



**MATHEMATICAL INEQUALITIES
AND
APPLICATIONS 2008**

Trogir, Croatia

June 8 – 14, 2008

**Conference in honour of Professor Josip Pečarić
on the occasion of his 60th birthday**

CONFERENCE PROGRAM

Arrival of participants to the hotel *Medena*

16:00 – 22:00 **Registration (Registration desk)**

07:30 – 09:00 **Registration (Registration desk)**

PLENARY SESSION (Hall A)

Chair: Lars – Erik Persson

09:00 – 09:30 **Opening ceremony**

09:30 – 10:30 *The Work of Professor Pečarić*
Peter S. Bullen

10:30 – 11:00 **Coffee break**

PLENARY SESSION (Hall A)

Chair: Gord Sinnamon

11:00 – 12:00 *My Life with Hardy and his Inequalities*
Lars – Erik Persson

12:00 – 13:00 *The Role of Parameters in Hardy-Type Inequalities*
Alois Kufner

13:00 – 16:00 **Lunch break**

13:00 – 16:00 **Registration (Registration desk)**

PLENARY SESSION (Hall A)

Chair: Lech Maligranda

16:00 – 17:00 *Weighted Inequalities for Integral Operators with Variable Domain of Integration*
Vladimir D. Stepanov

17:00 – 17:30 **Coffee break**

PARALLEL SESSION A (Hall A)

Chair: Zsolt Páles

17:30 – 17:50 *On Superquadracity*
S. Abramovich

17:50 – 18:10 *The Hierarchy of Convexity and Some Classical Inequalities*
Gh. Toader

18:10 – 18:30 *Kuhn-type Results for Quasiconvex Functions*
K. Nikodem

18:30 – 18:50 **Break**

Chair: Jamal Roojin

18:50 – 19:10 *Takagi Functions and Approximate Midconvexity*
J. Tabor and J. Tabor

19:10 – 19:30 *The Local Behaviour of van der Waerden Type Functions and Estimations of Approximate Convexity*
Z. Boros

20:00 – 21:00 **Dinner break**

21:00 **Welcome Reception**

PARALLEL SESSION B (Hall B)

Chair: Masatoshi Fujii

17:30 – 17:50 *The Jensen Functional Equation in non-Archimedean Normed Spaces*
F. Dadipour and M. S. Moslehian

17:50 – 18:10 *The Probabilistic Stability for a Functional Nonlinear Equation in a Single Variable*
D. Mihet

18:10 – 18:30 *Optimal Control Problems with Inequality Constraints via Hybrid Functions*
M. Razzaghi

18:30 – 18:50 **Break**

Chair: Attila Gilányi

18:50 – 19:10 *Fixed Points and Generalized Stability for Functional Equations in Abstract Spaces I*
V. Radu

19:10 – 19:30 *Fixed Points and Generalized Stability for Functional Equations in Abstract Spaces II*
L. Cădariu

19:30 – 19:50 *On the Fibonacci Functional Equation*
C. Choi and S. - M. Jung

PARALLEL SESSION C (Hall C)

Chair: Constantin P. Niculescu

17:30 – 17:50 *Uniform Exponential Stability of an Operator Semigroup on Hilbert Space and an Infinite Time*
C. Buşe

17:50 – 18:10 *On ψ Interpolation Spaces*
L. Nikolova and Th. Zachariades

18:10 – 18:30 *On a Functional Volterra-Fredholm Integral Equation, via Picard Operators*
N. Lungu and I. A. Rus

18:30 – 18:50 **Break**

Chair: Joan Cerdà

18:50 – 19:10 *Generalization of Special Bihari-Type Integral Inequalities in Measure Spaces*
L. Horváth

19:10 – 19:30 *Criteria of Two-weighted Inequalities with Applications in BVP*
V. Kokilashvili

19:30 – 19:50 *About one Integral Inequality with Delays and its Application*
S. Iskandarov

