Aristotle University)	



<b>Wednesday, July 6<sup>th</sup>, 2022      morning</b>	
<b>Amphitheatre 1, SAMPS building</b>	
<b>Session: Analysis</b>	
<b>09:30</b>	<i>Morita equivalence for operator systems</i>
<b>10:10</b>	<b>Evgenios Kakariadis</b> (University of Newcastle)
<b>10:10</b>	<i>Lower deviation estimates for norms</i>
<b>10:50</b>	<b>Petros Valettas</b> (University of Missouri, Columbia)

<b>Wednesday, July 6<sup>th</sup>, 2022      morning</b>	
<b>Multimedia room, NTUA Library (basement)</b>	
<b>Session: Geometry and Topology</b>	
<b>09:30</b>	<i>Curvature in Courant algebroids and Graded Geometry</i>
<b>10:10</b>	<b>Panagiotis Batakidis</b> (Aristotle University of Thessaloniki)
<b>10:20</b>	<i>A nonlinear spectrum on closed manifolds</i>
<b>11:00</b>	<b>Christos Mantoulidis</b> (Rice University)

<b>Wednesday, July 6<sup>th</sup>, 2022      morning</b>	
<b>Lecture Hall, Administration Building</b>	
<b>Session: Mathematics of Computer Science</b>	
<b>09:00</b>	<i>Intrinsic complexity</i>
<b>10:00</b>	<b>Yiannis N. Moschovakis</b> (UCLA)
<b>10:00</b>	<i>Efficient Algorithms for Graph Connectivity Problems</i>
<b>10:30</b>	<b>Loukas Georgiadis</b> (University of Ioannina)
<b>10:30</b>	<i>From Structural Graph Theory to Algorithms</i>
<b>11:00</b>	<b>Archontia Giannopoulou</b> (National and Kapodistrian University of Athens)

<b>Wednesday, July 6<sup>th</sup>, 2022      morning</b> <b>Lecture room 101, new SAMPS building</b>	
<b>Session: Algebra, Number Theory and Combinatorics</b>	
09:00	<i>On self-extensions of irreducible modules over symmetric groups</i>
10:00	<b>Haralampos Geranios</b> (University of York)
10:15	<i>On the existence of minimal models</i>
10:45	<b>Nikolaos Tsakanikas</b> (Saarland University)

<b>Wednesday, July 6<sup>th</sup>, 2022      morning</b> <b>Lecture room 001, new SAMPS building</b>	
<b>Session: Numerical Analysis and Scientific Computing</b>	
09:00	<i>Likelihood-weighted active learning with application to Bayesian optimization, uncertainty quantification, and decision making in high dimensions</i>
10:00	<b>Th. Sapsis</b> (Massachusetts Institute of Technology)
10:00	<i>Optimization with learning-informed nonsmooth differential equation constraints</i>
10:30	<b>K. Papafitsoros</b> (Weierstrass Institute Berlin)
10:30	<i>Learning the solution operator of parametric partial differential equations</i>
11:00	<b>P. Perdikaris</b> (University of Pennsylvania)

<b>Wednesday, July 6<sup>th</sup>, 2022      morning</b> <b>Lecture Hall, Administration Building</b>	
11:00	<b>Coffee Break</b>
11:30	
<b>Plenary Talks</b>	
11:30	Georgios Akrivis, University of Ioannina
12:30	<i>Analysis of numerical methods in the maximal parabolic regularity framework</i>
12:30	Dimitrios Bertsimas, Massachusetts Institute of Technology
13:30	<i>Machine Learning under a Modern Optimization Lens</i>

	<b>Wednesday, July 6<sup>th</sup>, 2022</b> <b>afternoon</b> <b>Lecture Hall, Administration Building</b>
	<b>Plenary Talk</b>
15:00 16:00	Perla Sousi, University of Cambridge <i>Picking a spanning tree at random</i>
16:00 16:30	<b>Coffee Break</b>

