

ESZTERGOM SUMMER SYMPOSIUM ON REAL ANALYSIS

AUGUST 10 – 14, 1987
ESZTERGOM, HUNGARY

The eleventh symposium on real analysis was held in Esztergom, Hungary, August 10 – 14. The conference was jointly organized by the Janos Bolyai Mathematical Society and the Real Analysis Exchange. The staff of the Real Analysis Exchange wishes to thank the Society for its support and to extend its gratitude to the Organizing Committee (Zoltan Buzcolich, Paul Humke, Miklos Laczkovich, and Gyorgy Petruska, Chairman) for its superb effort in running a well planned conference and for extending such warm hospitality to the participants.

The Symposium featured invited hour talks by

Alexander Kechris, California Institute of Technology, Pasadena

David Preiss, Charles University, Prague

Wladislaw Wilczynski, Lodz University, Lodz

Ludek Zajicek, Charles University, Prague.

Additionally, thirty–six twenty minute contributed talks were presented. The Exchange editorial staff thanks the speakers for providing summaries of their presentations for inclusion in this proceedings section.

PARTICIPANTS

R. Brackebusch (Louisville), J. Brown (Auburn), A.M. Bruckner (Santa Barbara), J.M. Bruckner (Santa Barbara), Z. Buczolich (Budapest), M. Chlebik (Prague), M. Crnjac (Sarajevo), B.R. Ebanks (Louisville), V. Ene (Bucharest), P. Erdos (Budapest), M.J. Evans (Raleigh), L. Feher (Budapest), K.M. Garg (Edmonton), R. Gibson (Columbus), S. Gladkoff (Palaiseau), C. Goffman (West Lafayette), Z. Grande (Bydgoszcz), P.D. Humke (Northfield), A. Kechris (Pasadena), P. Kostyrko (Bratislava), M. Laczkovich (Budapest), L. Larson (Louisville), C.M. Lee (Milwaukee), J. Lipinski (Gdansk), E.R. Love (Parkville), J. Marik (East Lansing), A. Marquetty (Metz), P. Mattila (Helsinki), H.I. Miller (Sarajevo), L. Misik (Bratislava), D.E. Peek (San Antonio), Gy. Petruska (Budapest), W.F. Pfeffer (Davis), I. Pokorny (Kosice), D. Preiss (Prague), Sz.Gy. Revesz (Budapest), R.M. Shortt (Middletown), V.A. Skvortsov (Moscow), K. Simon (Miskolc–Egyetemvaros), W. Slezak (Bydgoszcz), J. Smital (Bratislava), B.S. Thomson (Burnaby), J. Tkadlec (Prague), J. Uher (Prague), W. Wilczynski (Lodz), J. Wos (Wroclaw), L. Zajicek (Prague).

PROGRAM

*(In the case of joint authors, * denotes the presenter.)*

MONDAY, AUGUST 10

0900 – 0920	R.G. GIBSON A property of Borel measurable functions and extendable functions
0925 – 0945	A.M. BRUCKNER* and C. CORDY Near intersection conditions and path derivatives
0950 – 1010	M.J. EVANS Points of approximate continuity, approximate symmetry and L–points
1015 – 1030	COFFEE
1030 – 1130	V. AVERSA and D. PREISS* <i>Heart's density theorems</i>
1145 – 1205	P. MATTILA The Hausdorff dimension of very strongly porous sets in \mathbb{R}^n

1210 – 1230	M. CHLEBIK Symmetrically continuous functions
1235 – 1430	LUNCH
1430 – 1450	J. UHER Some remarks on the symmetric derivative
1455 – 1515	E.R. LOVE An inequality involving geometric means
1520 – 1545	OPEN PROBLEM SESSION (Chaired by M. Laczkovich)

TUESDAY, AUGUST 11

0900 – 0920	J.B. BROWN Nice restrictions of real functions
0925 – 0945	H.I. MILLER On quadratic functionals and some properties of Hamel bases
0950 – 1010	R.M. SHORTT Sets with countable chain condition
1015 – 1030	COFFEE
1030 – 1130	A.S. KECHRIS <i>Descriptive set theory and the structure of sets of uniqueness for trigonometric series</i>
1145 – 1205	C. GOFFMAN A remark on localization and $(C,1)$ localization
1210 – 1230	V. ENE Finite representation of continuous functions
1235 – 1430	LUNCH
1430 – 1450	Z. GRANDE Lattices, algebras and Baire systems generated by some families of functions
1455 – 1515	D.E. PEEK Star-one differentiability