PLENARY SESSION (Hall A)

Chair: Frank Hansen

- 09:00 – 10:00 *Comparison of Generalized Quasi-arithmetic Means*
Zsolt Páles
- 10:00 – 11:00 *Inequalities for Discrete Higher Order Convex Functions: a Survey*
András Prékopa
- 11:00 – 11:30 **Coffee break**

PARALLEL SESSION A (Hall A)

Chair: Charles E. M. Pearce

- 11:30 – 11:50 *Convexity in Global NPC Spaces*
C. P. Niculescu
- 11:50 – 12:10 *Hermite-Hadamard's Inequality and the p – HH – norm*
E. Kikianty
- 12:10 – 12:30 *Hermite-Hadamard Inequalities in the Approximate Integration*
S. Waśowicz
- 12:30 – 12:50 **Break**
- Chair: Shoshana Abramovich
- 12:50 – 13:10 *The Hermite-Hadamard Inequality in Beckenbach's Setting*
M. Bessenyei
- 13:10 – 13:30 *Mappings Connected with Hermite-Hadamard inequalities for Superquadratic Functions*
S. Banić

13:30 – 16:00 **Lunch break**

PARALLEL SESSION B (Hall B)

Chair: Vladimir D. Stepanov

- 11:30 – 11:50 *Asymptotic Estimates for Approximation Numbers of the Hardy Operator in the q – Banach Space*
E. N. Lomakina
- 11:50 – 12:10 *Maximal Overdetermined Weighted Hardy's Inequality on a Finite Interval*
M. Nasyrova
- 12:10 – 12:30 *Inequalities of Hardy Type with Measures, the Case $0 < p < 1$*
D. Prokhorov
- 12:30 – 12:50 **Break**
- Chair: Sorina Barza
- 12:50 – 13:10 *Some New Results Concerning the Hardy Inequality*
M. Johansson
- 13:10 – 13:30 *Hardy Inequalities with Both Variable Limits of Integration on Subclasses of Monotone Functions*
E. P. Ushakova

PARALLEL SESSION C (Hall C)

Chair: Ingram Olkin

- 11:30 – 11:50 *Reverses of Golden-Thompson-Type Inequality*
Y. Seo
- 11:50 – 12:10 *Operator Geometric Mean and its Use*
M. Fujii
- 12:10 – 12:30 *Inequalities Involving the Khatri-Rao Product of Maps on Positive Definite Matrices*
J. Mičić Hot
- 12:30 – 12:50 **Break**
- Chair: Ioan Gavrea
- 12:50 – 13:30 *A New Theory of Divergent Integrals*
A. Laforgia
- poster *An Analytic Solution for some Separable Convex Quadratic Programming Problems with Equality and Inequality Constraints*
L. Bayón, J. M. Grau, M. M. Ruiz, and P. M. Suárez

PLENARY SESSION (Hall A)

Chair: Victor Burenkov

16:00 – 17:00 *Real and Complex Operator Norms Between Quasi-Banach L^p - L^q Spaces*
Lech Maligranda

17:00 – 17:30 **Coffee break**

PARALLEL SESSION A (Hall A)

Chair: Yuki Seo

17:30 – 17:50 *Reverse Cauchy-Schwarz Inequalities for Positive C^* -valued Sesquilinear Forms*
M. S. Moslehian and L. – E. Persson

17:50 – 18:10 *The Dunkl-Williams Equality in pre-Hilbert C^* -modules*
R. Rajić

18:10 – 18:30 *Inequalities for C^* -valued Norms on a Hilbert C^* -module*
B. Kolarec

18:30 – 18:50 **Break**

Chair: Mohammad Sal Moslehian

18:50 – 19:10 *Superstability of Some Conditional Cauchy Functional Equations and Related Questions*
B. Batko

19:10 – 19:30 *On Two Variable Functional Inequality and Related Functional Equation*
M. Adamek

