

Programme of Talks

6 Sept **Jon Berrick**

Realization of groups as homology of strongly torsion generated groups, via K -theory

13 Sept **Mr Z Choo** (Sheffield)

Borel's regulator and Vandiver's conjecture for number rings

20 Sept

4 Oct **Wu Jie**

The EHP sequences for $(p - 1)$ -cell complexes

11 Oct **Prof N Nakayama** (RIMS, Kyoto)

On compact complex manifolds admitting nontrivial surjective endomorphisms

18 Oct **Tan Ser Peow**

End invariants of $SL(2, \mathbb{C})$ characters of a one-holed torus

25 Oct

1 Nov

8 Nov **To Wing Keung**

Effective bounds on holomorphic maps into complex hyperbolic manifolds

15 Nov

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Programme of Talks

- 18 Jan **Jelena Grbic**
Applications of combinatorial groups to homotopy theory
- 18 Jan **Mr Ben McReynolds** (U Texas)
To be confirmed
- 1 Feb **Prof Jiang Meiyue** (Peking U)
2-Dimensional L^p Minkowski problem
- 2 Feb **Zhang De-Qi** *NB: Thurs 3.10pm CRB*
To be announced
- 8 Feb **Prof M Chen** (Fudan U)
A sharp lower bound for the canonical volume of 3-folds of general type
- 22 Feb **Prof G Nishida** (Kyoto U)
Homotopy category of bigroups
- 1 Mar ()
- 8 Mar **Prof H Shiga** (Tokyo Inst Tech)
- 15 Mar **Prof M Mimura** (?)
On the Lusternik-Schnirelmann category of $SU(n)/SO(n)$ and $SU(n)/Sp(n)$
- 22 Mar
- 29 Mar
- 5 Apr

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NATIONAL UNIVERSITY OF SINGAPORE
Department of Mathematics
TOPOLOGY AND GEOMETRY SEMINAR
2005/06 Semester I

Programme of Talks

- 10 Aug **Jon Berrick**
Topology of stable orthogonal and symplectic groups over the integers
- 17 Aug **Prof J Weitsman** (UC Santa Cruz)
Measures on Banach manifolds and Supersymmetric quantum field theory
- 31 Aug **Jelena Grbic**
The homotopy type of the complement of a coordinate subspace arrangement
- 6 Sept **Dr S Theriault** (U Aberdeen) *NB: Tues 2pm CRB*
The odd-primary H -structure of Lie groups in low ranks
- 7 Sept **Prof I Shimada** (Hokkaido U)
Singularity theory in positive characteristics
- 14 Sept **Fedor Duzhin**
Closed trajectories of generalized billiards
- 28 Sept **Tan Ser Peow**
The $SL(2, \mathbb{C})$ character variety of the one-holed torus
- 5 Oct **Wayne Lawton**
Mechanical connections
- 12 Oct **To Wing Keung**
Level structures on abelian varieties over complex function fields
- 19 Oct **Prof Kim In Kang** (Seoul National U)
Isospectral finiteness of convex cocompact hyperbolic manifolds
- 14 Nov **Dr J Brodzki** (U Southampton) *NB: Mon 11am CRB*
Exactness, proper actions and nuclearity of the Roe algebra
- 16 Nov **Andrew Kriker**
Non-commutative Chern-Weil theory and a Duflo isomorphism for graphs

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NATIONAL UNIVERSITY OF SINGAPORE
Department of Mathematics
TOPOLOGY AND GEOMETRY SEMINAR
2004/05 Semester I

Programme of Talks

- 1 Sept **Jon Berrick**
Homotopy idempotent selfmaps of manifolds
- 8 Sept **Brett McInnes**
Is space *nearly* flat or *really* flat?
- 29 Sept **To Wing Keung**
 L^2 metrics and families of abelian varieties
- 13 Oct **Wu Jie**
Simplicial model of loop spaces using braid groups
- 20 Oct **Professor Woo Moo Ha** (Korea U)
Evaluation subgroups and G-sequences
- 27 Oct **Lian Bong Hor**
A question of T. Shioda
- 3 Nov **Andrew Linshaw** (Brandeis U)
A de Rham model for equivariant cohomology

