Transform Methods and Special Functions' 2011
6th International Conference, Sofia, 20-23 August 2011

Institute of Mathematics and Informatics
Bulgarian Academy of Sciences

TMSF’ 2011

SCIENTIFIC PROGRAM

Partially supported by Project D ID 02/25/2009:

"Integral Transform Methods, Special Functions and Applications",
National Science Fund – Ministry of Education, Youth and Science, BULGARIA
21 October (Friday)

SESSION 1 – HALL 055

9.00 – 9.40 Opening Ceremony  
Chair: G. Dimkov

9.45 Photo of participants in front of the Institute

9.50 – 10.10 Coffee Break  
Chair: I. Dimovski

10.15 – 10.35 V. Kiryakova: On the life contributions of Professor Peter Rusev

10.40 – 11.20 G. Dimkov: Mathematics and Music – so far and so close

11.20 – 11.40 P. Rusev: Classical Hermite and Laguerre polynomials and the zero-distribution of Riemann's \zeta function

11.40 – 12.20 Bl. Sendov: Polar derivatives and apolarity

12.20 – 13.00 R. Gorenflo, F. Mainardi: Two pathways to subordination in time-fractional diffusion

13.00 - 14.30 Lunch Break

SESSION 2 – HALL 055

Chair: S.L. Kalla

14.30 – 15.00 F. Mainardi, R. Gorenflo: On the distinguished role of the Mittag-Leffler and Wright functions in fractional calculus

15.00 – 15.30 A. Takaci, D. Takaci: On the approximate solutions of a fractional integro-differential equation

15.30 – 15.50 J. Vindas: Tauberian class estimates for wavelet and non-wavelet transforms of vector-valued distributions

15.50 – 16.10 D. Atanasiu, P. Mikusinski, D. Nemzer: An algebraic approach to tempered distributions

16.10 – 16.30 Coffee Break  
Chair: R. Gorenflo

16.30 – 16.50 N. Virchenko: On some generalizations of classical integral transforms

16.50 – 17.10 M. Stojanovic: Nonlinear time fractional evolution equations with singularities

17.10 – 17.30 T. Odzijewicz, A. Malinowska, D. Torres: Fractional variational calculus of variable order
Chair: N. Virchenko

17.30 – 17.50  B. Datsko, Yu. Luchko: Fractional nonlinear autonomous systems: stability analysis and limit cycles

17.50 – 18.10  E. Bazhlekova: Strict $L^p$ solutions for nonautonomous fractional evolution equations

18.10 – 18.30  I. Shilin: SO(2,1)-Invariant double integral transforms and formulas for Whittaker and other functions

18.30 – 20.30  WELCOME COCKTAIL (Buffet of IMI)

22 October (Saturday)

SESSION 3 – HALL 256

Chair: F. Mainardi

9.00 – 9.40  Yu. Luchko: Some existence and uniqueness results for the time-fractional diffusion equations

9.40 – 10.20  Vu Kim Tuan: Inverse problem for fractional diffusion equation

10.20 – 10.50  I. Podlubny, I. Petras, T. Skovranek, V. Vertibskyi, B. Vinagre, YangQuan Chen (V. Kiryakova): Matrix approach to discrete fractional calculus and its implementation in MATLAB

10.50 – 11.10  Coffee Break

Chair: P. Rusev

11.10 – 11.40  S.L. Kalla: Financial derivatives and integral transforms

11.40 – 12.10  I. Dimovski, Yu. Tsankov: Exact solutions of nonlocal BVPs for the multidimensional heat equation

12.10 – 12.40  I. Landjev: The bicentennial anniversary of E. Galois

12.40 – 13.40  Lunch Break

SESSION 4 – HALL 256

Chair: V. Krasniqi

14.00 – 14.20  Y. Polatoglu, M. Aydogan, A. Yemisci: Growth theorem and the radius of starlikeness of close-to-spirallike functions

14.20 – 14.40  D. Pashkouleva: Certain classes of functions with negative coefficients
14.40 – 15.00 P. Rajkovic, P. Barry, N. Savic: The Hankel determinants of the number sequences in an integral form

15.00 – 15.20 Coffee Break

Chair: A. Takaci

15.20 – 15.40 M. Stankovic, P. Rajkovic, P. Stankovic: Curves provided by ratio division of a few special functions

15.40 – 16.00 S. Marinkovic, M. Stankovic, E. Mulalic: The deformed trigonometric functions of two variables

16.00 – 16.20 M. Rakha: Classical summation theorems for the series $_2F_1$ and $_3F_2$ and their applications