19:30 – 19:50 *Inequalities for Different Kinds of Convexity*
M. Emin Ozdemir

PARALLEL SESSION B (Hall B)

Chair: Maria Nasyrova

17:30 – 17:50 *Boundedness and Compactness of the Operators in Weighted Spaces of the Sequences*
R. Oinarov

17:50 – 18:10 *Capacities, Symmetrizations, and Associated Lorentz Spaces*
J. Cerdà

18:10 – 18:30 *Best Constant in Triangle Inequality in Lorentz Spaces*
S. Barza

18:30 – 18:50 **Break**

Chair: Ryskul Oinarov

18:50 – 19:10 *Inequalities Based on Convexity Properties for a General Integral Operator*
D. Breaz and N. Breaz

19:10 – 19:30 *Weighted Inequalities for Bellman and Marcinkiewicz Transforms*
T. Tsanava

19:30 – 19:50 *On subquadratic functions*
A. Gilányi and K. Troczka-Pawelec

PARALLEL SESSION C (Hall C)

Chair: Andrea Laforgia

17:30 – 17:50 *An Extension of Alzer's Inequality via Convexity with Applications*
J. Rooin

17:50 – 18:10 *On Intermediate Mean Values*
S. Simić

18:10 – 18:30 *Shape Functional Optimization with Restrictions for Structural Design*
M. López, J. M. Matías, J. A. Vilán, C. Ordóñez, and J. Martínez

18:30 – 18:50 **Break**

Chair: Jadranka Mičić Hot

18:50 – 19:10 *Rule Extraction from Support Vector Machines Applied to the Construction of a Geomechanical Quality Index*
M. Araújo, J. M. Matías, T. Rivas, C. Ordóñez, and J. Taboada

19:10 – 19:20 *An Explicit Solution of the Performance of a new Brake Ring-Type Energy Dissipator*
J. J. del Coz Díaz, P. J. García Nieto, D. Castro-Fresno, and F. P. Álvarez Rabanal

PLENARY SESSION (Hall A)

Chair: László Losonczi

08:30 – 09:30	<i>Operator and Trace Inequalities with Applications</i> Frank Hansen
09:30 – 10:30	<i>Moment Inequalities, Mean Inequalities, Matrix Inequalities and Probability Inequalities</i> Ingram Olkin
10:30 – 11:00	Break
11:00 – 19:30	Excursion to the Krka National Park and Trogir (lunch included)

PLENARY SESSION (Hall A)

Chair: András Prékopa

- 09:00 – 10:00 *Numerical Solution of a Non-smooth Eigenvalue Problem*
Roland Glowinski
- 10:00 – 11:00 *Accurate Approximations of the Riemann-Stieltjes Integral via Theory of Inequalities*
Sever S. Dragomir
- 11:00 – 11:30 **Coffee break**

PARALLEL SESSION A (Hall A)

Chair: Slavko Simić

- 11:30 – 11:50 *Jensen's Inequality for Quasiconvex Functions*
S. S. Dragomir and C. E. M. Pearce
- 11:50 – 12:10 *On a Result by S. Simić*
B. Gavrea
- 12:10 – 12:30 *Uniform Treatment of Jensen's Type and Converse Jensen's Type Inequalities for Signed Measures*
J. Pečarić, I. Perić, and M. Rodić Lipanović
- 12:30 – 12:50 **Break**
- 12:50 – 13:10 *Comparison of Extended Logarithmic Mean, Generalized Logarithmic Mean and Power Means*
M. Rodić Lipanović, K. Smoljak, and V. Šimić
- 13:10 – 13:30 *Complementariness with Respect to the Logarithmic Mean*
I. Costin and S. Toader

13:30 – 16:00 **Lunch break**

PARALLEL SESSION B (Hall B)

