Global Analysis and Differential Geometry

Faculty of Science and Engineering

Saga University

Saga 840-8502, Japan

March 20-23, 2009

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A list of invited speakers

Chen Daguang (Tsinghua University)
Chen Qun (Wuhan University)
Ding Qing (Fudan University)
El Soufi Ahmad (University of Tours)
Furutani Kenro (Science University of Tokyo)
Harrell Evans (Georgia Institute of Technology)
Koiso Miyuki (Nara Women University)
Li Anmin (Sichuan University)
Shi Yuguang (Peking University)
Shiohama Katsuhiro (Fukuoka University)
Shioya Takashi (Tohoku University)
Suh Young Jin (Kyungpook National Unversity)
Urakawa Hajime (Tohoku University)
Xu Hongwei (Zhejiang University)
Zhang Xiao (Chinese Academy of Sciences)

Organizing Committee

Cheng Qing-Ming (Saga University)
Shoda Toshihiro (Saga University)

Program

11:00–11:05

Welcome speech by professor **Kobayashi Takayuki**,
Chairman of Department of Mathematics

11:05–11:55   **Shi Yuguang** (Peking University)
Regularity of Conformal Compact Manifolds at Infinity

11:55–14:00   **Lunch time**

14:00–14:50   **Shioya Takashi** (Tohoku University)
Geometric analysis on Alexandrov spaces

15:20–16:10   **Chen Daguang** (Tsinghua University)
Eigenvalue estimates for the Laplacian and the Dirac operator

16:40–17:30   **Harrell Evans** (Georgia Institute of Technology)
Using commutators and differential inequalities to study eigenvalues

09:50–10:40   **Ding Qing** (Fudan University)
A geometric approach to the discrete
Heisenberg ferromagnetic spin chain

11:10–12:00   **El Soufi Ahmad** (University of Tours)
The effect of the geometry on the eigenvalues
of natural operators on manifolds I

11:55–14:00   **Lunch time**

14:00–14:50   **Zhang Xiao** (Chinese Academy of Sciences)
The eigenvalues of the Dirac operator on manifolds
with boundary and the Alexandrov theorem

15:20–16:10   **Harrell Evans** (Georgia Institute of Technology)
Semiclassical and universal bounds on spectra and some applications.

16:40–17:30   **Xu Hongwei** (Zhejiang University)
Topological and Differentiable Sphere Theorems for Submanifolds

18:20–   **Banquet**

March 22, Sunday

09:50–10:40   **Chen Qun**   (Wuhan University)
Geometric analysis of Dirac-harmonic maps I

11:10–12:00   **Urakawa Hajime** (Tohoku University)
Existence, construction and classification of proper biharmonic maps

11:55–14:00   **Lunch time**

14:00–14:50   **Suh Young Jin** (Kyungpook National Unversity)
Commuting Ricci tensors for hypersurfaces in complex two-plane
Grassmannians and related topics

15:20–16:10   **Furutani Kenro** (Science University of Tokyo)
Zeta-regularizded determinant of product manifold
and Kronecker's second limit formula

16:40–17:30   **Zhang Xiao** (Chinese Academy of Sciences)
The conformal Laplacian operator and
the mass of asymptotically flat manifolds

March 23, Monday

09:50–10:40   **Chen Qun** (Wuhan University)
Geometric analysis of Dirac-harmonic maps II

11:10–12:00   **Koiso Miyuki** (Nara Women University)
Stability of hypersurfaces with constant mean curvature

11:55–14:00   **Lunch time**

14:00–14:50   **Shiohama Katsuhiro** (Fukuoka University)
Radial curvature and topology of complete noncompact manifolds

15:20–16:10   **Li Anmin** (Sichuan University)
The Extremal Kahler Metrics on Toric Manifolds

16:40–17:30   **El Soufi Ahmad** (University of Tours)
The effect of the geometry on the eigenvalues
of natural operators on manifolds II