KIAS Annual Report 2002

Korea Institute for Advanced Study (KIAS)
207-43 Cheongnyangni 2-dong, Dongdaemun-gu,
Seoul, 130-722 Korea
Homepage: http://www.kias.re.kr
Tel: 82 2 958 3711 Fax: 82 2 958 3770

KIAS Annual Report 2002

Report of President

This is the year 2002 annual report on the Korea Institute for Advanced Study (KIAS). The KIAS was founded on October 1, 1996, with a strong commitment to the excellence in basic science, by the Ministry of Science and Technology of Korea. At the time of inception, the KIAS embarked an ambitious journey with only three professors and three research fellows in mathematics and physics. Currently, the KIAS research staff consists of 64 members, 25 in the School of Mathematics, 24 in the School of Physics, and 15 in the newly created School of Computational Sciences. We have come a long way. Our research staff now consists of scholars with diverse nationalities. In this report we present KIAS history and its current status with an overview on organization, research staff, alumni, visiting scholars, and diverse scientific activities.

Although the history of the KIAS is relatively short, we have tried to build the best research facility in the region by providing an as pleasant and free research environment as possible which is open to the scholars home and abroad. In fact, last year alone, we have had over 200 visiting scholars from home and abroad and have organized numerous conferences, workshops and lecture series in a variety of subjects, ranging from Korea-Japan Joint Workshop on Algebraic Geometry and Related Topics in the School of Mathematics, KIAS Workshop on Strings and Branes in the School of Physics to KIAS Conference on Protein Structure and Function in the School of Computational Sciences, in which many world's leading scholars have participated. We have an ambition to make the KIAS a truly international research institution.

One of our goals is the sustained creation of new knowledge driven by curiosity and to share the results with others. Some knowledge will become, as history indicates, the backbone of technology that our society needs, whereas some will become fundamental knowledge that human race can cherish as an intellectual triumph.

Another goal is to make the KIAS relevant to our society. We are committed to providing a unique opportunity for the Korean community to grow in intellectual capability by providing actively interacting research environment. Establishment of the School of Computational Sciences which engages in theoretical and computational research in the so-called information, bio-, and nano- sciences is such an example. Also, as science itself has been undergoing a rapid paradigm shift, we are ready to embrace and nurture new ideas and perspectives in the future direction in basic science research. The flexibility should be the most important strength of the KIAS in this endeavor. In addition to the future growth in the Schools of Mathematics and Physics, we will plan aggressively to expand the School of Computational Sciences to replace the originally planned Schools of Chemistry and Biology.

We have also provided, in the past few years, mentoring programs for undergraduate and graduate science students in Korea in the form of winter and summer schools in order to motivate them and to provide them with guidance in their future science careers. We believe this program has been very successful and plan to continue to expand the efforts.

Finally, I would like to thank, with my deepest gratitude, everyone who has taken part in building this proud institution and who has worked so hard to make our dream come true.

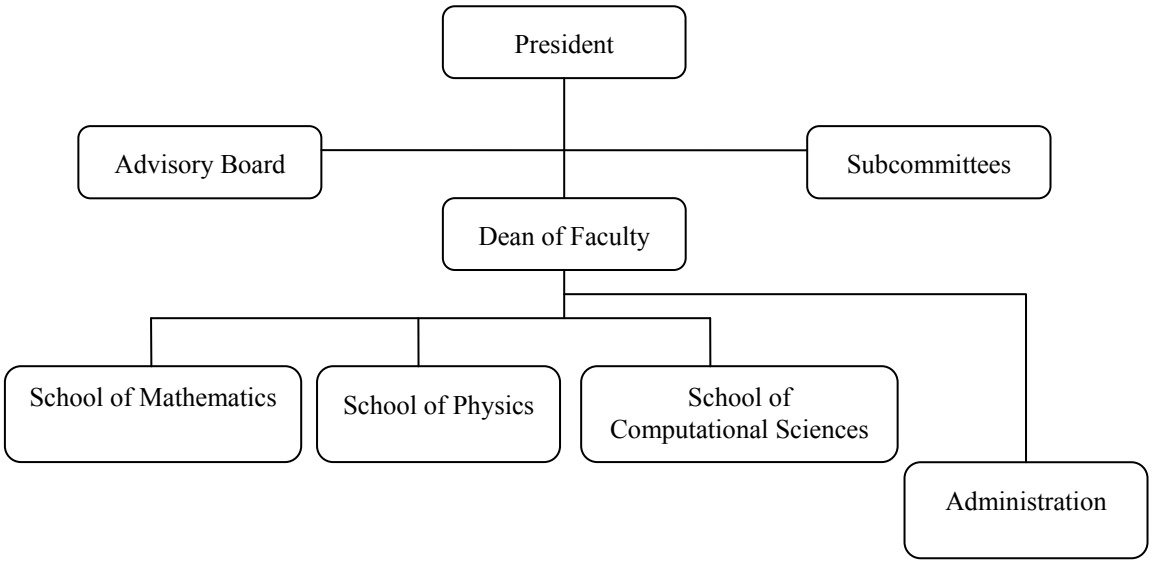
Chung Wook Kim
President

History

KIAS was inaugurated in October of 1996 under the support of the Korean government with strong commitment to the excellence of research in fundamental sciences (mathematics, physics, chemistry, and biology). Located on a 30-acre site in Hongneung, Seoul, Korea, KIAS provides a research-friendly atmosphere with a full access to state-of-the art research facilities.

1995	March	Feasibility study on the establishment of KIAS
	December	Establishment of KIAS approved at the Board of Trustees' Meeting KIAS Establishment Corps launched
1996	August	Prof. Efim I. Zelmanov of Yale University (1994 Fields Medalist) was appointed as Distinguished Professor at School of Mathematics
	October	KIAS established and inaugurated Prof. Hyo Chul Myung of KAIST was appointed as Vice President and Acting President
	November	School of Mathematics and School of Physics were established KIAS started with research staff of 1 Distinguished Professor, 2 Professors, and 3 Research Fellows
1997	December	Prof. Chung Wook Kim of the Johns Hopkins University was appointed as President
1998	December	Research staff of KIAS increased to 1 Distinguished Professor, 6 Professors, and 30 Research Fellows
1999	August	Prof. Leonard Susskind of Stanford University was appointed as Distinguished Professor at School of Physics
2000	September	School of Computational Sciences was established
2002	December	Research staff of KIAS consists of 2 Distinguished Professors, 15 Professors, and 47 Research Fellows

Organization and Committees



Administration

Kim, Chung Wook	*President*
Myung, Hyo Chul	*Dean of Faculty*
Shim, Moon Taik	*General Acting Manager*
Park, Cheol Kyu	*Purchasing/Contract*
Kim, Young Eun	*Personnel*
Lee, Minsung	*Payroll/General Welfare*
Jung, Yo Chang	*Asset Management*
Lee, Hyung Soon	*Secretary of President*
Oh, Si Hyoung	*Planning*
Choi, Byung-ho	*Computing*
Joo, Keehyoung	*Computational Sciences Research Assistant*
Park, Seon Jun	*Research Project/Visitor Management*
Lee, Jung Eun	*Public and International Relations/ Conferences*
Kim, So Young	*Research Expenses Management/Housing/Newsletter*
Park, Sujin	*Librarian*
Moon, Soon Ho	*Budget*
Kwak, Seong Cheol	*Financial Management*
Ryu, Neung Hyun	*Accounting*

School of Mathematics

The great success of modern science is due largely to the development of mathematics and analysis of models arising from natural and social phenomena. Research in the School of Mathematics includes both pure and applied mathematics such as algebra, algebraic geometry, topology, geometry, complex geometry, differential equations, etc.

Faculty

Distinguished Professor Zelmanov, Efim I.	*Algebra, Group Theory*
Professor Hwang, Jun-Muk	*Complex Geometry*
Professor Kang, Seok-Jin	*Lie Algebra and Representation Theory*
Professor Keum, JongHae	*Algebraic Geometry*
Professor Myung, Hyo Chul	*Lie Theory*
Professor Oh, Yong-Geun	*Differential Geometry*

Research Fellows

KIAS Assistant Professor Winkelmann, Joerg	*Algebraic Geometry and Complex Analysis*
Dr. Cho, Jin-Hwan	*Transformation Groups*
Dr. Choi, Yungook	*Algebraic Geometry*
Dr. Hong, Jaehyun	*Complex Geometry*
Dr. Hong, Kuk-Jin	*Number Theory (Modular Forms)*
Dr. Kim, Dong Han	*Ergodic Theory*
Dr. Kim, Namkwon	*PDE*
Dr. Kim, Sung Yeon	*Several Complex Variables*
Dr. Kwon, Jae Hoon	*Lie Algebra and Representation Theory*
Dr. Lee, Hyeonmi	*Lie Algebra and Representation Theory*
Dr. Lee, Joongul	*Number Theory*
Dr. Lee, Sangyop	*Low Dimensional Topology*
Dr. Lee, Sang Jin	*Topology*
Dr. Ochi, Yoshihiro	*Arithmetic Algebraic Geometry*
Dr. Schweizer, Andreas	*Number Theory*
Dr. Shin, Dong-Uy	*Lie algebra and Representation Theory*
Dr. Sung, Chanyoung	*Differential Geometry*
Dr. Yoon, Joung-Hahn	*Geometry and its Applications*
Dr. Yun, Ki-Heon	*Low Dimensional Topology*

In the year 2002, the school of mathematics held four international workshops.

The workshop “Rational curves on algebraic varieties” in March was aimed at surveying recent works in the study of algebraic varieties possessing many rational curves. The core of the program was lecture series by S. Kebekus (U. Bayreuth), Y. Miyaoka (U. Tokyo) and N. Mok (U. Hong Kong).

The program of the workshop “Modular Representation Theory” in October consisted of six two-hour lectures by J. Carlson (U. Georgia), A. Kleshchev (U. Oregon), Z. Lin (Kansas State U.), D. Nakano (U. Georgia), B. Parshall (U. Virginia) and A. Premet (U. Manchester), and a problem session. Some of the

most exciting developments in the representation theory of algebras over finite fields were discussed.

Korea-Japan Joint Workshop in Mathematics, held at KIAS in November, was the third in a series of workshops jointly organized annually by KIAS and Yamaguchi University. This year's theme was algebraic geometry and related topics. Speakers from Korea were Y. Choi (KIAS), D. Joe (POSTECH), Y. Kiem (SNU), B. Kim (POSTECH), S. Kim (Cheong Woon U.), S. Kwak (KAIST), Y. Lee (Sogang U.) and J. Park (U. Georgia). Speakers from Japan were A. Ishii (Kyoto U.), F. Kato (Kyoto U.), K. Konno (Osaka U.), D. Matsushita (Hokkaido U.), A. Moriwaki (Kyoto U.) Y. Namikawa (Osaka U.), M. Saito (Kobe U.) and F. Sakai (Saitama U.). The meeting was a great chance for algebraic geometers from both countries to have lively discussions in a stimulating and friendly atmosphere.

The first KIAS-POSTECH International Workshop on Number Theory-Modular Forms, held at KIAS in December, was on various topics related to modular forms. The invited speakers included D. Goldfeld (Columbia U.), T. Ibukiyama (Osaka U.), H. Iwaniec (Rutgers U.), S.-J. Kang (KIAS), D. Kim (Sogang U.), H. Kim (POSTECH), M.-H. Kim (SNU), W. Kohnen (U. Heidelberg), K. Ono (U. Wisconsin), A. Schweizer (KIAS), H. Stark (UC San Diego) and L. Walling (U. Colorado).

In addition to the four workshops, there were a number of special lecture series. Affiliate Distinguished Professor S. P. Novikov (U. Maryland) gave two lectures related to his recent works in Mathematical Physics. K. Oguiso (U. Tokyo)'s lecture series on derived categories was a survey of recent development in algebraic geometry in connection with derived categories of sheaves. Y. Saito (U. Tokyo) gave an introductory lecture series on canonical bases and crystal bases. O. Schiffmann (ENS)'s lecture series titled "Quivers, coherent sheaves and Lie algebras" gave an overview of the recent exciting interactions between geometry and representation theory.