Chair: Elena P. Ushakova

- 11:30 – 11:50 *A New Duality Theorem for New Tent Spaces, Distances of Functions from Bloch Classes to some Spaces of Holomorphic Functions, and some Remarks on Diagonal Map*
R. Shamoyan
- 11:50 – 12:10 *On Special Differential Subordinations Using Sălăgean and Ruscheweyh Operators*
A. Alb Lupaş
- 12:10 – 12:30 *Coefficient Inequalities and Distortion Bounds Associated with a new Subclass of Analytic Functions*
A. Cătaş
- 12:30 – 12:50 **Break**
- 12:50 – 13:10 *An Inequality for Continuous Linear Functionals*
M. Ivan
- 13:10 – 13:30 *Sharp Inequalities for Linear Functionals on Monotone Functions*
T. Rychlik

PARALLEL SESSION C (Hall C)

Chair: Peter S. Bullen

- 11:30 – 11:50 *Ratio of Stolarsky Means: Monotonicity and Comparison*
L. Losonczi
- 11:50 – 12:10 *New Means of Stolarsky Type*
J. Jakšetić
- 12:10 – 12:30 *Integral Mean Value Bounds for h -convex Functions*
M. Bombardelli and S. Varošanec
- 12:30 – 12:50 **Break**
- 12:50 – 13:10 *Necessary Conditions for the Existence of Global Solutions to Certain Systems of Fractional Differential Equations*
M. Kirane
- 13:10 – 13:30 *Nonexistence of Positive Solutions to Nonlinear Elliptic Systems Involving Fractional Diffusion Operators*
Z. Dahmani, F. Karami, and S. Kerbal

PLENARY SESSION (Hall A)

Chair: Roland Glowinski

16:00 – 17:00 *Sharp Multidimensional Multiplicative Inequalities for Weighted Lebesgue Spaces with Homogeneous Weights*
Victor Burenkov

17:00 – 17:30 **Coffee break**

PARALLEL SESSION A (Hall A)

Chair: Vladimir Volenec

17:30 – 17:50 *On Closed Curves and Related Inequalities in Minkowski Geometry*
H. Martini

17:50 – 18:10 *Heptagonal Triangle as Extremal Triangle of Dixmier-Kahane-Nicolas Inequality*
Z. Kolar-Begović and R. Kolar-Šuper

18:10 – 18:30 *On Young for Bounding Lorenz and Gini*
P. Cerone

18:30 – 18:50 **Break**

Chair: Mihály Bessenyei

18:50 – 19:10 *Some Inequalities for Differentiable Convex Functions*
E. Set

19:10 – 19:30 *Universal Truncation Error Upper Bounds in Sampling Restoration*
A. Olenko and T. K. Pogány

19:30 – 19:50 *Some Bounds for Alternating Mathieu Type Series*
Ž. Tomovski and R. Hilfer

PARALLEL SESSION B (Hall B)

Chair: Živorad Tomovski

17:30 – 17:50 *Inequalities in Summability Theory of Fourier Series*
F. Weisz

17:50 – 18:10 *Some Boundedness Properties of the Maximal Operator of the Subsequence of Walsh-Kaczmarz Logarithmic Means*
K. Nagy

18:10 – 18:30 *Maximal Convergence Spaces of (C, α) Summability Methods of Trigonometric and Walsh Series*
G. Gát

18:30 – 18:50 **Break**

Chair: Károly Nagy

18:50 – 19:10 *Maximal Operators on Vilenkin Systems*
I. Blahota

19:10 – 19:30 *Norm Estimations for Convolutions Related to the Fourier Cosine and Kontorovich-Lebedev Transforms*
L. E. Britvina

19:30 – 19:50 *Inequalities Involving Multidimensional Gram Determinants*
A. S. Gasparyan

PARALLEL SESSION C (Hall C)

Chair: Gheorghe Toader

17:30 – 17:50 *Properties of the Intermediate Point from the Mean Value Theorem*
D. Duca