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Programme of Talks

- 20 Jan **Jan Grabowski** (Queen Mary, London)
Lie bi-algebras and Lie induction
- 28 Jan **Hu Kaiyuan**
A generalization of the Fundamental Lemma of Differential Geometry
- 4 Feb **Wayne Lawton**
Hermite interpolation in loop groups and conjugate quadrature filters
- 11 Feb **Leung Man Chun**
Fine analysis of blow-up and interaction of bubbles
- 25 Feb **Prof A El-Kacimi** (Valenciennes)
Versal families of transversely homogeneous foliations
- 3 March **Prof I Madsen** (Aarhus)
The stable moduli space of Riemann surfaces
- 10 March **Zhang De-Qi**
Alternating group of degree 6, Leech lattice and K3 surface
- 24 March **Zhang Ying**
Generalization of McShane's identity
- 31 March **Jon Berrick**
The Bass trace conjecture
- 21 April **Prof A A Ivanov** (Imperial College, London)
to be announced

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NATIONAL UNIVERSITY OF SINGAPORE
Department of Mathematics
TOPOLOGY AND GEOMETRY SEMINAR
2003/04 Semester I

Programme of Talks

27 Aug **Brett McInnes**

(2pm) Are we living in a real projective space?

10 Sept **Hu Kaiyuan**

Poincaré lemma on a Hilbert manifold

17 Sept **Prof K Oguiso** (U of Tokyo)

A characterization of the Fermat quartic $K3$ surface by means of finite symmetries

24 Sept **Prof J Keum** (KIAS)

Seshadri-exceptional foliations on algebraic varieties

1 Oct **Jon Berrick**

Some acyclic groups in low-dimensional topology

8 Oct **Tan Ser Peow**

Circle packings, the Riemann mapping theorem and uniformisation

22 Oct **To Wing Keung**

Effective isometric embeddings for indefinite Hermitian bundles

29 Oct **Leung Man Chun**

Blow-up analysis and interaction of bubbles (*postponed to Semester II*)

5 Nov **Xu Xingwang**

Compactification of locally conformal flat metrics

7 Nov **Prof C Series** (Warwick)

Kleinian groups

20 Nov **Prof A Kono** (Kyoto)

(*Thurs*) The group $[X, U(n)]$

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Programme of Talks

- 5 Feb **Brett McInnes**
Scalar Curvature: From Einstein + Hilbert to Witten + Yau
- 19 Feb **Prof Qing-Ming Cheng** (Saga U, Japan)
A new version of rigidity theorems on submanifolds in Euclidean spaces
- 5 March **Hu Kaiyuan**
Differential forms on a Hilbert manifold and their exterior differentiation
- 12 March **Prof Zindine Djadli** (IAS, Princeton & U Cergy-Pontoise, France)
Best constants for optimal Sobolev inequalities on compact manifolds
- 19 March **Prof K Oguiso** (U Tokyo)
Local families of K3 surfaces and five applications
- 26 March **Prof I Shimada** (Hokkaido U)
Supersingular K3 surfaces as double covers of the projective plane
- 26 March **Prof Zindine Djadli** (IAS, Princeton & U Cergy-Pontoise, France)
Fourth order elliptic equations on the sphere [NB: 4pm]
- 2 April **Prof A El Kacimi Alaoui** (U Valenciennes & U Lille)
Towards a basic index theory
- 9 April **Wayne Lawton**
Geometric properties of Euler flow
- 16 April **Prof M Karoubi** (U Paris VII)
Representation theory and equivariant K-theory of real projective spaces

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Programme of Talks

- 31 Jul **Prof F R Cohen** (U Rochester, NY)
Representations of braid groups and associated bundles
- 7 Aug **Dr Chin Chee Whye** (UC Berkeley) [2pm, CRA]
Langlands correspondence over function fields
- 7 Aug **Prof V V Vershinin** (Montpellier)
3-Page embeddings of singular knots
- 8 Aug **Prof F Catanese** (Bayreuth)
Deformation and other equivalence relations for algebraic varieties, QED for example
- 21 Aug **Jon Berrick**
Intertwining matrices and K -theory
- 18 Sep **Dr P Topping** (Warwick)
Special properties of Jacobian determinants, and their implications for some pure and applied problems
- 2 Oct **Tan Ser Peow**
Right angled hexagons in hyperbolic 3-space: Variations on a theme
- 9 Oct **Prof R V Gurjar** (Tata Institute)
On ramification of self-maps of projective plane and affine plane
- 16 Oct **Zhang De-Qi**
Explicit calculation of integral closure of rings and solving polynomial equations
- 23 Oct **To Wing Keung**
On the asymptotic behavior of the Takhtajan-Zograf metric
- 30 Oct **Wu Jie**
Simplicial structures on configuration spaces and braid groups

All are welcome to attend the Seminar, which normally takes place in Colloquium Room B on Level 3 of the Mathematics Department building (S14). The Seminar is normally held on Wednesdays during term, from 3.10 to 4.00 pm, after refreshments in the Level 3 Common Room from 2.45 pm.

