#### SINGAPORE TOPOLOGY CONFERENCE

The Department of Mathematics and the Singapore Mathematical Society jointly organised a conference on topology at NUS recently. Topology is a modern form of geometry which studies abstract properties of shapes, usually in space of an arbitrary number of dimensions. The subject has lately seen important applications to physics and economics. This meeting focussed on the relationship of topology to algebra.

The conference, held from June 10 to 15, 1985, attracted 80 participants from 23 countries. Attendance from Southeast Asian Mathematical Society (SEAMS) countries included Singapore (16), Malaysia (6), Thailand (5), Indonesia (4), Philippines (4) and Hong Kong (2). Also 9 participants came from U. S. A., 7 from Japan, 4 from Australia, 3 from U. K. and 1 or 2 from another 13 countries. About half the participants stayed at Sheares Hall on the NUS Kent Ridge campus, while a quarter of them were at the Hotel Equatorial. During the previous week two related introductory workshops were conducted: on homology of groups, presented by P J Hilton, State University of New York – Binghamton; and algebraic K-theory, A J Berrick, NUS. These lecture courses and accompanying discussion sessions were attended by more than 30 people, about half of whom were sponsored by SEAMS with financial support from Unesco.

Major financial support was provided by the Lee Foundation through the Lee Kong Chian Centre for Mathematical Research and the Singapore Turf Club. Additional assistance came from Singapore Mathematical Society, Shell Eastern Petroleum Ltd, the British Council and Fraser & Neave (S) Pte Ltd.

The Singapore Mathematical Society took advantage of the presence at the conference of T Y Lam, University of California – Berkeley, who is also distinguished as a mathematical expositor. Prof. Lam gave a lecture to SMS members and conference participants on June 13 on "One hundred years of sums of squares of polynomials".

There were 34 lectures given during the conference; these are listed below. Taken together with such social events as a Sichuan banquet at the Hotel Equatorial, a zoo excursion and welcome party, as well as informal get-togethers and the usual attractions of Singapore for visitors, they made for a very full and rewarding week. The final event of the conference will be its Proceedings, to be published as a special issue of the North-Holland journal "Topology and Its Applications". It is likely that this will feature material from a number of the talks below as well as additional material.

# SINGAPORE TOPOLOGY CONFERENCE JUNE 10–15, 1985

#### List of speakers

Abdul Razak Salleh & Abu Osman Mohd Tap (Bangi, Malaysia) The fundamental groupoid of fuzzy topological spaces

Shôrô Araki (Osaka, Japan) Some properties of equivariant Whitehead torsion and equivariant s-cobordism theorem

Anthony Bak (Bielefeld, W. Germany) Surgery and higher K-theory

Thomas Bier (Singapore) Symmetric functions in several sets of variables

Andreas W. M. Dress (Bielefeld, W. Germany) The chamber system of a geometric cell complex: theory and applications

D. H. Gottlieb (W. Lafayette, U. S. A.) Fiber spaces and robots

Karl W. Gruenberg (London, U. K.) Complete cohomology functors on groups

K. A. Hardie (Cape Town, South Africa) Homotopy over and under

Peter J. Hilton (Binghamton, U. S. A.) Escher staircases of groups of spaces

Wu-Chung Hsiang (Princeton, U. S. A.) L<sup>2</sup>-cohomology of algebraic surfaces

Soren A. IIIman (Helsinki, Finland) Equivariant imbedding of G-complexes into representation space

W. van der Kallen (Utrecht, Netherlands) The theorem of Merkurjev and Suslin

Max Karoubi (Paris, France) Cyclic homology and K-theory

Akio Kawauchi (Osaka, Japan)