17:50 – 18:10 *Inequalities on Real Roots of Polynomials*
D. Stefanescu

18:10 – 18:30 *An Inequality for a Linear Discrete Operator Involving Convex Functions*
A. Holhoş

18:30 – 18:50 **Break**

Chair: Ivan Perić

18:50 – 19:10 *Classes of Functions that Satisfy the Generalized Schur Inequality*
M. Rădulescu, S. Rădulescu, and P. Alexandrescu

19:10 – 19:30 *A Property of a Linear Inclusion*
D. Popa

19:30 – 19:50 *Some Inequalities and Geometry in Banach Spaces*
Ji Gao

20:00 **Dinner Reception**

PLENARY SESSION (Hall A)

Chair: Alois Kufner

- 09:00 – 10:00 *Bootstrapping Weighted Fourier Inequalities*
Gord Sinnamon
- 10:00 – 11:00 *Mixed Means, Hardy Type Inequalities and Maximal Functions*
Ivan Perić
- 11:00 – 11:30 **Coffee break**

PARALLEL SESSION A (Hall A)

Chair: Ferenc Weisz

- 11:30 – 11:50 *On Monotone Iterative Method*
T. Jankowski
- 11:50 – 12:10 *Optimal Lyapunov Inequalities for BVP*
A. Cañada and S. Villegas
- 12:10 – 12:30 *Random Monotone Variational Inequalities with Various Applications*
J. Gwinner
- 12:30 – 12:50 **Break**
- Chair: Joachim Gwinner
- 12:50 – 13:10 *Existence and Behavior of Solutions for Variational Inequalities over Products of Sets*
D. Inoan
- 13:10 – 13:30 *Resolvent Operator Methods for General Variational Inclusions*
E. Hamad Al - Shemas

13:30 – 16:00 **Lunch break**

PARALLEL SESSION B (Hall B)

Chair: Tibor K. Pogány

- 11:30 – 11:50 *Deviation of Discrete Distributions*
T. F. Móri
- 11:50 – 12:10 *Minimax Inequality for the Prediction Risk*
L. Gajek and V. Lipińska
- 12:10 – 12:30 *Binary Programming Models for Crop Planning Under Risk*
M. Rădulescu and C. Zoie Rădulescu
- 12:30 – 12:50 **Break**
- Chair: Iva Franjić
- 12:50 – 13:10 *On Some Bounds of Ostrowski and Čebišev Type Inequalities*
F. Ahmad, P. Cerone, S. S. Dragomir, and N. A. Mir
- 13:10 – 13:30 *Weighted Ostrowski Type Inequality for a Random Variable whose Probability Density Function Belongs to $L_\infty[a, b]$*
N. A. Mir and F. Zafar

PARALLEL SESSION C (Hall C)

Chair: Pietro Cerone

- 11:30 – 11:50 *Two-Sided Estimates Concerning the Norm of Some Projective Operators*
A. I. Mitrea and D. Mitrea
- 11:50 – 12:10 *Hermite-Hadamard-Type Inequalities for Some Type of Quadrature Formulas*
I. Franjić
- 12:10 – 12:30 *The Corrected Two-point Weighted Quadrature Formulae*
S. Kovač
- 12:30 – 12:50 **Break**
- Chair: Vidosava Šimić
- 12:50 – 13:10 *On the Max Version of the Generalized Spectral Radius Theorem*
A. Peperko
- 13:10 – 13:30 *Logarithmic Convexity and How to Prove It*
T. Došlić

PLENARY SESSION (Hall A)

Chair: Sever S. Dragomir

16:00 – 17:00 *On Euler-type Identities and Applications*
Marko Matić

17:00 – 17:30 **Coffee break**

PARALLEL SESSION A (Hall A)

Chair: Elena N. Lomakina

17:30 – 17:50 *Hilbert's Inequality and Gaussian
Hypergeometric Functions*
M. Krnić

