

**International Conference
Constructive Theory of Functions
June 2-8, 2019, Sozopol, Bulgaria**



Scientific Program

Monday, June 3, 2019

Opening and Morning Session

- 9:30 – 9:40 Opening of the Conference
- 9:40 – 10:30 BLAGOVEST SENDOV:
On Rolle's theorem for complex polynomials
- 10:30 – 11:00 ~~~ Coffee Break ~~~
- 11:00 – 11:30 HRISTO SENDOV:
Polar convexity and critical points of polynomials
- 11:30 – 12:00 VLADIMIR KOSTOV:
Descartes' rule of signs and moduli of roots
- 12:00 – 12:30 LOZKO MILEV:
Sharp estimates for the critical points of oscillating
polynomials with Laguerre weight

Afternoon Session

- 15:30 – 16:00 NIKOLA NAIDENOV:
Further results on the zeros of the derivative of
oscillating polynomials with Laguerre weight
- 16:00 – 16:30 OGNYAN KOUNCHEV:
On polyharmonic interpolation of data on parallel
hyperplanes
- 16:30 – 17:00 ~~~ Coffee Break ~~~
- 17:00 – 17:30 HERMANN RENDER:
On interpolation with a class of bivariate polysplines
for data in the plane
- 17:30 – 18:00 DAVIT VOSKANYAN:
On the set of solutions of polynomial systems
- 19:30 – Reception

Tuesday, June 4, 2019

Morning Session

- 9:00 – 9:50 GITTA KUTYNIOK:
The approximation power of deep neural networks:
theory and applications
- 10:00 – 10:30 HEINZ-JOACHIM RACK:
Explicit solution, for $n = 6$, to a Markov-type extremal
problem initiated by Schur
- 10:30 – 11:00 ~~~ Coffee Break ~~~
- 11:00 – 11:30 THEODORE KILGORE:
Weighted approximation with Bernstein-Chlodovsky
operators
- 11:30 – 12:00 GENO NIKOLOV:
A discrete Markov-Bernstein inequality for sequences
and polynomials
- 12:00 – 12:30 ALETTA JOOSTE:
Recurrence equations involving different orthogonal
polynomial sequence

Afternoon Session

- 15:30 – 16:00 HEINER GONSKA:
Remarks on classical Kantorovich operators
- 16:00 – 16:30 MARGARETA HEILMANN:
Some results for linking Baskakov-type operators
- 16:30 – 17:00 ~~~ Coffee Break ~~~
- 17:00 – 17:30 ULRICH ABEL:
Voronovskaja type theorems for positive linear opera-
tors related to squared basis functions
- 17:30 – 18:00 ANA-MARIA ACU:
Voronovskaya type theorems for certain operators

Wednesday, June 5, 2019

Morning Session

9:00 – 9:50 DANY LEVIATAN:
Visiting Whitney

9:50 – 10:15 ~~~ Coffee Break ~~~

10:30 – Excursion

Thursday, June 6, 2019

Morning Session

- 9:00 – 9:50 JEAN-MARIE MIREBEAU:
Numerical methods for the discretization of anisotropic PDEs on cartesian grids
- 10:00 – 10:30 PETER BINEV:
Fast algorithms for adaptive approximation on conforming partitions
- 10:30 – 11:00 ~~~ Coffee Break ~~~
- 11:00 – 11:30 SERGEI KALMYKOV:
On some Bernstein-type inequalities for rational functions
- 11:30 – 12:00 ALI ARAL:
Operators preserving exponential functions in approximation theory
- 12:00 – 12:30 ANA AVDZHIEVA:
Definite quadrature formulae of order three

Afternoon Session

- 15:30 – 16:00 PENCHO PETRUSHEV:
Gaussian bound for the heat kernel induced by prolate spheroidal wave functions with applications
- 16:00 – 16:30 GEORGE KYRIAZIS:
Product Besov and Triebel-Lizorkin spaces with application to nonlinear approximation
- 16:30 – 17:00 ~~~ Coffee Break ~~~
- 17:00 – 17:30 KAMEN IVANOV:
Non-linear approximation in $BMO(\mathbb{S}^{d-1})$
- 17:30 – 18:00 ARTHUR DANIELYAN:
On Fatou's theorem on bounded analytic functions
- 20:00 – Conference Dinner

Friday, June 7, 2019

Morning Session

- 9:00 – 9:50 VILMOS TOTIK:
Polynomial inequalities on general sets
- 10:00 – 10:30 ALEXEI SHADRIN:
Optimal sampling rates for approximating analytic
functions from pointwise samples
- 10:30 – 11:00 ~~~ Coffee Break ~~~
- 11:00 – 11:30 RUMEN ULUCHEV:
On Hardy L_2 inequality in certain finite dimensional
spaces
- 11:30 – 12:00 BORISLAV DRAGANOV:
Simultaneous approximation by Bernstein polynomials
and their integer forms
- 12:00 – 12:30 IVAN GADJEV:
Weighted approximation of functions in L_p -norm by
some Kantorovich operators
- 12:30 – 12:45 Closing of the Conference