The integral homology of infinite cyclic coverings of manifolds

M. Kervaire (Geneva, Switzerland) V. Jones' polynomial link invariant

A. O. Kuku (Ibadan, Nigeria) Some finiteness results in the higher K-theory of orders and group-rings

S. P. Lam (Hong Kong) Non-realisability of an  $SL_n(F_q)$ -invariant subalgebra

T. Y. Lam (Berkeley, U. S. A.) Levels in algebra and topology

Bang-He Li (Beijing, China) On immersion of manifolds

James P. Lin (San Diego, U. S. A.) On the connectivity of finite H-spaces

Charles F. Miller (Melbourne, Australia) Recognising free metabelian groups

A. Mukherjee (Calcutta, India) Higher-order nondegenerate immersions of manifolds

J. L. Noakes (Perth, Australia) On the Bott periodicity theorem

R. Oliver (Aarhus, Denmark) Torsion in Whitehead groups

I. B. S. Passi (Chandigarh, India) Dimension subgroups and schur multiplicator

A. Robinson (Coventry, U. K.) An analogue of the derived category for extraordinary homology

J. H. Rubinstein (Melbourne, Australia) Piecewise-linear variational methods in 3 dimensions

Rick W. Sharpe (Toronto, Canada) Total absolute curvature and embedded Morse numbers

Hiroo Shiga (Ryukyu, Japan) Cohomology automorphisms of homogeneous spaces Nobuo Shimada (Kyoto, Japan) On the lambda algebra

Ross E. Staffeldt (Berkeley, U. S. A.) Cyclic homology and relations to geometry

Urs Stammbach (Zurich, Switzerland) On the integral homology of metabelian groups — an example

Charles B. Thomas (Cambridge, U. K.) Characteristic classes and the cohomology of discrete groups

Zen-ichi Yosimura (Osaka, Japan) The Bousfield class of BP-related spectra

# SINGAPORE TOPOLOGY CONFERENCE JUNE 10–15, 1985

#### List of participants

Abdul Razak Bin Salleh (Malavsia) Abdul Malik Md Yusof (Malaysia) Abu Osman Mohd Tap (Malaysia) Adnan Ismail (Indonesia) Shoro Araki (Japan) J. Antou (Indonesia) A. Bak (West Germany) A. J. Berrick (Singapore) Thomas Bier (Singapore) M. J. Canfell (Australia) Dhamrong Chanthorn (Thailand) C. T. Chong (Singapore) K. N. Cheng (Singapore) Severino D. Diesto (Philippines) Andreas W. M. Dress (West Germany) Daniel Flath (Singapore) David Gauld (New Zealand) D. H. Gottlieb (U. S. A.) Karl W. Gruenberg (U. K.) K. A. Hardie (South Africa) Peter J. Hilton (U. S. A.) Wu-Chung Hsiang (U. S. A.) Soren A. Illman (Finland) B. Kahn (France) W. van der Kallen (The Netherlands) Max Karoubi (France) Akio Kawauchi (Japan) M. Kervaire (Switzerland) Hang-Leen Koay (Malaysia) A. O. Kuku (Nigeria) Jootje B. Kulon (Indonesia) E. M. Lagare (Philippines) S. P. Lam (Hong Kong) T. Y. Lam (U. S. A.) P. Y. Lee (Singapore) M. H. Liew (Singapore) Lim Ming Huat (Malaysia) Y. K. Leong (Singapore) F. P. F. Leung (Singapore) Tat-Wing Leung (Hong Kong)