	<b>Wednesday, July 6<sup>th</sup>, 2022</b> <b>afternoon</b> <b>Amphitheatre 1, SAMPS building</b>
	<b>Session: Analysis</b>
16:30 17:00	<i>Separable spaces of continuous functions as Calkin algebras</i> <b>Pavlos Motakis</b> (York University)
17:00 17:30	<i>Multiple ergodic averages along sequences of polynomial growth</i> <b>Konstantinos Tsinas</b> (University of Crete)
17:30 18:00	<i>A negative moments approach to the study of sections of convex bodies</i> <b>Giorgos Chasapis</b> (Carnegie Mellon University)
18:00 18:30	<i>The percolation density <math>\vartheta(p)</math> is analytic</i> <b>Christoforos Panagiotis</b> (University of Geneva)
18:30 19:00	<i>Dynamics of weighted shifts on directed trees</i> <b>Dimitris Papathanasiou</b> (Université de Mons)

<b>Wednesday, July 6<sup>th</sup>, 2022      afternoon</b>	
<b>Multimedia room, NTUA Library (basement)</b>	
<b>Session: Geometry and Topology</b>	
<b>16:30</b>	<i>Morse foliations of codimension one on the sphere <math>S^3</math></i>
<b>17:10</b>	<b>Charalampos Charitos</b> (Agricultural University of Athens)
<b>17:20</b>	<i>A specific model of Hilbert geometry on the open unit disc</i>
<b>18:00</b>	<b>Georgios Tsapogas</b> (Agricultural University of Athens)
<b>18:10</b>	<i>Inverse Problems for the X-ray Transform on Asymptotically Hyperbolic Manifolds</i>
<b>18:30</b>	<b>Nikolaos Eptaminitakis</b> (Purdue University)
<b>19:20</b>	<i>(in-)Stability of the Anti-de Sitter spacetime and time-periodic solutions</i>
<b>19:40</b>	<b>Athanasios Chatzicaleas</b> (University of Muenster)

<b>Wednesday, July 6<sup>th</sup>, 2022      afternoon</b>	
<b>Lecture room 001, new SAMPS building</b>	
<b>Session: Probability and Statistics</b>	
<b>16:30</b>	<i>Longest and heaviest paths in random directed graphs</i>
<b>17:30</b>	<b>Takis Konstantopoulos</b> (University of Liverpool)
<b>17:30</b>	<i>Density functionals for inhomogeneous system</i>
<b>18:00</b>	<b>Dimitrios Tsagkarogiannis</b> (University of L'Aquila)
<b>18:00</b>	<i>Sharp spectral gap for regular and disordered chain of oscillators</i>
<b>18:30</b>	<b>Aggeliki Menegaki</b> (Institut des Hautes Études Scientifiques, Paris)
<b>18:30</b>	<i>Some recent progress on the properties of Schramm-Loewner Evolution (SLE)</i>
<b>19:00</b>	<b>Konstantinos Kavvadias</b> (University of Cambridge)

<b>Wednesday, July 6<sup>th</sup>, 2022      afternoon</b> <b>Lecture room 103, new SAMPS building</b>	
<b>Session: Differential Equations</b>	
16:30 17:10	<i>Existence theory and propagation of oscillations for the system of viscoelasticity of strain-rate type</i> <b>A. Tzavaras</b> (KAUST, Applied Mathematics and Computational Science)
17:15 17:45	<i>The Closeness of the Ablowitz-Ladik Lattice to non-integrable DNLS Lattice</i> <b>N. Karachalios</b> (University of Thessaly)
17:45 18:15	<b>Break</b>
18:15 18:45	<i>The inverse acoustic scattering problem via stochastic implementation</i> <b>A. Charalambopoulos</b> (NTUA)
18:45 19:15	<i>Scale invariant regularity estimates for second order elliptic equations with lower order coefficients in optimal spaces</i> <b>G. Sakellaris</b> (Aristotle University of Thessaloniki)
19:15 19:45	<i>A numerical solution for various lateral Cauchy problems</i> <b>L. Mindrinos</b> (NTUA)