Programme of Talks

- 18 July **Prof B H Lian** (Brandeis)
Intersection numbers on stable map moduli
- 19 July **Prof A El Kacimi** (Valenciennes)
Amenable groups and Lie foliations
- 2 Aug **Wang Hongyu**
Geometric nonlinear Schroedinger equations
- 16 Aug **Prof K Oguiso** (Tokyo)
Hyperkahler manifolds under small deformation
- 23 Aug **Prof Woo Moo Ha** (Korea U)
On monomorphisms in homotopy theory and forgetful maps
- 30 Aug **Prof Ma Li** (Tsing Hua)
Positive solutions of logistic equations
- 13 Sept **Xu Kai**
A weak form of the Spherical Conjecture
- 20 Sept **Tan Ser Peow**
Circle packings on $\mathbb{C}P^1$ -surfaces
- 27 Sept **Jon Berrick**
Acyclic groups and ...
- 4 Oct **Wong Yan Loi**
... Wild arcs
- 11 Oct **Hu Kaiyuan**
The frame bundle of a Banach manifold
- 20 Oct **Prof B Wegner** (Karlsruhe)
Exterior parallelism for submanifolds of spaces of constant curvature

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Programme of Talks

- 7 Jan **Prof Tian Gang** (MIT) CRA 3 - 4 pm
High dimension gauge theory
- 19 Jan **To Wing Keung**
On Seshadri constants of complex hyperbolic spaces
- 26 Jan **Dr R Diaz** (Warwick U) Maths Studio
Computing some pleating varieties for the twice punctured torus
- 2 Feb **Brett McInnes**
Scalar curvature and string theory
- 9 Feb **Hu Kaiyuan**
The Chern connection in Finsler geometry
- 16 Feb **Prof E Dror Farjoun** (Hebrew U, Jerusalem)
Completion towers for periodic homology
- 23 Feb **Prof J H Keum** (Konkuk U, Korea)
Automorphisms of Kummer surfaces
- 1 Mar **Judith Jesudason**
Projective modules over n -tori and module frames
- 8 Mar **Prof A Neeman** (ANU, Canberra)
 K_1 , new identities of determinants, and derived categories
- 15 Mar International Conference for Fundamental Sciences
- 22 Mar **Prof J Hubbuck** (Aberdeen U)
Syzygies in the homology of an elementary abelian 2-group
- 29 Mar **Wu Jie**
Configurations in homotopy theory
- 5 Apr **Dr A Heyworth** (U Wales, Bangor)
Grobner bases and geometric theorem proving

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NATIONAL UNIVERSITY OF SINGAPORE
Department of Mathematics
TOPOLOGY AND GEOMETRY SEMINAR
1999/2000 Semester I

Programme of Talks

- 28 July **S P Lam** (Chinese U HK)
Some exact sequences derived from the cofibre sequence $S^0 \rightarrow * \rightarrow S^1$
- 18 Aug **D Christensen** (Johns Hopkins)
Efficient construction of complexes
- 25 Aug **Yuval Flicker** (NUS/Ohio S U)
Motivic Galois groups
- 1 Sept **Jon Berrick**
Groups with infinite homology
- 15 Sept **Xu Xingwang**
Conformal volume, conformal energy and minimal surfaces
- 22 Sept **B Botvinnik** (U Oregon)
Positive scalar curvature on manifolds with singularities
- 29 Sept **Alexander Nenashev** (NUS/Bielefeld)
Simplicial structures in algebraic K -theory
- 6 Oct **Leung Man Chun**
Singular and exotic solutions of the conformal scalar curvature equation in \mathbb{R}^n
- 13 Oct **Xu Kai**
Group actions on the groups of self equivalences of spaces
- 20 Oct **Wang Hongyu**
A vanishing theorem for weighted L^2 -cohomology