Visiting Scientists

Koh, Kae-Won
Sep/17/2001 - Aug/31/2002
Dynamical Systems and Ergordic Theory
Ajou U

Shim, Young Sun
Oct/15/2001 - Aug/31/2002
Harmonic Analysis
POSTECH

Lee, Sang Jin
Dec/17/2001 - Jan/10/2002
Topology
CMI

Choe, Jaigyoung
Dec/19/2001 - Jan/17/2002
Differential Geometry
Seoul Nat'l U

Kim, Ho-il
Jan/07/2002 - Jan/21/2002
Algebraic Geometry
Kyungpook Nat'l U

Park, Jongil
Jan/07/2002 - Feb/08/2002
Topology
Konkuk U

Choi, Youn-Seo
Jan/07/2002 - Feb/06/2002
Number Theory
Korea U

Byun, Yang Hyun
Jan/28/2002 - Feb/28/2002
Topology
Hanyang U

Oh, Seungsang
Jan/28/2002 - Feb/08/2002
Dehn fillings and small surfaces
Chonbuk U

Marastoni, C.
Feb/11/2002 - Feb/20/2002
Radon-type integral transforms on general flag manifolds and equivariant D-modules
RIMS

Kuwata, T.
Feb/17/2002 - Feb/26/2002
Algebraic Geometry
Tokyo Denki U

Han, Sang Geun
Feb/24/2002 - Mar/05/2002
Number Theory
KAIST

Taguchi, Y.
Feb/25/2002 - Mar/20/2002
Number Theory
Kyushu U

Koh, Jee Heup
Mar/07/2002 - Mar/18/2002
Commutative Algebra, Algebraic Geometry
Indiana U

Kim, Ho-il
Mar/08/2002 - Jun/30/2002
Algebraic Geometry
Kyungpook Nat'l U

Martinez, C.
Mar/10/2002 - Mar/24/2002
Super Jordan Algebras
U of Oviedo

Kebekus, S.
Mar/10/2002 - Apr/02/2002
Algebraic Geometry
U of Bayreuth

Miyaoka, Y.
Mar/12/2002 - Mar/17/2002
Algebraic Geometry
U of Tokyo

Saito, M.
Mar/14/2002 - Mar/24/2002
Algebraic Geometry
Kobe U

Segal, G.
Mar/16/2002 - Mar/27/2002
Mathematical Physics
Oxford U

Baez, John
Mar/23/2002 - Mar/31/2002
Mathematical Physics
UC Riverside

Park, Hyung-Joo
Mar/26/2002 - Mar/29/2002
Algebraic Geometry
Oakland U

Han, Chong-Kyu
Apr/01/2002 - May/31/2002
Functions of several complex variables
Seoul Nat'l U

Park, Hyung-Joo
Apr/11/2002 - Apr/12/2002
Commutative Algebra
Oakland U

Kim, Myung-Hwan
Apr/12/2002 - Apr/18/2002
Representation theory of quatratic forms
Seoul Nat'l U

Han, Sang Geun
Apr/20/2002 - Apr/30/2002
Number Theory
KAIST

Park, Jong-Guk
Jun/03/2002 - Jun/05/2002
Harmonic Analysis
POSTECH

Kim, Kang-Tae
Jun/06/2002 - Jun/08/2002
Several Complex Variables
POSTECH

Padilla, Pablo
Jun/10/2002 - Jul/10/2002
Partial Differential Equations
Mexico U

Moon, Dongho
Jun/17/2002 - Jun/28/2002
Lie super algebra
Sejong U

Oh, Byeong-Kweon
Jun/24/2002 - Aug/31/2002
Representation of Integral Quadratic Forms
Ohio State U

Ko, Bong Soo
Jun/26/2002 - Jun/27/2002
Partial Differential Equations
Cheju Nat'l U

Kim, Ho-il
Jul/01/2002 - Dec/31/2002
Noncommutative Geometry
Kyungpook Nat'l U

Ye, Xiangdong
Jul/01/2002 - Jul/06/2002
Dynamical Systems & Ergordic Theory
U of Science & Technology of China

Noguchi, J.
Jul/04/2002 - Jul/07/2002
Several Complex Variables
Tokyo U

Moon, Dongho
Jul/10/2002 - Aug/30/2002
Lie Algebra
Sejong U

Martinez, C.
Jul/13/2002 - Aug/04/2002
Lie group and Super Jordan Algebra
U of Oviedo

Kim, Jongsu
Jul/15/2002 - Aug/09/2002
Differential Geometry
Sogang U

Lee, Man-Keun
Jul/15/2002 - Jul/19/2002
Algebraic Geometry
Dongyang U

Oguiso, K.
Jul/15/2002 - Jul/22/2002
Algebraic Geometry
Tokyo U

Qi, Zhang
Jul/15/2002 - Jul/22/2002
Algebraic Geometry
U of Missouri

Vlassopoulos, Ioannis
Jul/17/2002 - Aug/07/2002
Quantum Cohomology, Floer Cohomology
U of Athens

Kohnen, W.
Jul/22/2002 - Jul/29/2002
Modular form
U of Heidelberg

Noma, Atsushi
Jul/24/2002 - Aug/01/2002
Algebraic Geometry
Yokohama U

Bokut, L.
Jul/27/2002 - Aug/27/2002
Algebra and Combinatorics
Sobolev Institute of Mathematics

Miyajima, Kimio
Aug/05/2002 - Aug/13/2002
Complex Geometry
Kagoshima U

Kutzschebauch, Frank
Aug/11/2002 - Aug/13/2002
Holomorphic Group action
U of Sundsval

Fukaya, Kenji
Aug/12/2002 - Aug/16/2002
Algebraic Geometry
Koyto U

Wang, Julie Tzu-Yueh
Aug/19/2002 - Aug/25/2002
Complex Geometry
Academia Sincia

Cataldo, Mark de
Aug/22/2002 - Sep/15/2002
Algebraic Geometry
SUNY Stony Brook

Oh, Byeong-Kweon
Sep/01/2002 - Nov/14/2002
Representations of positive definite integral quadratic forms
Ohio State U

Mason, Alexander William
Sep/06/2002 - Sep/23/2002
Non-congruence subgroups
Glasgow U

Nishiyama, K.
Sep/10/2002 - Sep/25/2002
Algebraic Geometry
Saitama U

Tan, Ki-Seng
Sep/11/2002 - Sep/17/2002
Elliptic curves
Nat'l Taiwan U

Noboru, Aoki
Sep/12/2002 - Sep/17/2002
Elliptic curves
Rikkyo U

Kaup, Wilhelm
Sep/25/2002 - Sep/29/2002
Jordan triple modules
Tübingen U

Kim, Bumsig
Sep/31/2002 - Nov/02/2002
Algebraic Geometry
POSTECH

Novikov, S.
Nov/01/2002 – Nov/29/2002
Algebraic Geometry
U of Maryland

Saito, Yoshihisa
Nov/04/2002 – Nov/10/2002
Crystal bases & canonical bases of quantum groups
U of Tokyo

Schffmann, Olivier G.
Nov/08/2002 – Dec/01/2002
Hall Algebras and Quantum Groups
ENS, Paris

Yamaguchi, K.
Nov/12/2002 – Nov/19/2002
Complex Geometry
Hokkaido U

Jun, Byungheup
Nov/18/2002 – Nov/22/2002
Algebraic Geometry
U of Essen

To, Wing-Keung
Dec/08/2002 – Dec/18/2002
Complex Geometry
National U of Singapore

Research Activities (Workshops, Symposia, Conferences, Seminars, etc.)

Workshops/Symposia/Conferences

KIAS Workshop: Rational Curves on Algebraic Varieties (March 27-29, 2002)
KIAS Special Lecture: Korea Science Award (Prof. Hwang, Jun-Muk), (April 19, 2002)
KIAS Workshop on Modular Representation Theory (October 21-25, 2002)
KIAS Workshop on Geometry of Derived Categories (October 31-November 2, 2002)
Korea-Japan Joint Workshop in Mathematics (November 26-28, 2002)
First KIAS-POSTECH International Workshop on Number Theory-Modular Forms (December 3-6, 2002)

Seminars

January 9, 2002
Kim, Dong Han (KAIST)
"Entropy and the First Return Time"

January 10, 2002
Grinenko, Mikhail (KIAS)
"Pencils of del Pezzo surfaces of degree 1 and 2: survey of results"

January 10, 2002
Hong, Jaehyun (KIAS)
"Integral manifolds of Frobenius structures on compact Hermitian symmetric spaces"

January 15, 2002
Kim, Julee (IAS)
"Types and Plancherel formulas"

January 15, 2002
Seidel, Paul (IAS)
"Real and complex Morse theory (in two variables)"

January 23, 2002
Lee, Sang Hyuk (POSTECH)
"Endpoint estimates for the circular maximal function"

January 25, 2002
Kim, Minhyong (KIAS)
"Rational points on Fano varieties over finite fields"

January 29, 2002
Rasmussen, Christopher (U of Arizona)
"Galois actions on fundamental groups"

January 30, 2002
Yoo, Hyun Tae (Ajou U)
"Fermion random point fields as Gibbs measures and an application"

February 8, 2002
Hwang, Jun-Muk (KIAS)
"Degrees of Fano 4-folds"

February 8, 2002
Winkelmann, J. (KIAS)
"Elliptic curves in $SL_2(C)/\Gamma$"

February 15, 2002
Marastoni, Corrado (RIMS)
"Radon-type Integral transforms on generalized flag manifolds and equivariant D-modules (1)"

February 15, 2002
Marastoni, Corrado (RIMS)
"Radon-type Integral transforms on generalized flag manifolds and equivariant D-modules (2)"

February 25, 2002
Kuwata, T. (Tokyo Denki U)
"The logcanonical threshold of reducible curves"

February 25, 2002
Lee, Yongnam (Sogang U)
"The logcanonical threshold of reducible semistable plane curves"

March 5, 2002
Taguchi, Yuichiro (Kyushu U)
"Finiteness of various Galois representations"

March 8, 2002
Koh, Jee Heub (Indiana U)
"SCr condition on modules over local rings"

March 18, 2002
Segal, Graeme (Oxford U)
"Recent developments in conformal field theory I"

March 18, 2002
Segal, Graeme (Oxford U)
"Recent developments in conformal field theory II"

March 19, 2002
Hwang, Jun-Muk (KIAS)
"Introduction to Theory of Rational Curves"

March 20, 2002
Lee, Sang Jin (KIAS)
"Linearity of braid groups"

March 21, 2002
Kebekus, Stefan (U of Bayreuth)
"Nef fibration"

March 21, 2002
Saito, Masahiko (Kobe U)
"Logarithmic Symplectic Varieties and Painleve Equations"

March 22, 2002
Miyaoka, Yoichi (U of Tokyo)
"Characterization of hyperquadrics"

March 25, 2002
Segal, Graeme (Oxford U)
"Recent developments in conformal field theory III"

March 25, 2002
Segal, Graeme (Oxford U)
"Recent developments in conformal field theory IV"

March 26, 2002
Baez, John (UC Riverside)
"Quantum Riemannian Geometry and Gauge Theory I"

March 26, 2002
Baez, John (UC Riverside)
"Quantum Riemannian Geometry and Gauge Theory II"

March 28, 2002
Baez, John (UC Riverside)
"Quantum Riemannian Geometry and Gauge Theory III"

March 28, 2002
Baez, John (UC Riverside)
"Quantum Riemannian Geometry and Gauge Theory IV"

March 29, 2002
Kim, Hoil (Kyungpook Nat'l U)
"Noncommutative Geometry & (Homological) Mirror Symmetry"

April 3, 2002
Ahn, Youngho (Seoul Nat'l U)
"Joining characterization of a factor of a simple map"

April 11, 2002
Park, Hyungju (Oakland U& POSTECH)
"Module Theoretic Generalization of Hilbert Nullstellensatz"

April 12, 2002
Choe, Insong (Seoul Nat'l U)
"Finite morphisms between Fano hypersurfaces"

April 12, 2002
Kim, Hoil (Kyungpook Nat'l U)
"Introduction to Homological Mirror Symmetry"

April 17, 2002
Shim, Yong Sun (POSTECH)
"An Introduction to NLSO (I)"

April 19, 2002
Kim, Hoil (Kyungpook Nat'l U) and Kim, Eunsang (Hanyang U)
"Spectral Curves" (by Kim, Hoil), "Derived Categories" (by Kim, Eunsang)

April 26, 2002
Kim, Eunsang (Hanyang U)
"Derived Categories"

May 3, 2002
Shim, Jaekwan (Kyungbook Nat'l U)
"Floer Cohomology with A Infinite Category"

May 10, 2002
Shim, Jaekwan (Kyungbook Nat'l U)
"A infinite Category and Fukaya Category"

May 17, 2002
Shim, Jaekwan (Kyungbook Nat'l U)
"K Theory of Operator Algebras"

May 21, 2002
Oh, Yong-Geun (KIAS)
"Toric varieties (1)"

May 24, 2002
Shim, Jaekwan (Kyungbook Nat'l U)
"K homology and Kaprasov's KK theory"

May 27, 2002
Schweizer, Andreas (KIAS)
"On elliptic surfaces in characteristic p with a p-torsion section"

May 28, 2002
Oh, Yong-Geun (KIAS)
"Toric varieties (2)"

May 31, 2002
Kim, Eunsang (Hanyang U)
"Hochshild and Cyclic (co)Homology"

June 7, 2002
Kim, Eunsang (Hanyang U)
"Hochshild and Cyclic (co)Homology"

June 14, 2002
Kim, Eunsang (Hanyang U)
"Dixmier Trace"

June 20, 2002
Padilla, Pablo (UNAM)
"Dynamic, geometric and variational aspects of some nonlinear problems"

June 21, 2002
Kim, Hoil (Kyungbook Nat'l U)
"Connes' Spectral Triples"

June 26, 2002
Padilla, Pablo (UNAM)
"Dynamic, geometric and variational aspects of some nonlinear problems"

June 27, 2002
Padilla, Pablo (UNAM)
"Dynamic, geometric and variational aspects of some nonlinear problems"

June 28, 2002
Oh, Yong-Geun (KIAS)
"Minicourse: Toric Varieties"

June 28, 2002
Kim, Hoil (Kyungbook Nat'l U)
"Noncommutative Spaces with Morita Equivalence"

July 2, 2002
Oh, Yong-Geun (KIAS)
"Minicourse: Toric Varieties"

July 3, 2002
Ye, Xiang Dong (U of Science & Technology of China)
"Pairs in Topological Dynamics and Ergodic Theory"

July 4, 2002
Padilla, Pablo (UNAM, IIMAS)
"Dynamic, geometric and variational aspects of some nonlinear problems"

July 5, 2002
Kim, Hoil (Kyungbook Nat'l U)
"Brauer Group, Fukaya Category and Noncommutative Mirror Symmetry"

July 18, 2002
Qi, Zhang (U of Missouri)
"Holomorphic one forms on varieties of general type"

July 18, 2002
Oguiso, K. (U of Tokyo)
"Arithmetic aspects of FM partners of a K3 surface"

July 23, 2002
Oh, Yong-Geun (KIAS)
"Minicourse: Toric Varieties"

July 25, 2002
Kohnen, W. (U of Heidelberg)
"Special values of J-Functions"

July 26, 2002
Noma, Atsushi (Yokohama U)
"Castelnuovo-Mumford regularity of rational curves and secant lines"

July 30, 2002
Choie, YoungJu (POSTECH)
"Informal discussions on public key cryptography and computational number theory"

July 30, 2002
Oh, Yong-Geun (KIAS)
"Minicourse: Toric Varieties"

August 1, 2002
Vlassopoulos, I. (U of Athens)
"Quantum Cohomology and the Loop Space of Toric Varieties"

August 5, 2002
Bokut, A. (Sobolev Institute of Mathematics)
"Greubner-Shirshov bases for groups and the conjugacy problem"

August 6, 2002
Oh, Yong-Geun (KIAS)
"Minicourse: Toric Varieties"

August 7, 2002
Miyajima, Kimio (Kagoshima U)
"CR structure and deformation of normal isolated singularities"

August 12, 2002
Kutzschebauch, F. (U of Sundsval)
"Embeddings of C^k into C^n"