WEDNESDAY, AUGUST 12

- 0900 – 0920 W.F. PFEFFER
Upper semicontinuous gages and the Riemann–complete integral
- 0925 – 0945 Z. BUCZOLICH
A general Riemann–complete integral on the plane
- 0950 – 1010 V.A. SKVORTSOV
A Perron type integral in an abstract space
- 1015 – 1030 COFFEE
- 1030 – 1130 M. BALCERZAK, E. LAZAROW, and W. WILCZYNSKI^{*}
On one and two dimensional \mathbb{I} –densities and related kinds of continuity
- 1145 – 1205 J. EWERT and J. LIPINSKI
Continuity of Darboux multifunctions
- 1210 – 1400 LUNCH
- 1400 – 1420 M. LACZKOVICH and Sz. Gy. REVESZ^{*}
Periodic decompositions of functions
- 1425 – 1445 L. FEHER
When does $\lim f(\lambda_n x) = 0$ for every x imply $f(x) \rightarrow 0$ at infinity?
- 1450 – 1510 P. ERDOS
On some problems and related problems
- 1515 – 1535 OPEN PROBLEM SESSION (Chaired by P. Erdos)

THURSDAY, AUGUST 13

- 0900 – 0920 K. SIMON
Typical continuous functions are not iterates
- 0925 – 0945 J. SMITAL
Stability of chaotic and non–chaotic maps of the interval
- 0950 – 1010 L. LARSON
Typical compact sets in the Hausdorff metric are porous
- 1015 – 1030 COFFEE
- 1030 – 1130 L. ZAJICEK
The differentiability structure of typical functions in $C(0,1)$
- 1145 – 1205 W. SLEZAK
Sur le prolongement des fonctions de premiere classe de Baire

1210 – 1230	P. KOSTYRKO Quasicontinuity and some classes of Darboux Baire 1 functions
1235 – 1435	LUNCH
1435 – 1455	J. WOS Differentiation of real functions and pointwise ergodic theorems
1500 – 1520	C.M. LEE On Luzin's condition (N) and some of its modifications
1525 – 1545	G. ENE (Presented by V. Ene) Peano curves and continuous functions all of whose level sets are perfect
1550 – 1610	G. SOARES DE SOUZA and G. SAMPSON (Presented by J.B. Brown) A function in the Dirichlet space B such that its Fourier series diverges almost everywhere.
1900	BANQUET (HOTEL FURDO)

FRIDAY, AUGUST 14

0900 – 0920	A. MARQUETTY Derivatives and non-standard analysis
0925 – 0945	S. GLADKOFF Non-standard analysis and numeration systems
0950 – 1010	W.A. BEYER and B. EBANKS* On rates of convergence of certain sequences
1015 – 1030	COFFEE
1030 – 1050	J. MARIK Sums of powers of derivatives
1055 – 1115	I. POKORNY On Darboux functions in honorary Baire class 2
1120 – 1140	K.M. GARG More on a general non-separable theory of functions and multifunctions

BANQUET

Just as the mathematics presented at this and prior symposia has continued to generate interest and excitement, so have the accompanying banquets with their regional or exotic dishes and the ever present air of anticipation as the evening progresses and speculation builds concerning who will be selected as the recipient of the quasi-legendary "ANDY" award. This year's banquet was no exception, featuring delightful Hungarian selections and highlighted with the announcement by Gyorgy Petruska that

Ludek Zajicek

is this year's "ANDY" recipient. Paul Humke followed with frequently accurate reminiscences of the first decade of these symposia and their accompanying ANDY designates. The chronological list of ANDY-EMERITI is now: Paul Humke, J. Marshall Ash, Casper Goffman, Richard Fleissner, David Preiss, Michael Evans, Miklos Laczkovich, Richard O'Malley, Clifford Weil, and Brian Thomson. As is perhaps obvious from this list, the criteria for this award are unknown. The only known stipulation is that the conference organizers, who are empowered to select the recipient, must make no stipulations known. There is also a widespread rumor that Andy Bruckner is not eligible. In light of the latter and in celebration of a decade of symposia on real analysis and Professor Bruckner's contributions to the vitality of our field, the organizing committee presented an Honorary ANDY to

Andrew M. Bruckner.

The evening was then capped with a demonstration of precocious prestidigitation by Sarah Gibson and Marta Petruska.

SUMMARIES

Summaries of the papers presented at this conference follow. They appear in the order listed in the program. Regrettably, summaries were not received from Professors K.M. Garg and J. Wos in time to be included in this issue of the Exchange. Furthermore, the paper by Professor V. Ene will not appear in summary form here since the complete paper will appear in the Exchange. Also the informal discussion of problems in real analysis by Professor P. Erdos will not be summarized here.