

# The 15th International Workshop on Differential Geometry and The 4th KNUGRG-OCAMI Differential Geometry Workshop

**Date:** 2(Wed)~5(Sat) November, 2011

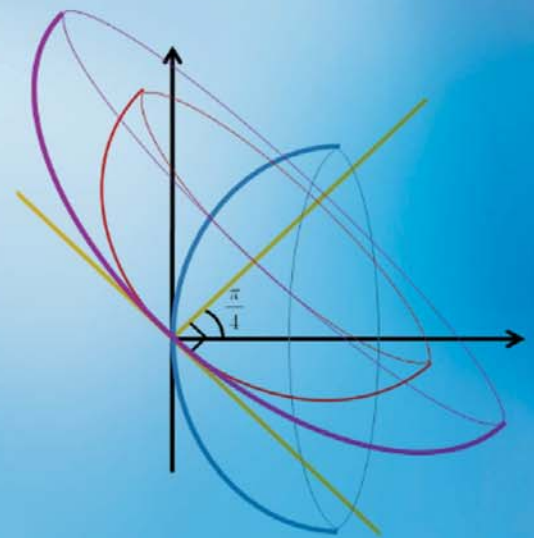
**Place:** Faculty Seminar Room #219, College of Natural Sciences,  
Kyungpook National University, Taegu 702-701, Korea

## Organizing committee:

- Prof. Young Jin Suh (Kyungpook Nat'l Univ.)
- Prof. Jürgen Berndt (Kings College London)
- Prof. Yoshihiro Ohnita (OCAMI & Osaka City Univ.)
- Prof. Byung Hak Kim (KyungHee Univ.)
- Dr. Hyunjin Lee (Kyungpook Nat'l Univ.)

## Invited Speakers

- Prof. Jürgen Berndt (King's College of London)
- Prof. Mayuko Kon (Shinshu Univ.)
- Prof. Yoshihiro Ohnita (OCAMI & Osaka City Univ.)
- Prof. Makiko Tanaka (Tokyo Univ. of Science)
- Prof. Guoxin Wei (South China Normal Univ.)
- Prof. Jong Taek Cho (Chonnam Nat'l Univ.)
- Prof. Yong Seung Cho (Ewha Womans Univ.)
- Prof. Seung Dal Jung (Jeju Nat'l Univ.)
- Prof. Byung Hak Kim (KyungHee Univ.)
- Prof. Do Hyung Kim (Dankuk Univ.)
- Prof. Kang Tae Kim (POSTECH)
- Prof. Min Kyu Kim (Gyeongin Nat'l Univ. of Education)
- Prof. Yoon-Weon Lee (Inha Univ.)
- Prof. Joonsang Park (Donggku Univ.)
- Prof. Juncheol Pyo (Pusan Nat'l Univ.)
- Prof. Young Jin Suh (Kyungpook Nat'l Univ.)
- Dr. Takanari Saotome (Academia Sinica)
- Dr. Imsoon Jeong (Kyungpook Nat'l Univ.)
- Dr. Hyunjin Lee (Kyungpook Nat'l Univ.)



## Organized by

National Institute for Mathematical Sciences  
& Grassmann Research Group

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## 3 November (Thursday), 2011

09:30-11:15

Chair Professor Young Jin Suh

09:30-10:15

Guoxin Wei (South China Normal University, China)  
On some classes of hypersurfaces in spheres

10:30-11:15

Byung Hak Kim (KyungHee University)  
Fibred Riemannian spaces with Sasaki-Einstein metric

11:30-12:50

Chair Professor Byung Hak Kim

11:30-11:40

Welcome Address - Young Jin Suh

11:50-12:50

Yoshihiro Ohnita (OCAMI & Osaka City University, Japan)  
Certain Lagrangian submanifolds in Hermitian symmetric spaces  
and Hamiltonian stability problems (I)

12:50-14:00

Lunch

14:00-16:10

Chair Professor Yoshihiro Ohnita

14:00-15:00

Jürgen Berndt (King's College London, United Kingdom)  
Polar actions on symmetric spaces (I)

15:00-15:10

Group Photo at Natural Science Building

15:25-16:10

Kang Tae Kim (Pohang University of Science and Technology)  
Semi-continuity theorems for holomorphic automorphism groups