<b>Wednesday, July 6<sup>th</sup>, 2022      afternoon</b> <b>Lecture Hall, Administration Building</b>	
<b>Session: Mathematics of Computer Science</b>	
16:30 17:00	<i>The Dynamics of Artificial Intelligence</i> <b>Panayotis Mertikopoulos</b> (CNRS)
17:00 17:30	<i>Evolutionary Graph Theory: Amplification and Optimization</i> <b>Andreas Pavlogiannis</b> (Aarhus University)
17:30 18:00	<i>Strongly Polynomial Time Algorithms for Learning Halfspaces and Approximate Forster Transforms</i> <b>Christos Tzamos</b> (University of Wisconsin-Madison)
18:00 18:30	<i>How to handle Biased Data and Multiple Agents in Machine Learning?</i> <b>Manolis Zampetakis</b> (UC Berkeley)
18:30 19:00	<i>Incentive-Aware Machine Learning for Decision Making</i> <b>Chara Podimata</b> (MIT)

<b>Wednesday, July 6<sup>th</sup>, 2022      afternoon</b> <b>Lecture room 101, new SAMPS building</b>	
<b>Session: Algebra, Number Theory and Combinatorics</b>	
<b>16:30</b>	<i>The Generic Anisotropy of Simplicial 1-Spheres</i>
<b>17:00</b>	<b>Vasiliki Petrotou</b> (University of Ioannina)
<b>17:00</b>	<i>Connected algebraic subgroups of <math>\text{Bir}(C \times P^n)</math> not contained in a maximal one.</i>
<b>17:30</b>	<b>Sokratis Zikas</b> (University of Basel)
<b>17:30</b>	<i>Tamagawa numbers of elliptic curves with torsion points</i>
<b>18:00</b>	<b>Mentzelos Melistas</b> (Steklov Mathematical Institute)
<b>18:00</b>	<b>Break</b>
<b>18:30</b>	<i>Gorenstein decomposable models</i>
<b>19:00</b>	<b>Danai Deligeorgaki</b> (KTH)
<b>19:00</b>	<i>Counting with symmetric and quasisymmetric functions</i>
<b>19:30</b>	<b>Basileios-Dionysios Moustakas</b> (Bar-Ilan University)
<b>19:30</b>	<i>Quadratic robust and generalized robust toric ideals of graphs</i>
<b>20:00</b>	<b>Christos Tatakis</b> (University of Ioannina)

<b>Thursday, July 7<sup>th</sup>, 2022</b> <b>morning</b> <b>Amphitheatre 1, SAMPS building</b>	
<b>Session: Analysis</b>	
<b>09:30</b>	<i>The Denjoy-Wolff set and wandering domains</i>
<b>10:10</b>	<b>Vasiliki Evdoridou</b> (University of Liverpool)
<b>10:10</b>	<i>Analysis on thin Cantor sets</i>
<b>10:50</b>	<b>Vyron Vellis</b> (University of Tennessee, Knoxville)

<b>Thursday, July 7<sup>th</sup>, 2022</b> <b>morning</b> <b>Multimedia room, NTUA Library (basement)</b>	
<b>Session: Geometry and Topology</b>	
<b>09:30</b>	<i>Rail knotoid invariants</i>
<b>10:10</b>	<b>Dimitrios Kodokostas</b> (National Technical University of Athens)
<b>10:20</b>	<i>Framed Thomson Groups</i>
<b>11:00</b>	<b>Aristides Kontogeorgis</b> (National and Kapodistrian University of Athens)

<b>Thursday, July 7<sup>th</sup>, 2022</b> <b>morning</b> <b>Lecture room 001, new SAMPS building</b>	
<b>Session: Numerical Analysis and Scientific Computing</b>	
<b>09:00</b>	<i>Embedding classical dynamics in a quantum computer</i>
<b>09:30</b>	<b>D. Giannakis</b> (New York University)
<b>09:30</b>	<i>A relaxation scheme for the numerical approximation of the Schrödinger-Poisson system</i>
<b>10:00</b>	<b>Th. Katsaounis</b> (University of Crete & IACM/FORTH)
<b>10:00</b>	<i>A hybrid FV/FE method for weakly dispersive highly nonlinear waves on unstructured meshes</i>
<b>10:30</b>	<b>M. Kazolea</b> (INRIA, University of Bordeaux, CNRS)
<b>10:30</b>	<i>A nonconforming finite element for ice shelf hydroelastic flexure</i>
<b>11:00</b>	<b>Th. Papathanasiou</b> (Aston University)