August 13, 2002
Oh, Yong-Geun (KIAS)
"Minicourse: Toric Varieties"

August 14, 2002
Fukaya, Kenji (Kyoto U)
"Asymptotic analysis and homological mirror symmetry I"

August 14, 2002
Fukaya, Kenji (Kyoto U)
"Asymptotic analysis and homological mirror symmetry II"

August 21, 2002
Wang, Julie (Academia Sinica (Taiwan))
"Sharing value sets problems for entire and meromorphic functions"

August 23, 2002
Cataldo, Mark de (SUNY, Stony Brook)
"Algebraic maps, topology and cycles"

August 26, 2002
Vesnin, Andrei (Seoul Nat'l U)
"Braid group B_4 and Fibonacci and Sieradski groups"

September 4, 2002
Kim, Sung Yeon (KIAS)
"Complete system for CR mappings and its applications"

September 5, 2002
Cho, Jin-Hwan (KIAS)
"MetaPost by examples (1)"

September 10, 2002
Cho, Jin-Hwan (KIAS)
"MetaPost by examples (2)"

September 13, 2002
Tan, Ki-Seng (Nat'l Taiwan U)
"The number of integer points on an elliptic curve"

September 13, 2002
Aoki, Noboru (Rikkyo U)
"On the Cassels-Tate pairing on semistable elliptic curves"

September 17, 2002
Nishiyama, K. (Saitama U)
"The Mordell-Weil groups of elliptic K3 surfaces"

September 25, 2002
Kim, Chang Heon (Max-Planck-Institute)
"Borcherds products associated with certain Thompon series"

September 30, 2002
Kang, Seok-Jin (KIAS)
"Combinatorial Representation Theory and Crystal Bases I"

October 7, 2002
Kang, Seok-Jin (KIAS)
"Combinatorial Representation Theory and Crystal Bases II"

October 14, 2002
Kang, Seok-Jin (KIAS)
"Combinatorial Representation Theory and Crystal Bases III"

October 25, 2002
Choi, Youngook (KIAS)
"On the defining equations of codimension 2 subvarieties of P^n"

October 25, 2002
Yun, Ki-Heon (KIAS)
"On symplectic filling of fibred 3-manifold"

October 31, 2002
Oguiso, Keiji (U of Tokyo)
"Basic notions, Serre functor"

October 31, 2002
Oguiso, Keiji (U of Tokyo)
"Orlov's representation theorem"

November 1, 2002
Oguiso, Keiji (U of Tokyo)
"Bridgeland's criterion for equivalence"

November 1, 2002
Oguiso, Keiji (U of Tokyo)
"D-equivalence implies K-equivalence"

November 2, 2002
Oguiso, Keiji (U of Tokyo)
"FM partners of K3 surfaces"

November 2, 2002
Oguiso, Keiji (U of Tokyo)
"Applications"

November 4, 2002
Saito, Yoshihisa (U of Tokyo)
"Introduction to canonical bases and crystal bases 1"

November 4, 2002
Saito, Yoshihisa (U of Tokyo)
"Introduction to canonical bases and crystal bases 2"

November 6, 2002
Saito, Yoshihisa (U of Tokyo)
"Introduction to canonical bases and crystal bases 3"

November 6, 2002
Saito, Yoshihisa (U of Tokyo)
"Introduction to canonical bases and crystal bases 4"

November 8, 2002
Saito, Yoshihisa (U of Tokyo)
"Introduction to canonical bases and crystal bases 5"

November 8, 2002
Saito, Yoshihisa (U of Tokyo)
"Introduction to canonical bases and crystal bases 6"

November 13, 2002
Yamaguchi, Keizo (Hokkaido U)
"Characterization of Hermitian symmetric spaces by fundamental forms"

November 13, 2002
Winkelmann, Joerg (KIAS)
"Bounds for curves in abelian varieties"

November 14, 2002
Kim, Jin-Hong (KAIST)
"On the Taubes' conjecture and some related questions"

November 14, 2002
Sung, Chan Young (KIAS)
"Minimal volume, scalar curvature, and almost Kahler metric"

November 18, 2002
Schiffmann, Olivier (CNRS)
"Quivers, coherent sheaves and Lie algebras 1"

November 18, 2002
Schiffmann, Olivier (CNRS)
"Quivers, coherent sheaves and Lie algebras 2"

November 19, 2002
Motegi, Kimihiko (Nihon U)
"On Seifert Fibered Dehn surgeries on knots"

November 19, 2002
Novikov, S.P. (U of Maryland)
"Geometry of the discrete linear systems on the triangulated 2D manifolds"

November 20, 2002
Schiffmann, Olivier (CNRS)
"Quivers, coherent sheaves and Lie algebras 3"

November 20, 2002
Schiffmann, Olivier (CNRS)
"Quivers, coherent sheaves and Lie algebras 4"

November 20, 2002
Lim, Seon Hee (Yale U)
"Counting lattices in the automorphism group of a tree"

November 21, 2002
Jun, Byungheup (U of Essen)
"Period of an irregular connection on an elliptic curve"

November 21, 2002
Novikov, S.P. (U of Maryland)
"Real Algebraic Geometry and Solitons"

November 29, 2002
Schiffmann, Olivier (ENS Paris)
"Quivers, coherent sheaves and Lie algebras 5"

November 29, 2002
Schiffmann, Olivier (ENS Paris)
"Quivers, coherent sheaves and Lie algebras 6"

December 11, 2002
To, Wing-Keung (Nat'l U of Singapore)
"On the asymptotic behavior of the Takhtajan-Zograf metric"

December 17, 2002
Kim, Namkwon (KIAS)
"Vortex patch in Euler equations"

December 20, 2002
Kim, Dong Han (KIAS)
"The mean waiting time of Markov chains"

December 20, 2002
Lee, Sangyop (KIAS)
"Dehn fillings on 3-manifolds"

Publications

Choe GH, Kim DH
The first return time test of pseudorandom numbers
J COMPUT APPL MATH 143 (2): 263-274 2002

Chung MH, Kwon JH
Reduction of the Hilbert space in strongly correlated systems
J MATH PHYS 43 (10): 4582-4591 OCT 2002

Dolgachev I, Keum J
Birational automorphisms of quartic Hessian surfaces
T AM MATH SOC 354 (8): 3031-3057 2002

Hwang JM
Varieties with degenerate gauss mappings in complex hyperbolic space forms
INT J MATH 13 (2): 209-216 MAR 2002

Hwang JM, Mok N
Cartan-Fubini type extension of holomorphic maps for Fano manifolds of Picard number 1
J MATH PURE APPL 80 (6): 563-575 JUL-AUG 2001

Hwang JM, Mok N
Deformation rigidity of the rational homogeneous space associated to a long simple root
ANN SCI ECOLE NORM S 35 (2): 173-184 MAR-APR 2002

Hwang JM, Varolin D
A compactification of $(C^*)^4$ with no non-constant meromorphic functions
ANN I FOURIER 52 (1): 245-+ 2002

Hwang JM, To WK
Volumes of complex analytic subvarieties of Hermitian symmetric spaces
AM J MATH 124 (6): 1221-1246 2002

Kang SJ, Kwon JH
Tensor product of crystal bases for U-q(gl(m, n))-modules
COMMUN MATH PHYS 224 (3): 705-732 DEC 2001

Kang SJ, Kwon JH
Quantum affine algebras, combinatorics of Young walls, and global bases
ELECTRON RES ANNOUNC 8: 35-46 2002

Kang SJ, Lee IS, Lee KH, et al.
Hecke algebras, Specht modules and Grobner-Shirshov bases
J ALGEBRA 252 (2): 258-292 JUN 15 2002

Keum J, Zhang DQ
Fundamental groups of open K3 surfaces, Enriques surfaces and Fano 3-folds
J PURE APPL ALGEBRA 170 (1): 67-91 MAY 8 2002

Kim HK, Kim JS
Evaluation of zeta function of the simplest cubic field at negative odd integers
MATH COMPUT 71 (239): 1243-1262 2002

Kwon O, Lee JY, Yoon JR
Equipotential line method for magnetic resonance electrical impedance tomography
INVERSE PROBL 18 (4): 1089-1100 AUG 2002

Kwon O, Seo JK, Yoon JR
A real-time algorithm for the location search of discontinuous conductivities with one measurement
COMMUN PUR APPL MATH 55 (1): 1-29 JAN 2002

Kwon O, Woo EJ, Yoon JR, et al.
Magnetic resonance electrical impedance tomography (MREIT): Simulation study of J-substitution algorithm
IEEE T BIO-MED ENG 49 (2): 160-167 FEB 2002

Lee JS, Rim KS
Weighted norm inequalities for pluriharmonic conjugate functions
J MATH ANAL APPL 268 (2): 707-717 APR 15 2002

Lee S, Oh S
Constructing persistently laminar knots
TOPOL APPL 124 (1): 139-143 2002

Lee S, Oh SS, Teragaito T
Dehn fillings creating essential spheres and tori
J KNOT THEOR RAMIF 11 (6): 887-890 2002

Martinez C, Zelmanov E
Specializations of Jordan superalgebras
CAN MATH BULL 45 (4): 653-671 DEC 2002

Ochi Y, Venjakob O
On the structure of Selmer groups over p-adic Lie extensions
J ALGEBRAIC GEOM 11 (3): 547-580 JUL 2002

Rim KS
Marcinkiewicz integral operators on product domains
MATH PROC CAMBRIDGE 132: 523-530 Part 3 MAY 2002

Schweizer A
On Drinfeld modular curves with many rational points over finite fields
FINITE FIELDS TH APP 8 (4): 434-443 OCT 2002

Yoon JH, Pottmann H, Lee YS
Locally optimal cutting positions for 5-axis sculptured surface machining
COMPUT AIDED DESIGN 35 (1): 69-81 2003

Yoon JR, Kim SW, Kwon JK et al.
On a linear partial differential equation arising in magnetic resonance electrical impedance tomograpy
SIAM J MATH ANAL 34(3) : 511-526 2002

School of Physics

The 20th century witnessed giant improvements in human condition, much of which were prompted and guided by accomplishments in natural sciences in general and physics in particular. It is hard to imagine our technology-driven world without the underlying modern physics, from a sweeping change of paradigm introduced by quantum mechanics to the invention of a little device known as the semiconductor. KIAS aspires to serve as a basin of fundamental knowledge that will play an important role in the 21st century. With such an aim, the school of physics conducts research in theoretical physics, and currently houses several active groups in string and field theory, particle physics, condensed matter physics, astrophysics, and astro-hadron physics.

Faculty

Distinguished Professor Susskind, Leonard	*Theoretical Physics*
Professor Chun, Eung Jin	*Particle Phenomenology*
Professor Kim, Chung Wook	*Neutrino Physics and Cosmology*
Professor Lee, Kimyeong	*Theoretical Physics*
Professor Park, Hyunggyu	*Statistical Physics*
Professor Rho, Mannque	*Astro-hadron Physics*
Professor Yi, Piljin	*String Theory and Field Theory*

Research Fellows

KIAS Assistant Professor Chang, Heon-Young	*Astrophysics*
Dr. Ahn, Sang-Hyeon	*Astrophysics*
Dr. Akeroyd, Andrew	*Particle Physics Phenomenology*
Dr. Baek, Seungwon	*Supersymmetry Phenomenology*
Dr. Cornell, Alan	*Particle Physics Phenomenology*
Dr. Hong, Hyunsuk	*Statistical Physics*
Dr. Kang, Gungwon	*Gravity and Theoretical Physics*
Dr. Kim, Hyung Do	*High Energy Physics*
Dr. Kwon, Hwang-hyun	*Theoretical High Energy Physics*
Dr. Lee, Kang Young	*Particle Physics Phenomenology*
Dr. Michishita, Yoji	*String Theory*
Dr. Park, Jeong-Hyuck	*M/String theory*
Dr. Park, Seong Chan	*High Energy Physics*
Dr. Sim, Heung-Sun	*Condensed Matter Theory*
Dr. Song, Jeong-hyeon	*Neutrino Physics Phenomenology*
Dr. Yee, Jung-Tay	*String Theory*
Dr. Yi, Hangmo	*Condensed Matter Theory*

In the field of particle physics phenomenology, the Spring School on new physics search in rare B decays was held during April 22-25. As main lecturers, Prof. Masiero, Antonio (Padova), Kagan, Alex (Cincinnati) and Chay, Junegone (Korea University), Morozumi, Takuya (Hiroshima) were invited to give lectures on B physics such as collinear effective field theory, B decays and mixing, and tests of new physics including supersymmery. The KAIST-KIAS Joint Workshop was started in the year of 2002. The first workshop was on cosmology and held during June 12-21 both in KAIST and KIAS. In the Summer

Institute intended for Ph.D students during July 1-12, Prof. Ko, Pyungwon (KAIST) and Dr. Kim, Hang Bae (Lausanne) were invited to give lectures on the standard model and cosmology. During the year of 2002, the following research on particle phenomenology has been performed at KIAS. Prof. Chun, Eung Jin investigated neutrino masses and mixing that can arise from the supersymmetric standard model allowing lepton number violaton and the possibility of testing such a scheme at future colliders. Dr. Lee, Kang Young looked for the effect of anomalous right-handed top quark coupling in CP violation and decays of B mesons. Dr. Song, Jeong-hyeon worked in the field of physics of extra dimensions to examine the phenomena of radion-Higgs mixing in e+e- colliders and top quark Kaluza-Kein mixing in B decays, and the production of Kaluza-Klein gravitino together with a single photon, the last of which was an outcome of a collaboration with Drs. Baek and Park in KIAS. She also worked on the Higgs decay in the supersymmetric standard model with CP violation. Dr. Akeroyd, Andrew looked for the possibility of a light CP-odd Higgs boson (A0) in the supersymmetric standard model together with Dr. Baek and others, and the effects of R-parity violation in B and D meson decays. In addition to the aforementioned collaborations, Dr. Baek, Seungwon was very active in investigating the phenomenology of the supersymmetric standard model in connection with various low energy observables such as the anomalous magnetic moment of muon and B meson decays into leptons. Dr. Kim, Hyung Do contributed to the recent development of extra dimension physics by investigating the gauge coupling renormalization in an orbifold and ADS5 geometry which has to be understood in order to merge the ideas of grand unification and extra dimensions. He explored 5 dimensional models with a SU(3)_W unification and also a supersymmetric SO(10).