Bang-He Li (China) C. H. Lim (U. S. A.) James P. Lin (U. S. A.) Emilio Lluis-Puebla (Mexico) Charles F. Miller (Australia) Sidney S. Mitchell (Thailand) A. Mukherjee (India) Mitutaka Murayama (Japan) T. B. Ng (Singapore) Lyle Noakes (Australia) R. Oliver (Denmark) I. B. S. Passi (India) T. A. Peng (Singapore) W. C Quek (Singapore) C. A. Robinson (U. K.) Joachim H. Rubinstein (Australia) Richard W. Sharpe (Canada) Judy Schaper (U. S. A.) Hiroo Shiga (Japan) Nobuo Shimada (Japan) Y. T. Soon (Singapore) P. Soeparna (Indonesia) Mullika Srikamol (Thailand) Ross Staffeldt (U. S. A.) Urs Stammbach (Switzerland) George Stejan (New Zealand) Jan Strooker (The Netherlands) Benya Sudasna-Na-Ayudhaya (Thailand) K. C. Tan (Singapore) **Evelyn Tan (Philippines)** Somkit Tantikol (Thailand) Charles B. Thomas (U. K.) P. Emery Thomas (U. S. A.) Miriam Travina (Philippines) L. V. Villar (Philippines) M. J. Wicks (Singapore) Peng-Choon Wong (Malaysia) Kohhei Yamaguchi (Japan) Yap Weng Yin (Singapore) Zen-ichi Yosimura (Japan)

#### ANALYSIS CONFERENCE

## **SINGAPORE 1986**

#### **Conference and Workshop**

A conference on Analysis, with emphasis on harmonic analysis and functional analysis, will be jointly organized by the Department of Mathematics, National University of Singapore, and the Singapore Mathematical Society. The Conference will be held at the National University of Singapore from 17 - 21 June 1986; it will be preceded by a workshop from 11 - 16 June 1986.

The Conference will be sponsored by the Southeast Asian Mathematical Society (SEAMS). It is expected that a UNESCO grant will be available (through SEAMS) to provide partial travel assistance for a small number of participants from countries represented in the SEAMS Council.

Invited speakers for the Conference will include

Professor E. Hewitt University of Washington

Professor G. Pisier Université Paris VI

Professor J. J. Uhl, Jr. University of Illinois at Urbana-Champaign

#### **Short Communications**

There will be several sessions for 15-minute oral presentations of contributed papers on topics related to analysis.

## Accommodation

Student hostel rooms and air-conditioned hotel rooms will be available for accommodation. Further details will be given in the Second Notice.

#### Registration

The registration fee for the Conference (and Workshop) will be S\$30 (about US\$15) for members of the Singapore Mathematical Society or the Southeast Asian Mathematical Society, and S\$50 (about US\$25) for others.

#### **Organizing Committee**

L.Y.H. Yap (Chairman), T.S. Quek (Secretary), K. M. Chan, K. N. Cheng, T. S. Chew, S. T. L. Choy, J. P. Jesudason, P. Y. Lee, S. K. Lim, P. N. Ng, R. K. S. Poh.

# AUSTRALIA-SINGAPORE JOINT CONFERENCE 1986

# **Joint Conference**

A conference on Information Processing and Combinatorial mathematics will be jointly organized by the Combinatorial Mathematics Society of Australia (CMSA), the Singapore Mathematical Society (SMS), the Southeast Asian Mathematical Society (SEAMS), the Department of Information Systems and Computer Science and the Department of Mathematics, National University of Singapore. The conference will be held at the National University of Singapore from 19–23 May 1986.

# **Invited Talks and Short Communications**

Besides some 50-minute invited talks, there will be several sessions for 15-minute oral presentations on topics related to information processing and combinatorial mathematics. Names of invited speakers will be announced in the Second Notice.

## Accommodation

Student hostel rooms and air-conditioned hotel rooms will be available for accommodation. Further details will be given in the Second Notice.

#### Registration

The registration fee for the Conference will be S\$50 for members of CMSA, SMS and SEAMS; S\$40 for students and S\$80 for others. This fee includes a Conference dinner.

#### Proceedings

A Proceedings of the Conference will be published. All papers submitted for publication will be refereed.

**Organizing Committee** 

Chairman: H. H. Teh

Co-chairmen: L.S. Hsu and D.A. Holton

Secretary: C.C. Chen and T.W. Ling

#### Committee members:

Y.S. Ho. K.M. Koh, K.S. Poh, S.C. Shee, S.K. Tan, T.S. Tay, W.W. Tsang, H.P.Yap, C.K. Yuen