	<b>Thursday, July 7<sup>th</sup>, 2022</b> <b>morning</b> <b>Lecture room 101, new SAMPS building</b>
	<b>Session: Algebra, Number Theory and Combinatorics</b>
<b>09:00</b> <b>10:00</b>	<i>Torsion phenomena for zero-cycles on a product of curves over a number field</i> <b>Valia Gazaki</b> (University of Virginia)
<b>10:15</b> <b>10:45</b>	<i>Relating homomorphism spaces between Specht modules of different degrees</i> <b>Dimitra-Dionysia Stergiopoulou</b> (National and Kapodistrian University of Athens & University of Thessaly)

	<b>Thursday, July 7<sup>th</sup>, 2022</b> <b>morning</b> <b>Lecture Hall, Administration Building</b>
<b>11:00</b> <b>11:30</b>	<b>Coffee Break</b>
	<b>Plenary Talks</b>
<b>11:30</b> <b>12:30</b>	<b>Maria Chlouveraki, University of Versailles-St Quentin</b> <i>The symmetric group: mysteries and miracles</i>
<b>12:30</b> <b>13:30</b>	<b>Nikolaos Frantzikinakis, University of Crete</b> <i>Randomness properties of bounded sequences: An ergodic point of view</i>



	<b>Thursday, July 7<sup>th</sup>, 2022</b> <b>afternoon</b> <b>Lecture Hall, Administration Building</b>
	<b>Plenary Talk</b>
15:00 16:00	Ioannis Kontoyiannis, University of Cambridge <i>Entropy in probability and additive combinatorics</i>
16:00 16:30	<b>Coffee Break</b>

	<b>Thursday, July 7<sup>th</sup>, 2022</b> <b>afternoon</b> <b>Amphitheatre 1, SAMPS building</b>
	<b>Session: Analysis</b>
16:30 17:00	<i>A scale-critical trapped surface formation criterion for the Einstein-Maxwell system</i> <b>Nikolaos Athanasiou</b> (American College of Thessaloniki)
17:00 17:30	<i>Περιοδικές λύσεις και νήσοι ευστάθειας στον Anti-de Sitter χωροχρόνο</i> <b>Athanasios Chatzikaleas</b> (University of Münster)
17:30 18:00	<i>The anomalous spreading property for a system of Fisher-KPP type equations</i> <b>Alexandra Stavrianidi</b> (Stanford University)
18:00 18:30	<i>On the well-posedness of the derivative nonlinear Schrödinger equation</i> <b>Maria Ntekoume</b> (Rice University)
18:30 19:00	<i>Geometric rigidity in variable domains and applications to SDRI models</i> <b>Konstantinos Zemas</b> (University of Münster)

<b>Thursday, July 7<sup>th</sup>, 2022</b> <b>afternoon</b>	
<b>Multimedia room, NTUA Library (basement)</b>	
<b>Session: Geometry and Topology</b>	
<b>16:30</b>	<i>Kauffman bracket skein modules: A braid theoretic approach</i>
<b>17:10</b>	<b>Ioannis Diamantis</b> (Maastricht University, The Netherlands)
<b>17:20</b>	<i>Invariants of multi-linkoids and bondoids</i>
<b>18:00</b>	<b>Boštjan Gabrovšek</b> (University of Ljubljana)
<b>18:10</b>	<i>On the spectrum of twisted Laplacians and the Teichmüller representation</i>
<b>18:30</b>	<b>Polyxeni Spilioti</b> (Aarhus University)

<b>Thursday, July 7<sup>th</sup>, 2022</b> <b>afternoon</b>	
<b>Lecture Hall, Administration Building</b>	
<b>Session: Mathematics of Computer Science</b>	
<b>16:00</b>	<b>Christos Papadimitriou</b> (Columbia University)
<b>17:00</b>	<b>Constantinos Daskalakis</b> (MIT)
<b>17:00</b>	<b>Constantinos Daskalakis</b> (MIT)
<b>18:00</b>	<i>On the Hidden Geometry of Datasets and Approximate Metric Embeddings</i>
<b>18:30</b>	<b>Vaggos Chatziafratis</b> (University of California Santa Cruz)
<b>18:30</b>	<i>Spectral Ranking Regression</i>
<b>19:00</b>	<b>Stratis Ioannidis</b> (Northeastern)