During the year 2002, String and Field Theory Group of KIAS hosted numerous workshops and schools, aimed at diverse levels of participants, from undergraduate physics students to worldwide experts on string theory. One of the longest running annual events is the Physics Winter Camp, which together with Center for Theoretical Physics of Seoul National University, hosts bright juniors and seniors in major universities, and try to infuse a sense of curiosity and bring out diverse possibilities in physics. We hope to culture young students into well-balanced future scientists through such educational events. As an off-shoot of this winter camp, we also hosted lecture series for a handful of the brightest freshmen and sophomores, not only from best colleges in Korea but also a few from overseas, such as from Harvard University. Another educational program, intended for those graduate students already in theoretical physics, is the annual Summer Institute for Theoretical Physics, which was held for the second time in year 2002. This program was more focused and intended to serve as a basin of knowledge, which is necessary to become a well-balanced and mature theorist. During regular semesters, such short-term schools are complemented by more intensive and detailed lecture series. Prof. Kimyeong Lee's String Theory Lecture during the Spring Semester was heard by many eager graduate students. An international meeting for more eminent participants, such as Gary Gibbons of Cambridge and Toru Eguchi of Tokyo as well as some twenty overseas speakers and local experts, was held during May, 2002 at KIAS. This meeting, lasting for two solid weeks, was intended as a workshop for experts and also as a background for new and old collaborations. More than 30 presentations on recent advances in string theory were given, which were later stored and made available on the internet for wider dissemination. This is the second meeting in a series that was started in the year 2000 at KIAS, through the initiative of Prof. Piljin Yi, and have served both as a focal point for bringing in new advances worldwide and as an opportunity to advertise KIAS in the international community of string theorists. One of more memorable moments during last year was when Prof. Lenni Susskind, distinguished professor of the school of physics, gave a lecture at the 50th anniversary KPS meeting with a dire prediction that it is about time to abandon the old paradigm of quantum field theory and find a completely new way to describe the real world. The research of the String and Field theory group was also very active. This group was one of the most active set of people currently exploring exactly solvable background of string theory and M theory, widely known as PP-wave geometry.

In particular, Dr. Jeong-Hyuck Park played an important role in uncovering the quantum nature of M theory in PP-wave background and stands out among our members. Most of the research fellows as well as two faculty members contributed significantly to various aspects of this new theoretical laboratory. The hope is that such diverse exploration will lead us to a better and more useful formulation of a theory of everything. Apart from this, each member continued to produce interesting work in his own fields. Dr. Hyeonjoon Shin and Dr. Sangmin Lee maintained high quality research of string theory in non-commutative field theory setting, while Dr. Yoji Michishita continued with his detailed study of D-branes and the associated boundary state. Dr. Gungwon Kang, a new member of the group specialized in Classical Gravitational Theories, gave the group a new basin of knowledge much needed. The continued study of unstable D-branes, lead by Prof. Piljin Yi, was given a new interpretation in the context of Inflation cosmology, and has attracted many local and international physicists during last year. Finally, Prof. Kimyeong Lee's expertise in quantum field theory resulted in several interesting work in diverse area of physics, as usual.

In the year of 2002, the members of the condensed matter group at KIAS were as follows: Prof. Hyunggyu Park, Dr. Hyunsuk Hong, Dr. Hangmo Yi, Dr. Heung-Sun Sim, Dr. Mahn-Soo Choi, and Dr. Hyun-Woo Lee. The last two left KIAS in the late 2002, and Prof. Hyunggyu Park and Dr. Sim joined the group in September and November, respectively. Six conferences were organized by the condensed matter group at KIAS in 2002. These include "KIAS-SNU Special Lecture on Nanoscale Transistors" (23-29 March), "Workshop on Quantum Coherence in Mesoscopic Systems" (12-14 September), and "The 7th APCTP-KIAS Lectures on Coherent Transport in Mesoscopic Systems: from Alpha to Omega" (20-21 December). The topics were mostly transport property in mesoscopic and nano-structure systems such as ferromagnet-superconductor junctions, molecular electronics, and quantum coherence in mesoscopic systems. Many distinguished world-class specialists participated in the workshops and discussed with the others on various hot topics. There appeared more than ten papers last year written by the condensed matter group. The subjects include universality class of absorbing transitions, dynamical surface structures, electron transport in a superconductor-Luttinger liquid junction, effects of quantum fluctuations in an Ising system on small-world networks, stochastic resonance in the driven Ising model, and optimal size of a complex network, and so on. Some of the papers were already published in Physical Review Journals, and more information is available at http://info.kias.re.kr.

In the year 2002, the astrophysics group at KIAS consisted of Prof. Mannque Rho, Prof. Insu Yi, Dr. Chang-Hwan Lee, Dr. Heon-Young Chang, and Dr. Sang-Hyeon Ahn. Activities in the astro-hadron physics group, led by Prof. Mannque Rho and strengthened by visitors from overseas and domestic, include study of compact stars, relativistic heavy-ion collisions, effective field theory approach to dense matter, solar neutrino processes, and QCD applied to nuclear matter. Prof. Rho is a recipient of the prestigious Ho-Am Prize for his contribution to science. Dr. Heon-Young Chang, winner of the Korean Space Science Society Award in the year 2002, devoted his research to many different astronomical phenomena, such as accretion disks around black holes and Gamma Ray Bursts as well as microlensing and helioseismology. Dr. Sang-Hyeon Ahn continued his study of interstellar media in high-red-shift starburst galaxies, and is also an expert in the historic record of astrophysical events and has uncovered regularity of the seasonal variation of meteor flux and the prominent meteoric showers during the Koryo dynasty (918-1392). Two of the members, Prof. I. Yi and Dr. C.-H. Lee, have left KIAS to pursue outside opportunities. Dr. Lee, now an assistant professor at Pusan National University, worked on black hole binary systems with his colleagues in Stony Brook and has suggested on the basis of the observed black hole mass-period correlation that the Gamma Ray Bursts could be powered by the black hole binary. The KIAS astrophysics group hosted a few informal working group meetings, such as Mini-Workshop on Dense Matter and a day-long meeting of local astrophysicists reviewing current understanding of super-massive black holes and intermediate-mass black holes.

Visiting Scientists

Chen, Chiang-Mei
Dec/08/2001 - Jan/05/2002
Quasilocal Quantities for Gravity
NTU

Park, Tae-Sun
Jan/06/2002 - Jan/12/2002
Dense Matter
Pusan Nat'l U

Hong, Deok-Ki
Jan/06/2002 - Jan/12/2002
Dense QCD
Pusan Nat'l U

Kogan, Bsi.
Jan/06/2002 - Jan/08/2002
Accretion Disk around a Black Hole
SRI

Karpov, S.
Jan/06/2002 - Jan/08/2002
Accretion Disk around a Black Hole
SRI

Kim, Se Yong
Jan/07/2002 - Jan/09/2002
Dense QCD
Sejong U

Kim, Young-Man
Jan/07/2002 - Jan/09/2002
Dense Matter
Seoul Nat'l U

Lee, Tae-Gyun
Jan/07/2002 - Jan/09/2002
Dense QCD
KAIST

Alford, M.
Jan/07/2002 - Jan/11/2002
Dense QCD
Glasgow U

Ko, Pyungwon
Jan/08/2002 - Jan/12/2002
Particle Physics, Phenomenology
KAIST

Chang, Kee Joo
Jan/18/2002 - Feb/18/2002
Condensed Matter Physics
KAIST

Gwon, Hyuk-Jeon
Jan/22/2002 - Jan/26/2002
Condensed Matter Physics
Maryland U

Kang, Gungwon
Jan/23/2002 - Jan/25/2002
Gravity, Stability of Brane-world scenario
KEK

No, Jae-Dong
Jan/23/2002 - Jan/26/2002
Phase Transition in Condensed Matter System
U of Saarbruecken

Kim, Chanju
Jan/28/2002 - Feb/09/2002
Melvin Background
Seoul Nat'l U

Yu, Chae-Hyun
Feb/01/2002 - Feb/28/2002
Beyond Standard Model
Seoul Nat'l U

Hyun, Seungjoon
Feb/06/2002 - Feb/16/2002
String Theory
Yonsei U

Lee, Jung-Jae
Feb/18/2002 - Feb/28/2002
String Motion under Magnetic Field
Daejin U

Hamanaka, M.
Feb/24/2002 - Mar/09/2002
String Theory, Field Theory
U of Tokyo

Stamatescu, I.O.
Feb/26/2002 - Feb/28/2002
QCD, Lattice Theory
Heidelberg U

Kang, Sin Kyu
Mar/04/2002 - Apr/03/2002
Supersymmetry & Neutrino Physics
KEK

Bruder, C.
Mar/07/2002 - Mar/13/2002
Mesoscopic Superconductivity
U of Basel

Hikida, Y.
Mar/24/2002 - Mar/31/2002
D-Branes in CFT backgrounds
U of Tokyo

Chan, C.T.
Apr/01/2002 - Apr/22/2002
String and Noncommutative Theories
NCTU

Kim, Jung-Dae
Apr/08/2002 - Apr/27/2002
Top KK Mixing
Yonsei U

Lee, Jae Sik
Apr/15/2002 - Apr/27/2002
Cp violating Higgs in the MSSM
KEK

Oda, Kin-ya
Apr/15/2002 - May/04/2002
Particle Physics
KEK

Ferrandis, Javier
Apr/17/2002 - Apr/26/2002
High Energy Physics
Hawaii U

Kim, Choong Sun
Apr/18/2002 - Apr/27/2002
Phenomenology
Yonsei U

Lee, M. Howard
Apr/20/2002 - Apr/28/2002
Statistical Physics
Georgia U

Kang, Sin Kyu
Apr/21/2002 - Apr/27/2002
Supersymmetry & Neutrino Physics
Hiroshima U

Keum, Yong-Youn
Apr/21/2002 - Apr/27/2002
B Physics
Nagoya U

Kang, Kungsik
Apr/26/2002 - May/02/2002
Fermion Mass localization & CP Violation in a Multi-Brane World
Brown U

Diaz, M.A.
Apr/26/2002 - May/03/2002
Particle Physics
Chile U, Catolica

Lee, Jong-Pil
May/06/2002 - May/18/2002
B Physics
Yonsei U

Lin, Feug-Li
May/19/2002 - May/30/2002
ADS/CFT, Holography, Noncommutative Theory
NTU

Kim, Nakwoo
May/20/2002 - Jun/01/2002
ADF/CFT, Wrapped Branes PP-Wave
Max-Planck-Institute

Kim, Beom-Joon
Jun/01/2002 - Dec/31/2002
Statistical Physics
Ajou U

Hong, Seok-In
Jun/01/2002 - Aug/31/2002
Statistical Physics & Field Theory
Incheon Nat'l U of Education

Falkoski, Adam
Jun/01/2002 - Jun/18/2002
Particle Physics
Institute of Theoretical Physics, Warsaw U

Kim, Nakwoo
Jun/06/2002 - Jun/21/2002
String Theory, PP Wave Limit
Max-Planck-Institute

Yang, S.-R. Eric
Jun/07/2002 - Jun/14/2002
Kondo Effect in a Quantum Dot in a String Magnetic Field
Korea U

Kim, Choong Sun
Jun/08/2002 - Jun/22/2002
B Physics & Extra Dimension
Yonsei U

Kim, Ju-Hyo
Jun/15/2002 - Jul/31/2002
Strongly correlated systems (super conductors)
North Dakota U

Choi, Ki Woon
Jun/19/2002 - Jun/23/2002
Supersymmetric Models and 5D Theory
KAIST

Kang, Kyungsik
Jun/21/2002 - Jul/24/2002
Fermion mass localization & CP violation in a Multi-Brane World
Brown U

Kim, Hang Bae
Jun/23/2002 - Jul/06/2002
Cosmology
U of Lausanne

Ko, Pyungwon
Jun/30/2002 - Jul/04/2002
Particle Physics, Phenomenology
KAIST

Kim, Yoonbai
Jun/30/2002-Jul/13/2002
Superstring & Field Theory
Sungkyunkwan U

Lee, Sang-Heon
Jul/01/2002 - Aug/15/2002
Superstring & Field Theory
Seoul Nat'l U

Bak, Dongsu
Jul/02/2002 - Jul/31/2002
Matrix of Model PP Wave Background
U of Seoul

Chang, Kee Joo
Jul/05/2002 - Aug/05/2002
Condensed Matter Physics
KAIST

Lee, Beom-Hoon
Jul/08/2002 - Aug/28/2002
D Branes, Gauge Theory, & Noncommutative Field Theories
Sogang U

Li, Miao
Jul/08/2002 - Jul/14/2002
String, Theory, PP Wave
Nat'l Taiwan U

Mckeller, Bruce
Jul/11/2002 - Jul/22/2002
CP Violation
U of Melbourne

Lee, Jung-Jae
Jul/22/2002 - Aug/21/2002
String Theory
Deajin U

Putten, Maurice Van
Jul/22/2002 - Jul/28/2002
Gravitational radiation from a torus around a black hole
MIT

Park, Tae-Sun
Jul/25/2002 - Aug/07/2002
Astro-Hadronic System
Pusan Nat'l U

Song, Young-Ho
Jul/25/2002 - Aug/07/2002
Astro-Hadronic System
Seoul Nat'l U

Kobodera, K.
Jul/25/2002 - Aug/07/2002
Astro-Hadronic System
U of South Carolina

Kim, Young-Man
Aug/01/2002 - Aug/26/2002
Quark Soliton in Compact Star Matter
Seoul Nat'l U

Fornengo, Nicolao
Aug/01/2002 – Aug/18/2002
Neutrino & Dark Matter Physics
INFN, Turin

Choi, Seong-Youl
Aug/05/2002 - Aug/25/2002
CP Violation & Extra Dimension
Chonbuk Nat'l U

Gaissmaier, Benedict
Aug/05/2002 - Aug/25/2002
Stau Polarization
Munich, Tech. U

Chang, Sang-Hyun
Aug/06/2002 - Aug/21/2002
Neutrino Physics
Purdue U

Han, Sang-Wook
Aug/07/2002 – Dec/06/2002
Low Dimensional Structural Properties
LBNL

