

Proceedings
of the
«First Congress of Greek Mathematicians»
Department of Mathematics, Athens, Greece,
June 20--26, 2018

The Hellenic Mathematical Society

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Preface

This collection of papers originates from the First Congress of Greek Mathematicians. The Congress was held at the Mathematics Department of the National and Kapodistrian University of Athens, Greece from 20-26 June 2018. The Congress was organized as an occasion to celebrate the Centennial year of the Hellenic Mathematical Society.

The website for the conference is: <http://www.hms.gr/fcgm2018/index.html>

The link includes detailed information on the organization of the conference, such as: copies of talks given at the conference, photos and videos, as well as the members of the International and Local Committees, to all of whom, as well as to the staff of the International Olympic Academy, we are indebted for their work towards the realization and the success of the Conference.

The First Congress of Greek Mathematicians aimed to make Athens a city of reunion of all Greek Mathematicians living in Greece and abroad. The programme of the Congress covered all areas of pure and applied mathematics. There were plenary lectures, invited lectures, and several sessions and mini-symposia in:

Algebra and Combinatorics; Analysis; Control Theory, Operations Research and Optimization; Differential Equations and Dynamical Systems; Geometry; History and Philosophy of Mathematics; Logic and Foundations of Mathematics; Mathematical Physics; Mathematical Finance; Mathematics Education; Number Theory, Arithmetic Geometry and Cryptography; Numerical Analysis and Scientific Computing; Probability and Statistics; Topology and Applications.

The official languages of the conference were English and Greek.

Plenary Speakers

Spyridon Argyros (NTUA), Demetrios Christodoulou (ETH Zurich), Constantinos Daskalakis (MIT), Panagiota Daskalopoulou (Columbia U.),

Mihalis Dafermos (Princeton U.), Athanasios Fokas (Cambridge U.), Stavros Garoufalidis (Georgia Inst. Tech.), Loukas Grafakos (U. of Missouri), Nicos Kapouleas (Brown U.), George Karniadakis (Brown U.), Michael Katehakis (Rutgers U.), Alexander Kechris (CalTech), Phokion Kolaitis (U. of California, Santa Cruz), Charalambos Makridakis (FORTH), Maryanthe Malliaris (U. of Chicago), Antonios Melas (NKUA), Georgios Pappas (Michigan State U.), Georgios Papanikolaou (Stanford U.), Georges Skandalis (U. Paris Diderot), Harry Tamvakis (U. of Maryland), Thaleia Zarifopoulou (U. of Texas at Austin).

Central Organizing Committee

Fellouris, Anargyros (NTUA, President of the HMS); Emmanouil, Ioannis (NKUA, Treasurer of the HMS); Lambropoulou, Sofia (NTUA, Council Member of the HMS); Giannopoulos, Apostolos (NKUA, Member of the HMS).

Organizing Committee

Chair: Fellouris, Anargyros (NTUA, President of the HMS)
Burnetas, Apostolos (NKUA); Charalambous, Hara (AUTH); Droutsas, Panagiotis (Vice President HMS); Giannoulis, Ioannis (UI); Karampetakis, Nicholas (AUTH); Kariotou, Foteini (HOU); Kritikos, Emmanouil (General Secretary MASSEE); Makri, Efrosini (UP); Makrides, Gregory (President of CMS); Prassidis, Efstratios (UA); Psarrakos, Panagiotis (NTUA); Tyrllis, Ioannis (General Secretary HMS); Zafeiropoulou, Filareti (UP); Zografos, Konstantinos (UI).

Scientific Programme Committee

President: Dougalis, Vassilios (NKUA)
Arvanitoyeorgos, Andreas (UP); Chrysafinos, Konstantinos (NTUA); Emmanouil, Ioannis (NKUA); Giannakopoulos, Athanasios (AUEB); Giannopoulos, Apostolos (NKUA); Hadjinicolaou, Maria (HOU); Kalavasis, Fragiskos (UA); Kamvissis, Spyridon (UOC); Karachalios, Nikolaos (UA); Kechagias, Epaminondas (UI); Lambropoulou, Sofia (NTUA); Poulakis, Dimitrios (AUTH); Siskakis, Aristomenis (AUTH); Tsapogas, Georgios (UA); Tzermias, Pavlos (UP); Vlachos, Theodoros (UI); Zazanis, Michael (AUEB); Zouraris, Georgios (UOC).

Session Organizers

Algebra and Combinatorics: Ioannis Emmanouil (NKUA), Alexis Kouvidakis (UOC), Vasileios Metaftsis (UA).

Analysis: Nikos Frantzikinakis (UOC), Apostolos Giannopoulos (NKUA), Vasileios Kanellopoulos (NTUA), Mihalis Kolountzakis (UOC), Aristomenis Siskakis (AUTH).

Control Theory, Operations Research and Optimization: Ioannis Tsinias (NTUA), Nikolas Karampetakis (AUTH).

Differential Equations and Dynamical Systems: Nikolaos Alikakos (NKUA), Gerassimos Barbatis (NKUA), Stathis Filippas (UOC), Spyridon Kamvissis (UOC), Maria Hadjinicolaou (HOU), Nikolaos Karachalios (UA), Vasileios Papanikolaou (NTUA), Achilles Tertikas (UOC).

Geometry: Andreas Arvanitoyeorgos (UP), Theodoros Vlachos (UI), Georgios Tsapogas (UA)

History and Philosophy of Mathematics: Dionyssios Anapolitanos (NKUA).

Logic and Foundations of Mathematics: Lefteris Kirousis (NKUA), Thanases Pheidas (UOC), Panagiotis Rondogiannis (NKUA), Rizos Sklinos (U. Lyon).

Mathematical Physics: Spyros Alexakis (U. Toronto), Stefanos Aretakis (U. Toronto), Grigorios Fournodavlos (U. Cambridge).

Mathematical Finance: Michail Anthropolos (UOP), Athanasios Giannakopoulos (AUEB), Antonis Papapantoleon (NTUA).

Mathematics Education: Fragkiskos Kalavasis (UA), Chronis Kynigos (NKUA), Despoina Potari (NKUA), Theodossios Zachariades (NKUA).

Number Theory, Arithmetic Geometry, Cryptography: Aristides Kontogeorgis (NKUA), Dimitrios Poulakis (AUTH), Pavlos Tzermias (UP).

Numerical Analysis and Scientific Computing: Georgios Akrivis (UI), Manolis Georgoulis (NTUA), Georgios Zouraris (UOC), Chrysoula Tsogka (UOC), Konstantinos Chrysafinos (NTUA).

Probability and Statistics: Dimitris Cheliotis (NKUA). Ioannis Kontoyiannis (AUEB), Christos Koukouvinos (NTUA), Michael Loulakis (NTUA), Michael Zazanis (AUEB).

Topology and Applications: Epaminondas Kechagias (UI), Sofia Lambropoulou (NTUA) Efstratios Prassidis (UA).

Round table

A round table was organized on Tuesday 26 June, at 19.00 with the theme:

**“The leakage of Greek scientific potential in the years of the crisis.
Which factors could help to its containment?”**

Interventions from: Dougalis, Vassilios, NKUA, (Coordinator), Daskalakis, Constantinos (MIT), Papanicolaou, George (Stanford U.), Sakellaridis, Ioannis (Rutgers U.), Representative of the Greek Ministry of Education, Representative of the Bank of Greece, Representative of the National Bank of Greece.

This volume contains contributed papers presented in the Congress divided into three parts: Pure and Applied Mathematics, Education and History of Mathematics.