

Jae-Hyouk Lee

ADDRESS

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Citizenship :

- Republic of Korea (South Korea)

Professional Experience :

2007 - present	Visiting Assistant Professor at University of Missouri - St. Louis
2004 - present	Reviewer of Mathematical Reviews
2004 - 2007	William Chauvenet Lecturer at Washington University in St. Louis
2005 Summer	Visiting scholar at National Chinese University of HongKong in HongKong
2003 March-May	Core-Participation in IPAM program of Symplectic Geometry and Physics
2000 Summer	Visiting scholar at National Center for Theoretical Sciences in Taiwan
1998 Fall-2004 spring	Teaching assistant, University of Minnesota
1995 Feb.	Mathematics teacher's license in South Korea

Professional Preparation :

<ul style="list-style-type: none"> • William Chauvenet Lecturer at Washington University in St. Louis (2004 Fall - 2007 Spring)
<ul style="list-style-type: none"> • Ph.D. in Mathematics, University of Minnesota, spring 2004. <ul style="list-style-type: none"> ◦ Thesis: Instantons and branes in manifolds with vector cross product ◦ Advisor: Professor Naichung Conan Leung
<ul style="list-style-type: none"> • M.S. in Mathematics, University of Minnesota, 2000.
<ul style="list-style-type: none"> • M.S. in Mathematics, Seoul National University, Korea, 1997.
<ul style="list-style-type: none"> • B.S. in Mathematics education, Seoul National University, Korea, 1995. <ul style="list-style-type: none"> ◦ Mathematics teacher's license in South Korea

Research Interests :

<ul style="list-style-type: none"> • Differential Geometry <ul style="list-style-type: none"> ◦ Geometry of manifolds with special holonomy groups, in particular G_2 and $Spin(7)$ ◦ Geometry of higher dimensional knot spaces
<ul style="list-style-type: none"> • Symplectic Geometry <ul style="list-style-type: none"> ◦ Geometry of symplectic Grassmannian space and symplectic knot spaces ◦ Geometry of Lagrangian submanifolds

Teaching Experience :

<ul style="list-style-type: none"> • 2007 fall- present, instructor at University of Missouri - St. Louis ; Real analysis, Differential Equations
<ul style="list-style-type: none"> • 2004 fall- 2007 spring, instructor at Washington University in St. Louis ; Complex variables, topology, linear algebra, dynamical system, algebraic systems, Matrix groups, Mathematics for Physicists, and Graduate courses
<ul style="list-style-type: none"> • 1998 fall-2004 spring, instructor and teaching assistant at University of Minnesota ; Collage algebra, Precalculus, Calculus, Differential equations and etc.
<ul style="list-style-type: none"> • 1996 spring-1998 spring, teaching assistant at Seoul National University in Korea ; Calculus.
<ul style="list-style-type: none"> • 1994 spring, teaching practice at middle schools and elementary schools.

Research Publications and Preprints :

1.	Geometric Structures on G_2 and $Spin(7)$ -manifolds, (with Prof. N.C. Leung), [math.DG./0202045] Submission to Advances in Theoretical and Mathematical Physics
2.	Instantons and Branes in Manifold with Vector Cross Product, (with Prof. N.C. Leung), To appear at Asian Journal of mathematics
3.	Higher Dimensional Knot spaces for Manifolds with Vector Cross Product,(with Prof. N.C. Leung), Advances in Mathematics 213(2007) 140-164
4.	Symplectic Geometry on Symplectic Grassmannian spaces (with Prof. N.C. Leung), Preprint.
5.	Symplectic Geometry on Symplectic Knot spaces, New York Journal of Mathematics 13.(2007) 17-31
6.	Special Lagrangian submanifolds in the Cotangent Bundles of Spheres, Preprint.
7.	New Examples of Compact 8-manifolds with holonomy $Spin(7)$, (with G. Jang), In preparation.

Selected Presentations and other Experiences :

1997 Summer	Participation in IMA graduate summer program at University of Chicago for Selected Topics in Algebraic Topology.
2003 June	Participation in Preparatory Workshop for the 2003 AMS/MSRI von Neumann Symposium
2003 Dec.	Talk at Gunkuk University in Korea Title : Geometry of Manifolds with Vector Cross Products
2004 Feb.	Talk at Geometric Analysis seminar at University of Minnesota Title : Instantons and Branes in Manifold with Vector Cross Products
2005 Spring	Organizing Seiberg-Witten invariants seminar
2005 March	Talk at Workshop in Geometry & Topology at University of Minnesota Title : Symplectic Grassmannian Geometry
2005 July	Talks at National Chinese University of HongKong in HongKong Title : Symplectic Grassmannian Geometry
2005 Fall	Organizing toric geometry seminar
2006 Sept.	Talk at Differential Geometry seminar at Washington University in St. Louis Title : Geometry of Symplectic Knot Spaces
2006 Oct.	Talk at Differential Geometry seminar at Washington University in St. Louis Title : Special Lagrangian Submanifolds in the Cotangent Bundles of Spheres
2007 May	Talk at Postech in Korea Title : Geometry along Vector Cross Products
2007 June	Talk at Seoul National University in Korea Title : Geometry on Manifolds with Vector Cross Products