Soni, Vircam
Aug/11/2002 – Aug/19/2002
Astro-Hadronic System
National Physical Laboratory, New Delhi

Anton, Lucian
Aug/12/2002 - Aug/26/2002
Critical Phenomena Nonequilibrium Statistical System
Inha U

Grassberger, P.
Aug/13/2002 – Nov/18/2002
Computational methods in complex systems
Wuppertal U

Kalinowski, J.
Aug/15/2002 - Aug/25/2002
Supersymmetric Standard Model
U of Warsaw

Lee, M. Howard
Aug/19/2002 – Aug/27/2002
Statistical Physics
Georgia U

Lee, Jae Sik
Aug/22/2002 - Aug/23/2002
Supersymmetric Standard Model
KEK

Drees, Manual
Aug/23/2002 - Sep/30/2002
Supersymmetric Standard Model
Munich, Tech. U

Rindani, Saurabh
Aug/23/2002 - Sep/09/2002
Linear Accelerator & MSSM
Physical Research Laboratory, Ahmedabad

Kwon, Seong-Chul
Aug/26/2002 - Sep/30/2002
Critical Phenomena in Nonequilibrium Statistical System
Inha U

Hong, Deok-Ki
Aug/26/2002 - Aug/28/2002
Particle Physics & Astrophysics
Pusan Nat'l U

Dominich, D.
Aug/30/2002 - Sep/01/2002
Particle Physics Phenomenology
U of Florence

Curtis, Stefania De
Aug/30/2002 - Sep/01/2002
Particle Physics Phenomenology
U of Florence

Kim, Joon-il
Sep/01/2002 - Sep/30/2002
Astro-Hadron Physics
Seoul Nat'l U

Park, Byung-Yun
Sep/01/2002 - Sep/30/2002
Astro-Hadron Physics
Chungnam Nat'l U

Vento, V.
Sep/01/2002 - Sep/30/2002
Astro-Hadron Physics
Valencia U

Palacios, Juan Jose
Sep/02/2002 - Sep/15/2002
Mesoscopic Physics, Quantum Hall effect
U of Alicante

Hoeflich, Peter
Sep/02/2002 - Sep/07/2002
Astrophysics
U of Texas

Geller, Michael R.
Sep/05/2002 - Sep/16/2002
Mesoscopic Physics
U of Georgia

Tesanovic, Zlatko
Sep/23/2002 - Sep/25/2002
Condensed Matter Physics
Johns Hopkins U

Kim, Nakwoo
Sep/24/2002-Oct/03/2002
D-brane, PP-wave
Albert-Einstein Institute

Giunti, Carlo
Sep/25/2002 - Oct/24/2002
Neutrino Physics
INFN, Turin & Turin U

Ree, Francis H.
Sep/26/2002 - Oct/06/2002
Condensed Matter Physics
Lawrence Livermore Nat'l Lab

Fornengo, Nicolao
Oct/01/2002-Oct/18/2002
Neutrino & Dark Matter Physics
INFN, Turin

Lee, Chang Yeong
Oct/05/2002-Dec/28/2002
Quantized Theta function
Sejong U

Han, Sang-Wook
Oct/07/2002-Dec/6/2002
Low Dimensional Structural Properties
LBNL

Soni, Vikram
Oct/11/2002-Oct/19/2002
Astro-Hadron System
Nat'l Physical Laboratory, New Delhi

Grassberger, P
Oct/13/2002-Nov/7/2002
Computational methods in complex systems
Wuppertal U

Lee, M. Howard
Oct/19/2002-Oct/27/2002
Statistical Physics
Georgia U

Chen, Jia'er
Oct/24/2002 – Oct/25/2002
Physics and Technology of Particle Accelerators
National Natural Science Foundation of China

Kim, Se Young
Oct/24/2002-Nov/21/2002
Particle Phenomenology
Sejong U

Kwon, O-Kab
Nov/01/2002 – Nov/30/2002
D-brane Decay
Sungkyunkwan U

Koga, J.
Nov/01/2002 – Nov/08/2002
Black Hole Entropy
Waseda U

Park, Mu-In
Nov/01/2002 – Nov/08/2002
Black Hole Entropy
POSTECH

Sekii, Takashi
Nov/11/2002 – Nov/16/2002
Gravity Mode
U of Tokyo

Chen, Bin
Nov/12/2002 – Nov/17/2002
String Theory
KAIST

Kim, Joon-il
Nov/13/2002 – Nov/14/2002
Astro-Hadronic System
Seoul Nat'l U

Park, Tae Sun
Nov/13/2002 – Nov/14/2002
Astro-Hadronic System
Pusan Nat'l U

Muramatsu, Tetsuyuki
Nov/25/2002 – Nov/27/2002
High Energy Physics
U of Tokyo

Kwon, O-Kab
Dec/01/2002 – Dec/31/2002
D-brane Decay
Sungkyunkwan U

Szabo, Richard
Dec/01/2002 – Dec/05/2002
Matriy Theory on ADS2 Background
Heriot-Watt, Edinburgh

Borzumati, F.
Dec/04/2002 – Dec/06/2002
Particle Phenomenology
KEK

Hikida, Yasuaki
Dec/05/2002 – Dec/07/2002
Superstring Theory
U of Tokyo

Casalbuoni. R.
Dec/05/2002 – Dec/09/2002
Theoretical Physics Collaboration and Seminar
U of Florence

Han, Sang-Wook
Dec/07/2002 – Dec/31/2002
Low dimensional Structural Properties
LBNL

Kim, Hang Bae
Dec/12/2002 – Dec/24/2002
Cosmology
U of Lausanne

Lee, Jung Jae
Dec/12/2002 – Dec/24/2002
Theoretical Physics
Daejin U

Lee, Chang Yeong
Dec/16/2002 – Jan/18/2002
Quantized Theta Function
Sejong U

Choi, Seong-Youl
Dec/23/2002 – Feb/18/2002
CP violation
Chonbuk Nat'l U

Research Activities (Workshops, Symposia, Conferences, Seminars, etc.)

Workshops/Symposia/Conferences

The 3rd KIAS-SNU Winter Camp (January 7-19, 2002)
KIAS Mini Workshop on Dense Matter (January 7-9, 2002)
String Theory Special Lecture (March-June, 2002)
2002 KIAS Spring School for Particle Physics (April 22-25, 2002)
The 6th Symposium for Mesoscopic and Nano-structure Systems (May 17-18, 2002)
KIAS Workshop on Strings and Branes (May 20-31, 2002)
KIAS-KAIST Cosmology Workshop (June 12-21, 2002)
The 2nd Summer Institute for Theoretical Physics (July 1-12, 2002)
KIAS Summer School for Theoretical Physics (August 12-23, 2002)
Workshop on Quantum Coherence in Mesoscopic Systems (September 12-14, 2002)
KIAS Special Colloquia: Prof. Robert Laughlin (Nobel Laureate in 1998) and Prof. Paul C. W. Chu (September 24, 2002)
The 7th APCTP-KIAS Lectures on Mesoscopic Systems: Coherent Transport in Mesoscopic Systems, from Alpha to Omega (December 20-21, 2002)

Seminars

January 7, 2002
Kogan, Bisnovatyi & Karpov (SRI & Moscow State U, Russia)
Astrophysics Group Seminar

January 8, 2002
Lee, Kang Young (KIAS)
Particle Physics Journal Club

January 15, 2002
Lee, Byung-Chan (Inha U)
"Tunneling Magnetoresistance in Magnetic Tunnel Junctions"

January 18, 2002
Choi, Mahn-Soo (KIAS)
Condensed Matter Journal Club

January 22, 2002
Kwon, Hyok-Jon (Maryland U)
"Subgap electron states and solitons in superconductors: How can we observe them?"

January 22, 2002
Lee, Hyun-Woo (KIAS)
"Electron transport through a superconductor-Luttinger liquid junction"

January 23, 2002
Choi, Mahn-Soo (KIAS)
"Geometric Quantum Computation on Solid-State Qubits"

January 23, 2002
Noh, Jae-Dong (Theoretische Physik - Uni Saarbruecken)
"Physics of Elastically Coupled Condensed Matter Systems in Disordered Environments"

January 24, 2002
Kang, Gungwon (KEK)
"Stability of the black strings/branes and the Gubser-Mitra conjecture"

January 25, 2002
Lee, Sangmin (KIAS)
String Theory Journal Club

January 25, 2002
Lee, Hyun-Woo (KIAS)
Condensed Matter Journal Club

January 31, 2002
Akeroyd, Andrew (KIAS)
Particle Physics Journal club

February 1, 2002
Yi, Piljin (KIAS)
String Theory Journal club

February 5, 2002
Si, Qimiao (U of Houston)
"Dynamic mean field theory (1)"

February 5, 2002
Lederer, Pascal (U of Paris)
"Quantum Hall Effect (1)"

February 6, 2002
Si, Qimiao (U of Houston)
"Dynamic mean field theory (2)"

February 6, 2002
Si, Qimiao (U of Houston)
"Dynamic mean field theory (3)"

February 6, 2002
Lederer, Pascal (U of Paris)
"Quantum Hall Effect (2)"

February 6, 2002
Baek, Seungwon (KIAS)
Particle Physics Journal Club

February 7, 2002
Lederer, Pascal (U of Paris)
"Quantum Hall Effect (3)"

February 7, 2002
Lederer, Pascal (U of Paris)
"Quantum Hall Effect (4)"

February 8, 2002
Kim, Chanju (Seoul Nat'l U)
String Theory Journal Club

February 8, 2002
Neupane, Ishwaree (Seoul Nat'l U)
"Confining-Deconfining Phases with Higher Curvatures"

February 22, 2002
Yee, Jung-Tay (KIAS)
String Theory Journal Club

February 25, 2002
Hamanaka, Masashi (U of Tokyo)
"ADHM/Nahm construction of localized solitons in noncommutative gauge theories"

February 27, 2002
Stamatescu, I.-O. (Heidelberg U)
"Lattice results for QGP in the region 1 - 3 Tc"

March 5, 2002
Yang, S.-R. Eric (Korea U)
"Ferromagnetic Semiconductors"

March 7, 2002
Park, Seok-Jae (Korea Astronomy Observatory)
"Black Hole Astrophysics"

March 8, 2002
Ahn, Changrim (Ewha Womans U)
Condensed Matter Journal Club

March 11, 2002
Bruder, Christoph (U of Basel)
"Full Counting Statistics of a Superconducting Beam Splitter"

March 13, 2002
Park, Seong Chan (KIAS)
Particle Physics Journal Club

March 14, 2002
Kang, Sin Kyu (KEK)
"Flavor mixing and fermion mass texture"

March 15, 2002
Hong, Hyunsuk (KIAS)
Condensed Matter Journal Club

March 19, 2002
Choi, Chul-Sung (KAO)
"X-ray Observations with astronomical satellites"

March 22, 2002
Yi, Hangmo (KIAS)
Condensed Matter Journal Club

March 25, 2002
Hikida, Yasuaki (U of Tokyo)
"Orientifolds of SU(2)/U(1) WZW Models"

March 27, 2002
Song, Jeong-hyeon (KIAS)
Particle Physics Journal Club

March 27, 2002
Hikida, Yasuaki (U of Tokyo)
"On the Boundary States and Crosscap States in AdS_3"

March 28, 2002
Park, Inkyu (U of Rochester)
"QGP search at RHIC"

March 29, 2002
Kim, Hyungdo (KIAS)
String Theory Journal Club

April 2, 2002
Akeroyd, Andrew (KIAS)
Particle Physics Journal Club

April 2, 2002
Yang, S.- R. Eric (Korea U)
"Non Drude optical conductivity offerromagnetic semiconductors"

April 3, 2002
Ko, Pyungwon (KAIST)
"SUSY in the loop"

April 3, 2002
Choi, Mahn-Soo (KIAS)
Condensed Matter Journal Club

April 4, 2002
Lee, Hyung Mok (Seoul Nat'l U)
"Dynamics of Rotating Star Clusters"

April 6, 2002
Lee, Kimyeong (KIAS)
Lectures on String Theory

April 9, 2002
Baek, Seungwon (KIAS)
Particle Physics Journal Club

April 11, 2002
Choi, Moo Young (Seoul Nat'l U)
"Physics of Complex Systems"

April 12, 2002
Chan, Chuan-Tsung (Nat'l Chian-Tung U., Taiwan)
"Toward a non-commutative description of quantum hall physics"

April 12, 2002
Lee, Hyun-Woo (KIAS)
Condensed Matter Journal Club

April 16, 2002
Oda, Kin-Ya (KEK)
"Alternative Signature of TeV Strings"

April 17, 2002
Shim, Young Sun (POSTECH)
"An Introduction to NLSO (I)"

April 17, 2002
Lee, Jae Sik (KEK)
"Decays of the MSSM Higgs Bosons with Explicit CP Violation"

April 19, 2002
Cheng, Kingman (NCTS, Taiwan)
"Collider test of large extra dimensions: black holes, string balls, p-branes"

April 19, 2002
Ferrandis, Javier (U of Hawaii at Manoa)
"Third generation fermion masses in the MSSM"

April 24, 2002
Kim, Seok Woo (KIAS)
"Generalized Liouville Theorems for Harmonic Functions and Harmonic Maps"

April 24, 2002
Wiel, Wilfred van der (U of Tokyo)
"Kondo effects in semiconductor quantum dots"

April 26, 2002
Ahn, Chanrim (Ewha Womans U)
Condensed Matter Journal Club

April 29, 2002
Park, Sooa (Yonsei U)
"Bethe Ansatz Method and Kosterlitz-Thouless Melting in Bilayer Quantum Hall System"

April 30, 2002
Oda, Kin-Ya (KEK)
Particle Physics Journal Club

May 3, 2002
Hwang, Jai-chan (Kyungpook Nat'l U)
"Cosmological structure problems of the ekpyrotic and the pre-big bang scenarios"

May 7, 2002
Kim, Yeon Woo (KAIST)
"Supergravity on AdS5"

May 9, 2002
Kiem, Youngjai (KAIST)
"Noncommutative field theory and string field theory"