Chair: Yu. Luchko

16.20 – 16.40 G. Chobanov, I. Dimovski: Exact solutions of a nonlocal pluriparabolic problem

16.40 – 17.00 I. Dimovski, V. Hristov: Commutants of the square of differentiation on the half-line

17.00 – 17.20 I. Dimovski, N. Bozhinov: Commutants of Sturm-Liouville operators on the halfline $\mathbb{R}_+$

17.20 – 17.40 G. Boychev: Hermite series with polar singularities

SESSION 5 – HALL 278

Chair: D. Takaci

14.00 – 14.20 G. Light: Information transmission in a quotient space


14.40 – 15.00 I. Matychyn, A. Chikrii, V. Onyshchenko: Conflict-controlled processes involving fractional differential equations with impulses

15.00 – 15.20 Coffee Break

Chair: G. Dimkov

15.20 – 15.40 E. Nikolov: Application of fractional operators in industrial control system (Fractional ML – DTC control systems - design and analysis)

15.40 – 16.00 A. Guerziz, A. Laouar: Passage of a long wave over a vertical barrier: Calculation of the local disturbances by a complex variable method

16.00 – 16.20 A.M. El-Kassar, M. Salameh, M. Bitar: EPQ model with imperfect quality raw material
Chair: O. Mushkarov

16.20 – 16.50  J. Davidov, O. Mushkarov: Existence of holomorphic functions on twistor spaces

16.50 – 17.10  L. Apostolova: Hyperbolic fourth-R quadratic equation and holomorphic fourth-R polynomials

17.10 – 17.30  Y. Nikolova: $\alpha$-Mellin Transform and one of its applications

18.30 – 20.00  BUS TOUR TO SOFIA DOWNTOWN (For Foreigners)
20.00          BANQUET PARTY

23 October (Sunday)

SESSION 6 – HALL 256

Chair: Vu Kim Tuan

9.30 – 10.10  G. Milovanovic, A. Cvetkovic: Special classes of orthogonal polynomials and corresponding quadratures of Gaussian type

10.10 – 10.40  R. Kovacheva: Zero distribution of geometrically convergent sequences of rational functions

10.45 – 11.10  Coffee Break

Chair: G. Milovanovic

11.10 – 11.40  G. Nikolov, A. Alexandrov: On the behavior of ultraspherical polynomials in the complex plane

11.40 – 12.10  V. Kiryakova: The special functions – classical and new, and generalized fractional calculus

12.10 – 12.30  J. Paneva-Konovska: Three multi-index Mittag-Leffler functions and convergent series in them

12.30 – 13.40  Lunch Break
SESSION 7 – HALL 256

Chair: T. Pogany

13.40 – 14.00  D. Takaci: On the visualization of generalized functions

14.00 – 14.20  D. Kolev, Ts. Donchev, K. Nakagawa: Weakened condition for the stability to solutions of parabolic equations with "maxima"

14.20 – 14.40  V. Krasniqi, F. Merovci: Some completely monotonic properties for the $\Gamma_{p,q}$-function

14.40 – 15.00  L. Boyadjiev: From the classical orthogonal polynomials to the fractional diffusion equations

15.00 – 15.20  B. Al-Saqabi: Solutions of fractional diffusion-wave equations in terms of $H$-functions

15.20 – 15.40  Coffee Break

Chair: L. Boyadjiev

15.40 – 16.00  T. Pogany: Integral forms of Neumann--type series of Bessel functions

16.00 – 16.20  Z. Tomovski, RK Saxena, T. Pogany: Probability distributions associated with Mathieu type series

16.20 – 16.40  S. Mirevski, L. Boyadjiev: Some fractional order analogues of the Laguerre, Kummer and Gauss functions

16.40 – 17.00  Closing of the Conference

SCHEME OF THE PROGRAM

Opening: 21 Oct. (Friday), 9.00 – 10.00
Talks, 21 Oct.: Session 1 (10.15 - 13.00), Session 2 (14.30 - 18.30)

Talks, 22 Oct.: Session 3 (9.00 – 12.40); Session 4 (14.00 – 17.40), Session 5 (14.00 – 17.40)

22 Oct., 18.30 – 20.00  Bus tour around Sofia (for foreigners)
22 Oct., 20.00 -  22 Oct.,  Banquet party in Restaurant “Biljana”

Talks, 23 Oct.: Session 6 (9.30 – 12.30); Session 7 (13.40 -16.40); Closing; Free evening