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NATIONAL UNIVERSITY OF SINGAPORE
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TOPOLOGY AND GEOMETRY SEMINAR
1998/99 Semester II

Programme of Talks

13 Jan **Zhang De-Qi**

1999 Fano varieties with mild singularities: Fano indices, Cartier indices and π_1

18 Jan **Prof Steven Zucker** (Johns Hopkins) **NB:** Mon, 10.00 am, in CRB
Ghost classes (in topology and algebraic geometry)

20 Jan **Dr Wu Jie** (U Penn)

Functorial decompositions of loop spaces of suspensions, and their relation to representation theory

3 Feb **Prof Peter Russell** (McGill)

Linearization for torus actions on affine spaces

10 Feb **Jon Berrick**

Solution to the defining problem for algebraic K -theory

3 Mar **Fred Leung** **NB:** 4.00 pm, in Studio

Eigenvalue estimates on an Einstein manifold

11 Mar **A Prof Belal Baaquie** (Physics) **NB:** Thurs, 3.00 pm, in Studio

An overview of string theory

16 Mar **Prof V Beloshapka** (Russian Acad Science) **NB:** Tues, 3.10 pm, in Studio

Real submanifolds of complex space: method of model surfaces

17 Mar **Prof A G Vitushkin** (Russian Academy of Science)

Geometrical aspects of the Jacobian Conjecture

31 Mar **Helmer Aslaksen**

Which month will be the leap month in the Chinese calendar in 2033?

7 Apr **Prof A Davydov** (NUS/Moscow State)

A_∞ -structures on cohomology rings

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<http://www.math.nus.sg/>

AJB (874 2747)
4 Mar 1999

NATIONAL UNIVERSITY OF SINGAPORE
Department of Mathematics
TOPOLOGY AND GEOMETRY SEMINAR
1998/99 Semester I

Programme of Talks

- 29 July **To Wing Keung**
Weighted L^2 cohomology of bounded domains with compact quotients
- 5 Aug **Dr B Hassett** (U Chicago)
Limits of plane curves and the minimal model program
- 11 Aug **Prof C K Cheung** (Boston Coll) **NB:** Tues, 3.10 pm, in CRB
A new invariant metric in complex geometry
- 26 Aug **Tan Ser Peow**
The geometry of Markov numbers
- 2 Sept **Zhang De-Qi**
Towards the determination of all finite groups of automorphisms of a $K3$ surface
- 9 Sept **Prof I Shimada** (Hokkaido U)
Fundamental groups of algebraic varieties
- 23 Sept **Jon Berrick**
The defining problem for algebraic K -theory
- 29 Sept **Wang Hongyu** **NB:** Tues, 3.10 pm, in CRB
Fredholm operators on periodic manifolds
- 30 Sept **Prof A Davydov** (Moscow State U / NUS)
Fusion rings, monoidal categories and homotopy associativity
- 7 Oct **Bonaventure Loo**
Irreducibility of certain fibre product spaces

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NATIONAL UNIVERSITY OF SINGAPORE
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TOPOLOGY AND GEOMETRY SEMINAR
1997/98 Semester II

Programme of Talks

1998

11 Feb **Xu Kai**

A conjecture of Arkowitz and Maruyama

3 Mar **Prof Q Zhang** (U Missouri, U Tokyo) - **NB: 2.00 pm**

Relative-dualizing sheaves, \mathbb{Q} -Fano varieties and the Albanese maps

4 Mar **Prof Q Zhang** (U Missouri, U Tokyo)

Global holomorphic 1-forms on projective varieties of general type

11 Mar **Dai Bo**

Minimal reductions of symplectic 4-manifolds

18 Mar **Leung Man Chun**

The singular Yamabe problem and conformal scalar curvature equations in open subdomains of S^n

25 Mar **Koh Liang Khoon**

Ends of Riemannian orbifolds

1 Apr **Hu Kaiyuan**

The Chern connection in Finsler geometry

8 Apr **Prof M Karoubi** (U Paris VII)

Quantum methods in algebraic topology

15 Apr **Prof H Tokunaga** (Kochi U)

Zariski pairs and elliptic $K3$ surfaces

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AJB (8742747)

8 Apr 1998