May 14, 2002
Lee, Kang Young (KIAS)
Particle Physics Journal Club

May 15, 2002
Lee, Jong-Phil (Yonsei U)
"Hadronic two-body B decays involving a tensor meson"

May 16, 2002
Choi, Seong-Youl (Chonbuk Nat'l U)
"Mass and Symmetry"

May 18, 2002
Lee, Kimyeong (KIAS)
String Theory Special Lecture

May 23, 2002
Hong, Soon-Tae (Sogang U)
"Baryon Strange Form Factors and Topological Soliton Models"

May 24, 2002
Choi, Moo Young (Seoul Nat'l U)
Condensed Matter Journal Club

May 31, 2002
Hong, Hyunsuk (KIAS)
Condensed Matter Journal Club

June 4, 2002
Akeroyd, Andrew (KIAS)
"R Parity violating enhancement of B_u^+ to l^+_ν and B_c^+ to l^+_ν"

June 5, 2002
Falkowski, Adam (U of Warsaw)
"Deconstructing dimensions"

June 10, 2002
Chung, Daniel (CERN)
"On the Oddity of Extra Dimensions"

June 10, 2002
Rhie, Keungwon (Korea U)
"Electron transport of Fe doped Ge: a DMS material - A comparison with dirty metals"

June 11, 2002
Baek, Seungwon (KIAS)
Particle Physics Journal Club

June 12, 2002
Choi, Mahn-Soo (KIAS)
Condensed Matter Journal Club: "Kondo effect on a quantum dot in a strong magnetic field"

June 18, 2002
Refsdal, S. (Hamburger Sternwarte, Germany)
"Microlensing"

June 21, 2002
Yi, Hangmo (KIAS)
Condensed Matter Journal Club: "Non-equilibrium transport through a vertical quantum dot"

June 25, 2002
Kim, Hang Bae (U of Lausanne)
"Ultra High Energy Cosmic Rays"

June 26, 2002
Liu, Qui-Yu (KIAS)
Summary Report of Neutrino02

June 27, 2002
Kim, Hang Bae (U of Lausanne)
"Rolling Tachyons in Dilaton Gravity"

July 2, 2002
Kim, Beom Jun (Ajou U)
"Small-World Networks: Why my sister happens to know the cousin of my friend?"

July 2, 2002
Michishita, Yoji (KIAS)
"D-branes in NSNS and RR pp-wave backgrounds and S-duality"

July 16, 2002
Mckellar, Bruce H J (U of Melbourne)
"Ultra High Energy Cosmic Rays-Messengers from Beyond the Standard Model"

July 16, 2002
Kim, Ju H. (U of North Dakota)
"Collective Josephson Vortex Dynamics in Long Josephson Junction Stacks"

July 18, 2002
Yi, Hangmo (KIAS)
Condensed Matter Journal Club: "Effect of Quantum Fluctuations in an Ising System on Small-World Networks"

July 19, 2002
Kim, Bongsoo (CNU)
"Nonequilibrium Critical Dynamics of Triangular Ising Antiferromagnet"

July 23, 2002
Putten, M. van (MIT)
"LIGO/VIRGO searches for gravitational radiation in hypernovae"

July 23, 2002
Kim, Gwang Hee (Sejong U)
"Quanutm Reversal of Magnetization in Small-Molecule Magnets"

July 26, 2002
Kim, Nam (KRISS)
"Cooper-pair boxes for qubits"

August 2, 2002
Kumar, Vijay (Tohoku U)
"Metal Encapsulated and Hydrogenated Silicon Fullerenes"

August 5, 2002
Chang, Heon-Young (KIAS)
"ULIG to QSO - a role of GRB"

August 5, 2002
Kim, Dong-Chan (SNU)
"ULIG to QSO - View in IR"

August 5, 2002
Choi, Chul-Sung (KAO)
"ULIG to QSO - View in X-rays"

August 14, 2002
Dong, J.-H./ Beak, S.W. (KIAS)
SUSY2002 review

August 14, 2002
Chun, E.J./Kim, H.D./Park, S.C. (KIAS)
ICHEP/ Brane-SUSY workshop review

August 16, 2002
Chang, Sang-Hyun (Perdue U)
"Renormalization group invariants of neutrino mass matrix"

August 19, 2002
Lee, Seong-Jae (Chungnam Nat'l U)
"What happens in ADAF when gamma=5/3?"

August 21, 2002
Kalinowski, J. (U of Warsaw)
"Supersymmetric lepton flavour violation at e+e- colliders"

August 21, 2002
Kim, Hyung Do (KIAS)
"Running of Gauge Couplings in AdS5 via Deconstruction"

August 21, 2002
Gaissmaier, B. (Munich)
"CP-violation in scalar tau production at muon colliders"

August 22, 2002
Kalinowski, J. (U of Warsaw)
"2HDM with CP violation in the decoupling limit"

August 22, 2002
Baek, Seungwon (KIAS)
"B-decays at large tan(beta) as a probe of SUSY breaking"

August 22, 2002
Lee, Jae Sik (KEK)
"Novel constraints Delta L=1 interactions from neutrino masses"

August 29, 2002
Kim, Sungsoo (Space Telescope Science Institute)
"Two topics on Galactic Dynamics at the center of the Milky Way"

September 4, 2002
Chae, Jongchul (Chungnam Nat'l U)
"Studies of Magnetic Helicity and Canceling: Magnetic Features on the Sun"

September 5, 2002
Palacios, Juan Jose (Universidad de Alicante, Spain)
"Do fractional quantum Hall edges satisfy Fermi statistics?"

September 5, 2002
Cho, Jin-Hwan (KIAS)
"MetaPost by examples (1)"

September 6, 2002
Hoeflich, Peter (U of Texas)
"Type Ia Supernovae and Cosmology"

September 9, 2002
Palacios, Juan Jose (Universidad de Alicante, Spain)
"Vortex matter in superconducting mesoscopic systems"

September 9, 2002
Geller, Michael R. (U of Georgia)
"Infrared Catastrophe and Tunneling into Strongly Correlated Electron Systems: Part 1"

September 10, 2002
Cho, Jin-Hwan (KIAS)
"MetaPost by examples (2)"

September 10, 2002
Geller, Michael R. (U of Georgia)
"Infrared Catastrophe and Tunneling into Strongly Correlated Electron Systems: Part 2"

September 11, 2002
Lee, Weonjong (Seoul Nat'l U)
"How do we study the strong interaction?"

September 16, 2002
Choi, C.-S. (KAO)
"GRB, the terminator of dusts in ULIGs"

September 18, 2002
Yang, S.-R. Eric (Korea U)
"What is strong magnetic semiconductor?"

September 18, 2002
Drees, M. /Akeroyd, A. (Munich, Tech.U. / KIAS)
Review: LCWS 2002

September 23, 2002
An, Jin Hyeok (Institute of Astronomy, Cambridge)
"Gravitational Microlensing Followup Observations"

September 25, 2002
Hyun, S. (Yonsei U)
"M/IIA string theory on pp-wave geometry"

September 26, 2002
Park, Hyunggyu (KIAS)
NonEquilibrium Statphys Theory (NEST) Group Meeting

October 2, 2002
Ree, Francis H. (Lawrence Livermore Nat'l Lab & Tokyo Institute of Technology)
"High-pressure and high-temperature behavior of Carbon-rich materials"

October 2, 2002
Kim, Sungwon (Ewha Womans U)
"Current status of the research on wormhole physics"

October 2, 2002
Kim, Nakwoo (AEI, Potsdam)
"Review of D-Branes in PP-Wave background"

October 4, 2002
NEST Group (KIAS)
NEST Group Meeting

October 9, 2002
Kim, Choong Sun (Yonsei U)
"What is C, P, T and how they are measured?"

October 12, 2002
Park, Hyunggyu (KIAS)
KIAS monthly meeting on Statistical Physics

October 16, 2002
Soni, Vikram (Nat'l Physical Laboratory, New Delhi, India)
"The nucleon and the compact stars"

October 17, 2002
Fornengo, Nicolao (INFN, Torino, Italy)
"Non-baryonic dark matter in Supersymmetry"

October 17, 2002
Krueger, Frank (TUM, Germany)
"Implications of Neutral Higgs-Boson Contributions for Rare B decay"

October 18, 2002
Itoh, T. / Yang, H.S. (Hanyang U / Nat'l Taiwan U)
String Theory Group Seminar

October 18, 2002
NEST Group (KIAS)
NEST Group Meeting

October 18, 2002
Grassberger, Peter (Wuppertal U)
"Heat conduction in low dimensions: From hard point gases to carbon nanotubes"

October 18, 2002
Sim, Heung-Sun (KIAS)
"Shot Noise in Ballistic Quantum Dots with a Mixed Classical Phase Space"

October 22, 2002
Giunti, Carlo (INFN, Torino, Italy)
"Current Status of Neutrino Masses and Mixings"

October 23, 2002
Lee, M. Howard (U of Georgia)
"Thermodynamic equivalence between ideal Fermi and Bose gases in 2d"

October 23, 2002
Han, Sang-Wook (Lawrence Berkeley Nat'l Lab)
"Non-Fermi liquid behavior in UCu_{5-x}Pd_x"

October 24, 2002
NEST Group (KIAS)
NEST Group Meeting

October 24, 2002
Grassberger, Peter (Wuppertal U)
"Go with the winners! Sequential sampling strategies with resampling (I)"

October 24, 2002
Grassberger, Peter (Wuppertal U)
"Go with the winners! Sequential sampling strategies with resampling (II)"

October 30, 2002
Suh, Kyoungwon (Chungbuk Nat'l U)
"Dust grains in AGB stars and young stellar objects"

November 1, 2002
NEST Group (KIAS)
NEST Group Meeting

November 1, 2002
Grassberger, Peter (Wuppertal U)
"Go with the winners! Sequential sampling strategies with resampling (III)"

November 1, 2002
Grassberger, Peter (Wuppertal U)
"Go with the winners! Sequential sampling strategies with resampling (IV)"

November 1, 2002
Kong, Kijeong (U of Seoul)
"Frontiers of first-principles electronic structure calculations"

November 4, 2002
Koga, Jun-ichirou (Waseda U)
"Is a black hole horizon degenerate?"

November 4, 2002
Park, Mu-In (POSTECH)
"Dynamics of Bounded Spacetime and Black Hole Entropy"

November 5, 2002
Cornell, Alan (KIAS)
Phenomenology Group Meeting

November 8, 2002
NEST group (KIAS)
NEST group meeting

November 11, 2002
Yi, Juyeon (Max-Planck-Institute, Dresden)
"Carbon nanotubes (CNT) and transport"

November 11, 2002
Lee, Deok-Sun (Seoul Nat'l U)
"Non-Gaussian probability density functions in one-dimensional growth"

November 12, 2002
Chun, E.J. (KIAS)
Phenomenology Group Meeting

November 13, 2002
Koh, Duk-Su (POSTECH)
"Information processing in single neurons"

November 15, 2002
Hong, Hyunsuk (KIAS)
Condensed Matter Journal Club

November 15, 2002
Chen, Bin (KAIST)
"Gravitational Radiation of Rolling Tachyon"

November 15, 2002
NEST Group (KIAS)
NEST Group Meeting

November 15, 2002
Sekii, Takashi (Tokyo U and NAOJ)
"Recent developments in helioseismology"

November 15, 2002
Han, Sang-Wook (Lawrence Berkeley Nat'l Lab)
"Geometrically frustrated pyrochlore systems"

November 23, 2002
Park, Hyunggyu (KIAS)
KIAS Monthly Meeting on Statistical Physics

November 22, 2002
Kang, Gungwon (KIAS)
A Review of "When Black Holes Meet Kaluza-Klein Bubbles" by Elvang and Horowitz, hep-th//0210303

November 22, 2002
NEST Group (KIAS)
NEST Group Meeting

November 23, 2002
Park, Hyunggyu (KIAS)
KIAS Monthly Meeting on Statistical Physics

November 26, 2002
Park, Seong Chan (KIAS)
Phenomenology Group Meeting

November 26, 2002
Muramatsu, Tetsuyuki (U of Tokyo)
"Power of Supersymmetry in D-particle Dynamics"

November 27, 2002
Kim, Jongsoo (Korea Astronomy Observatory)
"Is the parker instability a viable mechanism for the Formation of giant molecular clouds?"