17:50 – 18:10 *Some Remarks on Hilbert's Inequality*
I. Perić and P. Vuković

18:10 – 18:30 *On a Discrete Hilbert-Type Inequality
with a Non-homogeneous Kernel*
**B. Draščić Ban, J. Pečarić, and T. K.
Pogány**

18:30 – 18:50 **Break**

Chair: Mario Krnić

18:50 – 19:10 *Euler Harmonic Identities and Moments of
Real Borel Measures*
A. Čivljak, Lj. Dedić, and M. Matić

19:10 – 19:30 *Non-Euclidean Geometric Inequalities in
Geometry, Topology and Physics*
D. Veljan

19:30 – 19:50 *New Means of Cauchy's Type*
M. Anwar and J. Pečarić

PARALLEL SESSION B (Hall B)

Chair: Vakhtang Kokilashvili

17:30 – 17:50 *Some New Refinements of Strengthened
Hardy and Pólya-Knopp's Inequalities*
**A. Čizmešija, S. Hussain, and
J. Pečarić**

17:50 – 18:10 *Some New Boas-Hardy-type Inequalities
with Kernels*
A. Čizmešija, J. Pečarić, and D. Pokaz

18:10 – 18:30 *A new Hardy-Type Inequality with Kernel*
K. Krulić, J. Pečarić, and L.-E. Persson

18:30 – 18:50 **Break**

Chair: Tamás F. Móri

18:50 – 19:10 *Applications of Certain Differential
Inequalities to the Univalence of an
Integral Operator*
Gh. Oros and G. I. Oros

19:10 – 19:30 *Sufficient Conditions for Univalence
Obtained by Using Second Order Linear
Strong Differential Subordinations*
G. I. Oros

PARALLEL SESSION C (Hall C)

Chair: Silvia Toader

17:30 – 17:50 *On some Inequalities for Convex Functions*
I. Gavrea

17:50 – 18:10 *General Four-point Quadrature Formulae
with Applications for α -L-Hölder-Type
Functions*
**M. Klaričić Bakula and M. Ribičić
Penava**

18:10 – 18:30 *Euler's Method for Weighted Integral
Formulae*
**J. Pečarić, M. Ribičić Penava, and
A. Vukelić**

18:30 – 18:50 **Break**

Chair: Zoltán Boros

18:50 – 19:10 *A Refinement of Jensen's Discrete
Inequality and Applications*
V. Čuljak and B. Ivanković

19:10 – 19:30 *Bounds for the Normalized Jensen-Mercer
Functional*
J. Barić and A. Matković

PARALLEL SESSION A (Hall A)

Chair: Tomislav Došlić

- 09:00 – 09:20 *More on the Two-Point Ostrowski inequality*
M. Matić and Š. Ungar
- 09:20 – 09:40 *General Euler-Simpson Type Formulae and Estimations of the Error via Pre-Gruss Inequality*
A. Vukelić
- 09:40 – 10:00 *Weighted Generalizations of Euler Identity with Applications to Ostrowski-Type Inequalities*
A. Aglič Aljinović
- 10:00 – 10:20 *Applications of Error Inequalities to Iterative Methods*
F. Zafar and N. A. Mir
- 10:20 – 10:45 **Coffee break**

10:45 **Closing Ceremony**

Departure of participants

PARALLEL SESSION B (Hall B)

Chair: Vera Čuljak

- 09:00 – 09:20 *Review of the Reverses of the Cauchy-Bunyakowsky -Schwarz Inequality and Related Results*
I. Brnetić, S. S. Dragomir, and R. Hoxha
- 09:20 – 09:40 *History and new Reveals on Alzer's Inequality*
S. Abramovich, J. Barić, M. Matić, and J. Pečarić
- 09:40 – 10:00 *Optimal Embeddings of Generalized Sobolev Spaces*
I. Ahmed and G. E. Karadzhov
- 10:00 – 10:20 *A Note on Certain Maps Between Ordered Fields*
I. Gusić
- 10:20 – 10:45 **Coffee break**