<b>Thursday, July 7<sup>th</sup>, 2022</b> <b>afternoon</b> <b>Lecture room 103, new SAMPS building</b>	
<b>Session: Differential Equations</b>	
16:30 17:10	<i>Simple solutions in anisotropic elasticity</i> <b>G. Dassios</b> (University of Patras)
17:15 17:45	<i>The emergence of weak turbulence in general relativity</i> <b>G. Moschidis</b> (Princeton University, USA)
17:45 18:15	<b>Break</b>
18:15 18:45	<i>Feedback control of the 1d viscous Saint-Venant model</i> <b>I. Karafyllis</b> (NTUA)
18:45 19:15	<i>An inequality regarding completely monotone functions</i> <b>V. Bitsouni</b> (University of Athens)
19:15 19:45	<i>Quasilinear elliptic equations involving absorption terms and measure data</i> <b>K. Gkikas</b> (University of Athens)

<b>Thursday, July 7<sup>th</sup>, 2022</b> <b>afternoon</b> <b>Lecture room 001, new SAMPS building</b>	
<b>Session: Numerical Analysis and Scientific Computing</b>	
16:30 17:00	<i>Lyapunov functions, convergence to equilibrium and applications to sampling and optimization</i> <b>K. Zygalakis</b> (University of Edinburgh)
17:00 17:30	<i>Inference methods for stochastic differential equation(s) and application</i> <b>E. Kalligiannaki</b> (IACM/FORTH)
17:30 18:00	<i>Multiscale simulations of complex systems by learning their effective dynamics</i> <b>G. Arambatzis</b> (ETH, Zürich)
18:00 18:30	<b>Break</b>
18:30 19:00	<i>Preconditioning techniques for Non-Symmetric Real Toeplitz Systems</i> <b>D. Noutsos</b> (University of Ioannina)
19:00 19:30	<b>F. Karakatsani</b> (University of Ioannina)
19:30 20:00	<i>Advances in finite element computation and analysis of PDE systems within random geometries based on Embedded FEMs and applications</i> <b>E. Karatzas</b> (National Technical University of Athens)

<b>Thursday, July 7<sup>th</sup>, 2022</b>		<b>afternoon</b>
<b>Lecture room 101, new SAMPS building</b>		
<b>Session: Algebra, Number Theory and Combinatorics</b>		
16:30	<i>Reduction of stabilizers and generalized Donaldson-Thomas invariants</i>	
17:30	<b>Michail Savvas</b> (University of Texas at Austin)	
17:30	<i>Reedy categories and finite dimensional algebras</i>	
18:00	<b>Georgios Dalezios</b> (National and Kapodistrian University of Athens)	
18:00	<b>Break</b>	
18:30	<b>Break</b>	
18:30	<i>Nakayama algebras and 321-avoiding permutations</i>	
19:00	<b>Eirini Chavli</b> (University of Stuttgart)	
19:00	<i>Finite group schemes acting on schemes</i>	
19:30	<b>Kostas Karagiannis</b> (University of Manchester)	
19:30	<i>Geometry of <math>p</math>-adic representations</i>	
20:00	<b>Kostas I. Psaromiligkos</b> (The University of Chicago)	

	<b>Friday, July 8<sup>th</sup>, 2022</b> <b>morning</b> <b>Multimedia room, NTUA Library (basement)</b>
	<b>Session: Geometry and Topology</b>
<b>09:30</b> <b>10:10</b>	<i>Differential structures on topological spaces. A categorical approach</i> <b>Maria Papatriantafillou</b> (National and Kapodistrian University of Athens)
<b>10:20</b> <b>11:00</b>	<i>Spinor pairs and the concentration principle for Dirac operators</i> <b>Manousos Maridakis</b>