16:25-17:40

Chair Professor Kang Tae Kim

16:25-16:55

Min Kyu Kim (Gyeongin National University of Education)  
Classification of equivariant vector bundles over two-sphere

17:10-17:40

Yoon-Weon Lee\* (Inha University) and  
Rung-Tzung Huang (National Central University, Taiwan)  
Boundary problem for the refined analytic torsion on compact manifolds  
with boundary

## 4 November (Friday), 2011

09:30-11:15

Chair Professor Yoon-Weon Lee

09:30-10:15

Joonsang Park (Donggku University)  
Orbit surfaces of the 3-dimensional geometries

10:30-11:15

Mayuko Kon (Shinshu University, Japan)  
On 3-dimensional compact real hypersurfaces of a complex space form

11:30-14:40

Chair Professor Jürgen Berndt

11:30-12:30 Makiko Tanaka (Tokyo University of Science, Japan)  
Antipodal sets of compact Riemannian symmetric spaces and their applications

12:30-13:40 Lunch

13:40-14:40 Yoshihiro Ohnita (OCAMI & Osaka City University, Japan)  
Certain Lagrangian submanifolds in Hermitian symmetric spaces and Hamiltonian stability problems (II)

14:55-16:25

Chair Professor Makiko Tanaka

14:55-15:40 Yong Seung Cho (Ewha Womans University)  
Topological properties of symmetric products

15:55-16:25 Seoung Dal Jung (Jeju National University)  
Eigenvalue estimates of the basic Dirac operator

16:40-17:55

Chair Professor Yong Seung Cho

16:40-17:10 Takanari Saotome\* (Academia Sinica, Taiwan) and  
Shu-Cheng Chang (TIMS & National Taiwan University, Taiwan)  
The  $Q$ -curvature flow in a closed CR 3-manifold

17:25-17:55 Jong Taek Cho (Chonnam National University)  
Contact manifolds and the Reeb flow

## 5 November (Saturday), 2011

09:00-10:10

Chair Professor Joonsang Park

09:00~09:30 Seonhui Kim (Kyungpook National University),  
Imsoon Jeong\* (Kyunpook National University), and  
Young Jin Suh (Kyungpook National University)  
Real hypersurfaces in complex two-plane Grassmannians with  $\xi$ -parallel structure Jacobi operator

09:40~10:10 Juncheol Pyo (Pusan National University)  
Minimal surfaces in  $H^2 \times R$

10:20-12:00

Chair Professor Young Jin Suh

10:20~11:20 Jürgen Berndt (King's College London, United Kingdom)  
Polar actions on symmetric spaces (II)

11:30~12:00 Do Hyung Kim (Dankuk University)  
Causal automorphisms on two-dimensional Minkowski space

# Pre Meeting of The 15th International Workshop on Differential Geometry & Related Topics

## 2 November (Wednesday), 2011

14:00-15:15

Chair Dr. Hyunjin Lee

- 14:00-14:30 Seonhui Kim\* (Kyungpook National University),  
Hyunjin Lee (Kyungpook National University), and  
Young Jin Suh (Kyungpook National University)  
A commuting condition of real hypersurfaces in complex two-plane  
Grassmannians
- 14:45-15:15 Jung Taek Oh\* (Kyungpook National University),  
Juan de Dios Pérez (Universidad de Granada, Spain), and  
Young Jin Suh (Kyungpook National University)  
A characterizations of real hypersurfaces of type A in complex two-plane  
Grassmannians

15:30-16:45

Chair Professor Jürgen Berndt

- 15:30-16:00 Imsoon Jeong (Kyungpook National University),  
Hyunjin Lee\* (Kyungpook National University), and  
Young Jin Suh (Kyungpook National University)  
The parallelism of shape operator related to the generalized Tanaka-  
Webster connection on real hypersurfaces in complex two-plane  
Grassmannians
- 16:15-16:45 Imsoon Jeong (Kyungpook National University),  
Eunmi Pak\* (Kyungpook National University), and  
Young Jin Suh (Kyungpook National University)  
Real hypersurfaces in complex two-plane Grassmannians with  
generalized Tanaka-Webster invariant shape operator

17:00-18:00

Chair Professor Young Jin Suh

- 17:00-18:00 Jürgen Berndt (Kings College London, United Kingdom)  
Hermitian submanifolds and its applications

**After Discussion** E-mail : yjsuh@knu.ac.kr (Young Jin Suh)  
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