

Most, but not all, of the participants of the 10th Summer Symposium in Real Variables appear in the above photograph. Due to the underwhelming response to last year's contest, it will not be repeated this year. Identification of those in the picture is left to the discretion of the reader.

One of those who appears in the group photo is the DP (designated photographer). Due to an equipment failure his picture of the group did not turn out and one taken by another participant had to be substituted. Another casualty of this unfortunate equipment failure was the usual photograph of the presentation of the Andy. We apologize to both the worthy recipient, Professor Brian Thomson and to the presenter and host, Professor Peter Bullen. The DP is hereby warned that any mistakes of a similar nature in the future will result in dismissal.

## THE TENTH SUMMER REAL ANALYSIS SYMPOSIUM

# JULY 27 - 30, 1986, UNIVERSITY OF BRITISH COLUMBIA

The Tenth Symposium on Real Analysis was sponsored and hosted by the University of British Columbia. The mathematical portion of the conference consisted of invited hour lectures by A. M. Bruckner, University of California, Santa Barbara; R. Henstock, University of Ulster, Coleraine; Lee Peng-Yee, National University of Singapore; J. Mawhin, Universite Catholique de Louvain; W. F. Pfeffer, University of California, Davis; and V. A. Skvortsov (B. A. Ckrophor), Moscow State University; and a number of 15 minute presentations. The Editorial Staff of the Exchange wishes to thank the U.B.C. Department of Mathematics and its members for the support given this conference, and, especially, wishes to thank Professor Peter Bullen for his excellent job as conference organizer. Gratitude is also expressed to the conference speakers for providing the Exchange with summaries of their presentations for publication in this issue. Following are a list of participants, the conference program, and summaries of the presentations.

#### **PARTICIPANTS**

- S. Agronsky, R. Brackebusch, G. Brauer, A. M. Bruckner, P. S. Bullen,
- G. Cross, M. J. Evans, J. Foran, A. Galperin, R. Gibson, A. Grigori,
- J. Hausserman, R. Henstock, T. Howroyd, Hu Thak-Yin, M. T. Kiang,
- M. Laczkovich, L. Larson, C. M. Lee, Lee Peng-Yee, E. R. Love, J. Marik,
- P. Maritz, J. Mawhin, S. Meinershagen, P. Muldowney, C. Nasim, C. T. Ng,
- R. O'Malley, G. Petruska, W. F. Pfeffer, D. Rinne, A. Russell, D. Russell,
- D. N. Sarkel, V. A. Skvortsov, B. Thomson, J. Upton, D. Waterman, C. E. Weil,
- P. Wingren, B. Wolf, and A. Zayed.

### **PROGRAMME**

### SUNDAY JULY 27TH

- 0930 1030 Registration, Coffee and Donuts.
- 1030 1045 Opening Remarks P. S. Bullen
- 1045 1140 A. M. Bruckner, University of California, Fanta Barbara Fome Aspects of Dynamical Behavior of Maps of Intervals
- 1150 1205 D. Waterman, Syracuse University

  Recent Developments in Fourier Analysis and Generalized Bounded

  Variation
- 1210 1330 LUNCH BREAK

1330 - 1425 W. F. Pfeffer, University of California, Davis The Fundamental Theorem of Ealculus I 1435 - 1450 E. R. Love, University of Melbourne Lebesgue Points in Fractional Integrals P. Maritz, University of Stellenbosch 1455 - 1510 Extreme Point Multifunctions and a Generalized Radon-Nikodym Theorem COFFEE BREAK 1515 - 1530 P. Muldowney, McGee College, University of Ulster, Londonderry 1530 - 1545 Two Function Space Integrals WINE AND CHEESE PARTY AT THE BULLENS 1730 -MONDAY JULY 28TH 0900 - 0955 V. A. Thvortsov (B. A. CKBOPHOB), Moscow State University Generalized Integrals in the Theory of Trigonometric Feries S. Agronsky, California Polytechnic University, San Luis Obispo 1005 - 1020 Iterative Behavior of a Residual Class of Functions 1025 - 1040 J. Marik, Michigan State University, East Lansing Characteristic Functions that are Products of Derivatives COFFEE BREAK 1040 - 1100 1. Mawhin, Universite Latholique de Louvain 1100 - 1155 Leassical Problems in Analysis and New Integrals I 1205 - 1220 R. G. Gibson, Columbus College Concerning the Extension of Connectivity Functions 1225 - 1330 LUNCH BREAK R. Henstock, University of Ulster, Goleraine 1330 - 1425 Limits Under the Integral Lign 1435 - 1450 Hu Thak-Yin, Tamkang University Chaotic Functions and Scrambled Sets 1455 - 1510 G. Cross, University of Waterloo Generalized Riemann Complete Integrals

COFFEE BREAK

1515 - 1530

- 1530 1545 R. Dwilewicz, Centre de Recherches Mathematiques, Montreal

  Integral Inequalities for Solutions of Some Partial Differential

  Equations
- 1550 1605 M. Laczkovich, Eotvos Lorand University, Budapest Generalized Riemann Derivatives

# TUESDAY JULY 29TH

- 0900 0955 Lee Peng-Yee, National University of Fingapore

  Convergence Theorems in Integration Theory
- 1005 1020 J. Foran, University of Missouri, Kansas City Bounded Variation and Porosity
- 1025 1040 S. Meinershagen, University of Missouri, Kansas City
  Derivation Bases and Hausdorff Measure
- 1045 1100 COFFEE BREAK
- 1100 1155 W. F. Pfeffer, University of California, Davis
  The Fundamental Theorem of Calculus II
- 1205 1220 L. Larson, University of Louisville
  Another Monotonicity Theorem for the Approximate Symmetric
  Derivative
- 1225 1330 LUNCH BREAK
- 1330 1425 V. A. Fevortsov (B. A. Ckbopyob), Moscow Ftate University

  Seneralized Integrals in the Theory of Walsh and Haar Feries
- 1435 1450 C. T. Ng, University of Waterloo On Convexity
- 1455 1510 M. J. Evans, North Carolina State University, Raleigh L-Points of Typical Functions in the Zahorski Classes
- 1830 SALMON BARBEQUE (U.B.C. FACULTY CLUB)

# WEDNESDAY JULY 30TH

- 0900 0955 J. Mawhin, Université Catholique de Louvain Classical Problems in Analysis and New Integrals II
- 1005 1040 A. Russell, University of Melbourne

  Banach Algebras of Functions of Generalized Variation
- 1025 1040 J. Upton, University of Melbourne

  Variations of k<sup>th</sup> Order and p<sup>th</sup> Power

1045 - 1100 COFFEE BREAK

1100 - 1155 W. F. Pfeffer, University of California, Davis
The Fundamental Theorem of Calculus III

1225 - 1330 LUNCH BREAK

1330 - 1425 R. Henstock, University of Vister, Coleraine
Functional Analysis and Generalized Integrals

1430 - 1435 Closing Remarks

## SUMMARIES

The following pages contain summaries of these presentations as prepared by the speakers. Summaries of the talks by M. J. Evans and E. R. Love are not included because the complete papers on which the talks were based appear in the Research Articles section of this issue of the <u>Exchange</u>. Similarly, James Foran has submitted the paper on which his presentation was based to the <u>Exchange</u> for publication in a forthcoming issue.