	<b>Friday, July 8<sup>th</sup>, 2022</b> <b>morning</b> <b>Lecture room 001, new SAMPS building)</b>
	<b>Session: Numerical Analysis and Scientific Computing</b>
<b>09:00</b> <b>10:00</b>	<b>E. Gallopoulos</b> (University of Patras)
<b>10:00</b> <b>10:30</b>	<i>On the numerical approximation of partial differential equations with logarithmic non-linearity</i> <b>G. Zouraris</b> (University of Crete)
<b>10:30</b> <b>11:00</b>	<i>Imaging in three-dimensional waveguides with partial-aperture data</i> <b>D. Mitsoudis</b> (University of West Attica & IACM/FORTH)

	<b>Friday, July 8<sup>th</sup>, 2022</b> <b>morning</b> <b>Lecture room 101, new SAMPS building)</b>
	<b>Session: Algebra, Number Theory and Combinatorics</b>
<b>09:00</b> <b>10:00</b>	<i>Adjoining roots to ring spectra and algebraic K-theory.</i> <b>Tasos Moulinos</b> (Institut de Mathématiques de Toulouse)
<b>10:15</b> <b>10:45</b>	<i>A canonical ideal approach to the deformation theory of curves with automorphisms</i> <b>Alexios Terezakis</b> (National and Kapodistrian University of Athens)

<b>Friday, July 8<sup>th</sup>, 2022</b>		<b>morning</b>
<b>Lecture room 103, new SAMPS building</b>		
<b>Session: The History of Mathematics</b>		
<b>09:00</b> <b>09:30</b>	<i>From 'theory' to 'precision': numerical calculations in the early post-Christian centuries</i> <b>Francesca Papanika</b>	
<b>09:30</b> <b>10:00</b>	<i>Identifying the parts of a proposition in Euclid's Elements using machine learning algorithms</i> <b>Vasilios Siochos</b>	
<b>10:00</b> <b>10:30</b>	<i>Byzantine mathematics as the constant sideler: where do the Mathematics of the Eastern Empire stand in the history of the Medieval Mathematical world</i> <b>Athanasia Megremi</b>	
<b>10:30</b> <b>11:00</b>	<i>Antagonism as Essential Part of Ancient Greek Milieu: The case of Mathematics</i> <b>Michalis Sialaros</b>	

<b>Friday, July 8<sup>th</sup>, 2022</b>		<b>morning</b>
<b>Lecture Hall, Administration Building</b>		
<b>11:00</b> <b>11:30</b>	<b>Coffee Break</b>	
<b>Plenary Talks</b>		
<b>11:30</b> <b>12:30</b>	<b>Spyridon Alexakis, University of Toronto</b> <i>Reconstructing a Riemannian metric form geodesic data: The problem of lens rigidity</i>	
<b>12:30</b> <b>13:30</b>	<b>Panagiotis Souganidis, University of Chicago</b> <i>Deterministic surface growth models</i>	

<b>Friday, July 8<sup>th</sup>, 2022 afternoon</b> <b>Lecture room 101, new SAMPS building</b>	
<b>Session: Algebra, Number Theory and Combinatorics</b>	
15:00	<i>K-Absolutely pure complexes</i>
15:30	<b>Ilias Kaperonis</b> (National and Kapodistrian University of Athens)
15:30	<i>Szygies and curves</i>
16:00	<b>Ioannis Tsouknidas</b> (National and Kapodistrian University of Athens)
16:00	<b>Coffee Break</b>
16:30	<i>Introduction to Zastava spaces</i>
17:00	<b>Andreas Hayash</b> (University of Massachusetts Amherst)
17:00	<i>Some classification results in higher-dimensional Auslander–Reiten theory</i>
17:30	<b>Laertis Vaso</b> (NTNU)
17:30	<b>Break</b>
18:00	<i>On the linearity of fundamental groups of certain graph of groups with free abelian vertex groups</i>
18:30	<b>Dafni Tsipa</b> (University of the Aegean)
18:30	<i>Algebraic Dirac operators and Dirac cohomology</i>
19:00	<b>Spyros Afentoulidis</b> (Université de Lorraine, Metz)