November 29, 2002
Ahn, Sang-Hyeon (KIAS)
"Dusty starburst galaxies and the epochof the galaxy formation"

November 29, 2002
Kim, Hee-Il (Sejong U)
"Recent topics on the astrophysical formation of Supermassive and Intermediate mass black holes"

November 29, 2002
Lee, Chang-Hwan (Seoul Nat'l U)
"Possible connection between ULX and SXT"

November 29, 2002
NEST Group (KIAS)
NEST Group Meeting

December 2, 2002
Choi, C. S. (KAO)
"Starburst ULIG connection to QSOs"

December 2, 2002
Kim, D. C. (SNU)
"Starburst ULIG connection to QSO"

December 3, 2002
Kang, Gungwon (KIAS)
"Introduction to Hawking's radiation I and II"

December 3, 2002
Szabo, Richard (Heriot-Watt, Edinburgh)
"Exact solution of noncommutative gauge theory in two dimensions"

December 6, 2002
Casalbuoni, R. (U of Florence, Italy)
"Squeezing Quarks"

December 6, 2002
NEST Group (KIAS)
NEST Group Meeting

December 6, 2002
Choi, Mahn-Soo (Korea U)
Condensed Matter Journal Club

December 10, 2002
Song, Jeong-hyeon (KIAS)
Phenomenology Group Meeting

December 13, 2002
NEST Group (KIAS)
NEST Group Meeting

December 13, 2002
Park, Hyunggyu (KIAS)
Condensed Matter Journal Club: "Fluctuations of self-flattening surfaces"

Publications

Ahn SH, Lee HW, Lee HM
Ly alpha line formation in starbursting galaxies. II. Extremely thick, dustless, and static H I media
ASTROPHYS J 567 (2): 922-930 Part 1 MAR 10 2002

Akeroyd AG, Recksiegel S
Direct CP asymmetry of b -> s gamma and b -> d gamma in models beyond the Standard Model
NUCL PHYS B-PROC SUP 111: 276-278 NOV 2002

Akeroyd AG, Baek S, Cho GC, et al.
On the possibility of a very light A(0) at low tan beta in the minimal supersymmetric standard model
PHYS REV D 66 (3): art. no. 037702 AUG 1 2002

Akeroyd AG, Baek S
Large mass splittings between charged and neutral Higgs bosons in the MSSM
PHYS LETT B 525 (3-4): 315-321 JAN 24 2002

Akeroyd AG, Liu C, Song J
Stau lightest supersymmetric particle and comparison with H-+/- phenomenology
PHYS REV D 65 (1): art. no. 015008 JAN 1 2002

Akeroyd AG, Recksiegel S
Direct CP asymmetry of B -> X-d,(s)gamma in a model with vector quarks
PHYS LETT B 525 (1-2): 81-88 JAN 17 2002

Akeroyd AG, Recksiegel S
R-parity violating enhancement of B-u(+)-> l(nu)(+) and B-c(+)-> l(nu)(+)
PHYS LETT B 541 (1-2): 121-128 AUG 8 2002

Anikin IV, Binosi D, Medrano R, et al.
Single-spin asymmetry parameter from deeply virtual Compton scattering of hadrons up to twist-3 accuracy - I. Pion case
EUR PHYS J A 14 (1): 95-103 MAY 2002

Baek S, Ko P, Park JH
Muon anomalous magnetic moment from effective supersymmetry
EUR PHYS J C 24 (4): 613-618 AUG 2002

Baek S, Park SC, Song J
Kaluza-Klein gravitino production with a single photon at e(+)e(-) colliders
PHYS REV D 66 (5): art. no. 056004 SEP 1 2002

Baek S
Very light sbottom and gluino scenario confronting electroweak precision tests
PHYS LETT B 541 (1-2): 161-165 2002

Baek S, Ko P, Song WY
Implications on supersymmetry-breaking mediation mechanisms from observing B-s ->mu(+)mu(-) and the muon g-2
PHYS REV LETT 89 (27): art. no. 271801 2002

Bak D, Lee K
Supertubes connecting D4 branes
PHYS LETT B 544 (3-4): 329-336 SEP 26 2002

Bak D, Lee K, Park JH
BPS equations in six and eight dimensions
PHYS REV D 66 (2): art. no. 025021 2002

Bak JG, Oberlin DM, Seeger A
Two endpoint bounds for generalized Radon transforms in the plane
REV MAT IBEROAM 18 (1): 231-247 2002

Barragan D, Eu BC
Propagation failure in an array of Oregonator cells and irreversible thermodynamics of an assembly of discrete systems
J PHYS CHEM A 106 (6): 988-996 FEB 14 2002

Brown GE, Rho M
On the manifestation of chiral symmetry in nuclei and dense nuclear matter
PHYS REP 363 (2): 85-171 JUN 2002

Chang HY
Spectral behavior of solar oscillations modulated by magnetic variation
ASTRON ASTROPHYS 390 (1): 359-362 JUL 2002

Chang HY, Choi CS, Yi IS
Radio/X-ray luminosity relation for X-ray bright galactic nuclei: Implications for weighing supermassive black holes
ASTRON J 124 (4): 1948-1953 OCT 2002

Chang HY, Han CH
Variation of spot-induced anomalies in caustic-crossing binary microlensing event light curves
MON NOT R ASTRON SOC 335 (1): 195-200 SEP 2002

Chang HY, Lee CH, Yi I
Afterglow light curve modulated by a highly magnetized millisecond pulsar
ASTRON ASTROPHYS 381 (1): L5-L8 JAN 2002

Chang HY, Yoon SJ, Choi CS
A possible use of Fourier transform analysis method as a distance estimator
ASTRON ASTROPHYS 383 (1): L1-L4 FEB 2002

Cho JH, Oh P, Park JH
Solitons in a Grassmannian sigma model coupled to a Chern-Simons term
PHYS REV D 66 (2): art. no. 025022 JUL 15 2002

Choi KW, Kim HD, Kim YW
Gauge Coupling Renormalization In Orbifold Field Theories.
J HIGH ENERGY PHYS (11): art. no. 033 2002

Choi SY, Drees M, Lee JS, et al.
Supersymmetric Higgs boson decays in the MSSM with explicit CP violation
EUR PHYS J C 25 (2): 307-313 SEP 2002

Chun EJ, Jung DW, Kang SK, et al.
Collider signatures of neutrino masses and mixing from R-parity violation
PHYS REV D 66 (7): art. no. 073003 OCT 1 2002

Chung MM
Localization-delocalization transition in quantum dots
PHYSICA E 11 (4): 303-309 NOV 2001

Dyson L, Lindesay J, Susskind L
Is there really a de Sitter/CFT duality
J HIGH ENERGY PHYS (8): art. no. 045 2002

Eu BC
Nonlinear viscosity derived by means of Grad's moment method
PHYS REV E 65 (3): art. no. 031202 Part 1 MAR 2002

Falkowski A, Do Kim H
Running of gauge couplings in AdS(5) via deconstruction
J HIGH ENERGY PHYS (8): art. no. 052 AUG 2002

Garzelli MV, Giunti C
Model independent information on solar neutrino oscillations
PHYS REV D 65 (9): art. no. 093005 Part A MAY 1 2002

Gibbons G, Hashimoto K, Yi PJ
Tachyon condensates, carrollian contraction of Lorentz group, and fundamental strings
J HIGH ENERGY PHYS (9): art. no. 061 SEP 2002

Guslienko KY, Ivanov BA, Novosad V, et al.
Eigenfrequencies of vortex state excitations in magnetic submicron-size disks
J APPL PHYS 91 (10): 8037-8039 Part 3 MAY 15 2002

Guslienko KY, Novosad V, Otani Y, et al.
Magnetization reversal due to vortex nucleation, displacement, and annihilation in submicron ferromagnetic dot arrays
PHYS REV B 65 (2): art. no. 024414 JAN 1 2002

Han CH, Chang HY, An JH, et al.
Properties of microlensing light curve anomalies induced by multiple planets
MON NOT R ASTRON SOC 328 (3): 986-992 DEC 11 2001

Harada M, Kim Y, Rho M
Vector manifestation and fate of vector mesons in dense matter
PHYS REV D 66 (1): art. no. 016003 JUL 1 2002

Hong H, Kim BJ, Choi MY
Stochastic resonance in the driven Ising model on small-world networks
PHYS REV E 66 (1): art. no. 011107 Part 1 JUL 2002

Hong H, Kim BJ, Choi MY
Comment on "Ising model on a small world network"
PHYS REV E 66 (1): art. no. 018101 Part 2 JUL 2002

Hong SJ, Nah H, Park YJ, et al.
Analysis of the accuracy of the local thermal noise sources for the impedance field method using the Monte Carlo method
J KOREAN PHYS SOC 40 (1): 77-81 JAN 2002

Jang JH, Lee KY, Park SC, et al.
Enhancement of epsilon(')/epsilon in the SU(2)(L)xSU(2)(R)xU(1) model
PHYS REV D 66 (5): art. no. 055006 SEP 1 2002

Jeon GS, Park K, Choi MY
Dynamic renormalization-group analysis of the two-dimensional XY gauge-glass
J KOREAN PHYS SOC 41 (1): 97-102 JUL 2002

Jung J, Park H, Du DZ, et al.
A decision criterion for the optimal number of clusters in hierarchical clustering
J GLOBAL OPTIM 25 (1): 91-111 JAN 2003

Kabat D, Lee K, Weinberg E
QCD vacuum structure in strong magnetic fields
PHYS REV D 66 (1): art. no. 014004 JUL 1 2002

Kang K, Kang SK, Kim CS, et al.
Neutrino oscillations and lepton flavor mixing
MOD PHYS LETT A 16 (33): 2169-2175 OCT 30 2001

Kiem Y, Lee S, Rey SJ, et al.
Interacting open Wilson lines from noncommutative field theories
PHYS REV D 65 (4): art. no. 046003 FEB 15 2002

Kim C, Lee K, Yi PJ
Discrete light cone quantization of fivebranes, large N screening, and L-2 harmonic forms on Calabi manifolds
PHYS REV D 65 (6): art. no. 065024 MAR 15 2002

Kim C, Lee K, Yi SH
Tales of D0 on D6 branes: matrix mechanics of identical particles
PHYS LETT B 543 (1-2): 107-114 SEP 5 2002

Kim CS, Kwon Y, Lee J, et al.
Test of factorization hypothesis from exclusive nonleptonic B decays
PHYS REV D 65 (9): art. no. 097503 Part B MAY 1 2002

Kim HD
Softness of Scherk-Schwarz supersymmetry breaking
PHYS REV D 65 (10): art. no. 105021 MAY 15 2002

Kim HD, Kim JE, Lee HM
Top-bottom mass hierarchy, s-mu puzzle and gauge coupling unification with split multiplets
EUR PHYS J C 24 (1): 159-164 MAY 2002

Kim HD, Kim JE, Lee HM
TeV scale 5D SU(3)(W) unification and the fixed point anomaly cancellation with chiral split multiplets
J HIGH ENERGY PHYS (6): art. no. 048 JUN 2002

Kim J, Lee MH
Dynamics of the independent-oscillator (IO) model in the Einstein and pseudo-Debye limits
PHYSICA A 304 (3-4): 409-420 FEB 15 2002

Kim N, Lee KM. Yi PJ
Deformed Matrix Theories With N=8 And Five-Branes In The Pp Wave Background.
J HIGH ENERGY PHYS (11): art. no. 009 2002

Kim N, Park JH
Superalgebra for M theory on a pp wave
PHYS REV D 66 (10): art. no. 106007 2002

Kim S, Lee C, Lee K
Quantum field dynamics in a uniform magnetic field: Description using fields in oblique phase space
PHYS REV D 65 (4): art. no. 045009 FEB 15 2002

Kim SY
Partition function zeros of the Q-state Potts model on the simple-cubic lattice
NUCL PHYS B 637 (1-3): 409-426 AUG 19 2002

Kim TS, Hershfield S
Even-odd parity effects in conductance and shot noise of metal-atomic-wire-metal (superconducting) junctions
PHYS REV B 65 (21): art. no. 214526 JUN 1 2002

Kim Y, Kim TS, Park H
Dynamical surface structures in multiparticle-correlated surface growths
PHYS REV E 66 (4): art. no. 046123 Part 2 OCT 2002

Kim Y, Lee K
First and second order vortex dynamics
PHYS REV D 66 (4): art. no. 045016 AUG 15 2002

Kim Y, Yoon SY, Park H
Fluctuations of self-flattening surfaces
PHYS REV E 66 (4): art. no. 040602 Part 1 OCT 2002

Lee CH, Brown GE, Wijers RAMJ
Discovery of a black hole mass-period correlation in soft X-ray transients and its implication for gamma-ray burst and hypernova mechanisms
ASTROPHYS J 575 (2): 996-1006 Part 1 AUG 20 2002

Lee K
L-2 harmonic forms on Calabi manifolds and their applications
J KOREAN PHYS SOC 39: S523-S526 Suppl. S DEC 2001

Lee KM
M-theory on less supersymmetric pp-waves
PHYS LETT B 549 (1-2): 213-220 2002

Lee KY, Song WY
Probing anomalous right-handed (t)over-barbW and (t)over-barsW couplings in rare B decays
NUCL PHYS B-PROC SUP 111: 288-290 NOV 2002

Lee KY, Song WY
Probing anomalous right-handed top quark couplings in rare B decays
PHYS REV D 66 (5): art. no. 057901 SEP 1 2002

Lee M, Jeon GS, Choi MY
Quantum and frustration effects on fluctuations of the inverse compressibility in two-dimensional Coulomb glasses
PHYS REV B 66 (7): art. no. 075304 AUG 15 2002

Lee MH
Nonextensivity in ordinary thermodynamics
CHAOS SOLITON FRACT 13 (3): 545-546 MAR 2002

Lee MH
Ergodic theory, infinite products, and long time behavior in Hermitian models
PHYS REV LETT 87 (25): art. no. 250601 DEC 17 2001

Lee MH
Ergodicity in simple and not so simple systems and Kubo's condition
PHYSICA A 314 (1-4): 583-591 NOV 1 2002

Lee MH, Kim J
Quantum gases and polylogs
PHYSICA A 304 (3-4): 421-428 FEB 15 2002

Lee SS, Eom JH, Kim KS, et al.
Origin of peak-dip-hump structure in the in-plane optical conductivity of the high-T-c cuprates: Role of antiferromagnetic spin fluctuations of short-range order
PHYS REV B 66 (6): art. no. 064520 AUG 1 2002

Liu C, Song JY
Phenomenological study of lepton mass matrix textures
PHYS REV D 65 (5): art. no. 057303 MAR 1 2002

Lyubchanskii IL, Dadoenkova NN, Lyubchanskii MI, et al.
Second harmonic light scattering by magnetic dots
PHYS STATUS SOLIDI A 189 (3): 989-994 FEB 23 2002

Metlov KL, Guslienko KY
Stability of magnetic vortex in soft magnetic nano-sized circular cylinder
J MAGN MAGN MATER 242: 1015-1017 Part 2 APR 2002

Michishita Y
Tachyon lump solutions of bosonic D-branes on SU(2) group manifolds in cubic string field theory
J KOREAN PHYS SOC 39: S588-S614 Suppl. S DEC 2001

Michishita Y
Comments on D-branes on general group manifolds
MOD PHYS LETT A 17 (1): 31-42 JAN 10 2002

Michishita Y, Yi P
D-brane probe and closed string tachyons
PHYS REV D 65 (8): art. no. 086006 Part B APR 15 2002

Novosad V, Guslienko KY, Otani Y, et al.
Magnetostatic interdot coupling in arrays of circular ferromagnetic dots
J MAGN MAGN MATER 239 (1-3): 234-236 Sp. Iss. SI FEB 2002

Novosad V, Guslienko KY, Shima H, et al.
Effect of interdot magnetostatic interaction on magnetization reversal in circular dot arrays
PHYS REV B 65 (6): art. no. 060402 FEB 1 2002

Otani Y, Shima H, Guslienko K, et al.
Magnetic properties of nano-structured ferromagnetic dot arrays
PHYS STATUS SOLIDI A 189 (2): 521-526 FEB 16 2002

Park BY, Min DP, Rho M, et al.
Atiyah-Manton approach to skyrmion matter
NUCL PHYS A 707 (3-4): 381-398 SEP 9 2002

Park JH
On a matrix model of level structure
CLASSICAL QUANT GRAV 19 (3): L11-L16 FEB 7 2002

Park JH
Chern-Simons theories on noncommutative plane
J KOREAN PHYS SOC 39: S576-S579 Suppl. S DEC 2001

Park JH
Supersymmetric objects in the M-theory on a pp-wave
J HIGH ENERGY PHYS (10): art. no. 032 2002

Park SC, Song HS, Song JH
Z boson pair production at CERN LHC in a stabilized Randall-Sundrum scenario
PHYS REV D 65 (7): art. no. 075008 Part B APR 1 2002

Rah K, Eu BC
Generic van der Waals equation of state and theory of diffusion coefficients: Binary mixtures of simple liquids
J CHEM PHYS 116 (18): 7967-7976 MAY 8 2002

Shima H, Guslienko KY, Novosad V, et al.
Magnetization reversal in magnetostatically coupled dot arrays
J APPL PHYS 91 (10): 6952-6954 Part 2 MAY 15 2002

Sim HS, Lee HW, Chang KJ
Even-odd behavior and quantization of conductance in monovalent atomic contacts
PHYSICA E 14 (4): 347-354 JUL 2002

Um CI, Yeon KH, George TF
The quantum damped harmonic oscillator
PHYS REP 362 (2-3): 63-192 MAY 2002

Yi HM
Resonant tunneling and the multichannel Kondo problem: Quantum Brownian motion description
PHYS REV B 65 (19): art. no. 195101 MAY 15 2002

Yi J, Cho MW, Salk SHS
From paramagnetic to diamagnetic charge and spin currents in a Hubbard necklace
PHYS REV B 65 (19): art. no. 193108 MAY 15 2002

Yi PJ
ADE algebra and anomaly of (2,0) theories in six dimensions
J KOREAN PHYS SOC 39: S546-S548 Suppl. S DEC 2001

Yoo JJ, Lee HW, Ahn SH
Profiles of the resonance doublets formed in bipolar winds in symbiotic stars
MON NOT R ASTRON SOC 334 (4): 974-982 AUG 2002

Zou XB, Lee HW, Kim J, et al.
Nonlocality of Hardy type in experiments using independent particle sources
PHYS LETT A 305 (6): 354-358 2002

School of Computational Sciences

In 2000 KIAS established new programs in computational sciences which have emerged as an important interdisciplinary research field, involving complex theories and extensive computations across many branches of science and engineering. KIAS is initiating a few cutting edge programs in the general area of bio- and nano-sciences. The list of projects under investigation includes the structure study of protein folding, using parallel computing and optimization, full band Monte Carlo simulation of nano-electronic device performance, and quantum cryptography and quantum computing with emphasis on the physical realization aspect of quantum computers.

Faculty

Professor Kim, Dae Mann	*Micro- and Nano-electronic Devices*
Professor Kim, Jaewan	*Quantum Computation and Information*
Professor Lee, Jooyoung	*Protein Folding and Global Optimization*
Professor Nguyen, Ba An	*Nonlinear and Quantum Optics*

Research Fellows

Dr. Kim, Saejoon	*Bioinformatics and Coding Theory*
Dr. Kim, Seung-Yeon	*Protein Folding and Global Optimization*
Dr. Kwon, Sungchul	*Quantum Computation*
Dr. Lee, Julian	*Protein Folding*
Dr. Lee, Kyoungrim	*Protein Folding*
Dr. Lee, Soojoon	*Quantum Computation*
Dr. Oh, Byeong-Kweon	*Number Theory*
Dr. Oh, Sangchul	*Quantum Computation*
Dr. Park, Hwa-Kyun	*Pattern Formation*
Dr. Quan, Wuyun	*Modeling and Simulation of Nano-devices*
Dr. Yu, Hoseog	*Algebraic Number Theory*

Prof. Dae Mann Kim and Dr. Wuyun Quan are doing research on nanoscale electronic devices. The main thrust of the work consists of the characterization, modeling and simulation of the nano-CMOS devices, in active collaboration with Samsung. The wave nature of 2-dimensional electrons or holes impacting the device performance is under systematic investigation. The sublinear response of the inversion charge under gate bias has been incorporated into the drift-diffusion I-V model via the concept of the threshold voltage creep. The associated capacitance-voltage behavior has been explicitly modeled using the triangular potential well approximation. The gate leakage current, a key device parameter as a driving force for non-volatile memory cell operation and also as a limiting factor for device scaling is under active study. The Fowler-Nordheim tunneling current has been successfully and accurately compact modeled and the gate current modeling is being extended to include the direct tunneling operative in nano-CMOS devices. Additionally the parameters of sub 0.1 μm Samsung devices are being accurately extracted for use in ULSI circuit simulation. KIAS invited Professor Lundstrom from Purdue for a series of lectures on the modeling of nano-MOSFET. Professor Lundstrom also gave related lectures at Seoul National University and Samsung.

Prof. Jaewan Kim, Prof. Ba An Nguyen, Dr. Sangchul Oh, and Dr. Soojoon Lee joined the School of Computational Sciences for the research of quantum information science in 2002. Their research is focused on the quantum optical approach of quantum information processing and the study of quantum entanglement.

They are collaborating with Prof. Dae Mann Kim for the physical implementation of quantum repeater to realize quantum teleportation and quantum cryptography without distance limit. Prof. Jaewan Kim acquired a grant from Korea Research Foundation for the research of "Quantum Information Science" for the term of three years. KIAS and APCTP held a workshop on Quantum Information from June 28 through July 3, 2002. Invited speakers were Drs. Daniel Gottesman, Robert Gingrich, Eli Yablonovitch, Allan Solomon, Masato Koashi, and Keiji Matsumoto.

The main research activities of protein folding group led by Prof. Jooyoung Lee are three-fold.
(1) Protein structure prediction by computer simulations: The one dimensional sequence information of proteins is well understood due to the recent progress of various genome projects. However, it is the three dimensional structural and functional information of proteins that contains the most important and yet unsolved issues of life sciences. We map this protein folding problem to a global optimization problem of a complex energy function which governs the microscopic interactions between atoms. In recent publications, we proposed a systematic protocol to optimize a given potential energy by refining its parameters. This method exploits the high efficiency of the conformational space annealing (CSA) method in finding distinct low energy conformations. Currently, we are studying the application to various available potential energies in order to validate their applicability in the protein folding problem.
(2) Protein folding mechanism: Even after extensive investigations both experimentally and theoretically, the microscopic understanding of the folding mechanism is far from being complete. Recently, we proposed an atomistic potential which was specifically optimized to study a few small proteins for the study of the microscopic folding mechanism. This potential is much more useful for the study of folding kinetics in that all possible interactions are included. This should be contrasted to the existing approaches where only native interactions are considered. From this study, we conclude that the way a protein folds into its native structure is determined by the convergence point of early folding trajectories relative to the native state. The results agree well with those in the literature and provide new insights on the folding mechanism.
(3) Application CSA method to important global optimization problems: We are currently attacking various global optimization problems, such as the traveling salesman problem (TSP), the Lennard-Jone cluster problem (LJ). For the case of LJ problem, we have shown that the global minimum structure of LJ clusters up to N=201 can be efficiently obtained by the CSA, which is an unbiased optimization method. We have not used any extra information of the problem such as the structures of the known global energy minima. From preliminary tests, we have promising results from various TSP problems.
(4) The research scopes which are not covered by above three are: pattern recognition problems (such as secondary structure prediction problem, domain parsing problem, contact prediction), nearest neighbor method for secondary structure problem, global optimization problem for the multiple sequence alignment, application of action-derived molecular dynamics simulations to carbon clusters and kinetic folding studies, and vortex patterns and infinite degeneracy in the frustrated XY models.

Visiting Scientists

Park, Haesun
Sep/05/2001 - Jul/31/2002
Protein structure study
U of Minnesota

Lee, Eun-Joo
Dec/15/2001 - Jun/14/2002
Nano CMOS Modeling
Hallym U

Kim, Hyun-Soo
Jan/12/2002 - Aug/31/2002
Bioinformatics
U of Minnesota

Elden, L.
Jan/12/2002 - Jan/18/2002
Data retrieval and dimension reduction
Linkoping U

Park, Hyunggyu
Feb/01/2002 - Feb/28/2002
Statistical Physics
Inha U

Park, In-Gyu
Feb/25/2002 - Mar/10/2002
Molecule visualization and implementation of GUI to CSA using C^{++}
U of Rochester

Iwaoka, M.
Mar/17/2002 - Mar/24/2002
Protein Energy Development for Protein Folding Studies
U of Tokyo

Lundstrom, M
Mar/27/2002 - Apr/02/2002
Modeling and Simulation of Nanodevices
Purdue U

Shin, Hang-Cheol
Apr/08/2002 - Apr/08/2002
Protein Folding & Proteomics Study
Soongsil U

Choi, Gwan-Yong
May/01/2002 - May/02/2002
Protein Folding
POSTECH

Seong, Woo-Kyung
May/30/2002 - Jun/01/2002
Computational Sciences
POSTECH

Lee, In-Ho
Jun/17/2002 - Jun/19/2002
Carbon potential energy
KRISS

Lee, Eun-Joo
Jul/01/2002 - Dec/31/2002
Nano-CMOS modeling
Hallym U

Hyun, Sang-il
Jul/04/2002 - Jul/13/2002
Protein folding and global optimization
Johns Hopkins U

Kim, Yup
Jul/29/2002 - Aug/05/2002
MC study for Random Laplacian Growth Model
Kyung Hee U

Park, Haesun
Aug/01/2002 - Aug/27/2002
Protein Secondary Structure Prediction by SVM
U of Minnesota

Shin, Hang-Cheol
Sep/03/2002 - Sep/03/2002
Protein Structure Analysis
Soongsil U

Kim, Yup
Sep/09/2002 - Sep/30/2002
Self avoidings walk model
Kyung Hee U

Lee, In-Ho
Sep/23/2002 - Sep/24/2002
Global Optimization of LJ cluster
KRISS

Chang, Ik Soo
Sep/25/2002 - Sep/28/2002
Protein Folding
Pusan U

Lee, Byungkook
Nov/12/2002 - Nov/21/2002
Protein Folding
National Institute of Health

Kuwajima, Kunihiro
Dec/20/2002 - Dec/28/2002
Protein Folding
U of Tokyo

Research Activities (Workshops, Symposia, Conference, Seminars, etc.)

Workshops/Symposia/Conferences

KIAS-SNU Special Lecture (March 28-30, 2002)
KIAS-APCTP Workshop on Quantum Information (June 28-29, 2002)
KIAS Symposium on Molecular Electronics (July 3-4, 2002)
KIAS Summer School on Protein Folding (August 26-27, 2002)
Second KIAS Conference on Protein Structure and Function (September 26-28, 2002)

Seminars

January 7, 2002
Chi, Dong Pyo (Seoul Nat'l U)
"Special Lecture on Quantum Information Theory (1)"

January 8, 2002
Chi, Dong Pyo (Seoul Nat'l U)
"Special Lecture on Quantum Information Theory (2)"

January 9, 2002
Chi, Dong Pyo (Seoul Nat'l U)
"Special Lecture on Quantum Information Theory (3)"

January 10, 2002
Chi, Dong Pyo (Seoul Nat'l U)
"Special Lecture on Quantum Information Theory (4)"

January 11, 2002
Chi, Dong Pyo (Seoul Nat'l U)
"Special Lecture on Quantum Information Theory (5)"

January 12, 2002
Chi, Dong Pyo (Seoul Nat'l U)
"Special Lecture on Quantum Information Theory (6)"

January 15, 2002
Elden, Lars (Linkoping U, Sweden)
"Approximation and Compression of Multidimensional Data"

March 5, 2002
Shin, SM (Seoul Nat'l U)
"Formation of beta hair pins"

March 8, 2002
Park, Inkyu (U of Rochester)
"An Object Oriented Global Optimization Tool"

March 12, 2002
Lee, Julian (KIAS)
"Parameter Optimization of UNRES"

March 19, 2002
Kim, Hyunsoo (U of Minnesota)
"Protein Secondary Structure Prediction"

March 19, 2002
Iwaoka, M (U of Tokyo)
"Solvent effects on Phi-Psi potential surfaces of small dipeptide molecules studied by ab intio calculations"

March 21, 2002
Iwaoka, M (U of Tokyo)
"S···O interactions in proteins"

March 26, 2002
Lee, Julian (KIAS)
"Parameter optimization of a potential energy function"

April 2, 2002
Kim, Seung-Yeon (KIAS)
"Protein Folding Dynamics"

April 11, 2002
Park, Hyungju (Oakland U & POSTECH)
"Algebraic Issues in Multidimensional System Theory"

April 23, 2002
Kim, Seung-Yeon (KIAS)
"Protein folding dynamics"

April 27, 2002
Kim, Saejoon (Samsung)
"An Introduction to Coding Theory"

May 1, 2002
Lee, Weontae (Yonsei U)
"NMR-based Structural Proteomics: A Short-cut for Drug Development?"

May 3, 2002
Kahng, Byungnam (Seoul Nat'l U)
"Classification of Scale Free Networks"

May 7, 2002
Park, Haesun (U of Minnesota)
"Introduction to Linear Programming: Simplex Method"

May 8, 2002
Park, Hwa-Kyun (Max-Planck Institute, Dresden)
"Pattern dynamics in oscillatory media with resonant forcing"

May 10, 2002
Park, Haesun (U of Minnesota)
"Introduction to Linear Programming: Simplex Method: Part 2"

May 15, 2002
Kim, Jaewan (KIAS)
"Quantum Imaging"

June 7, 2002
Kim, Jaewan (KIAS)
"Entropy and Quantum Information [1]"

June 11, 2002
Kim, I. S. (Sungkyunkwan U)
"Secondary Structure Prediction and JPred"

June 14, 2002
Park, Haesun (U of Minnesota)
"Introduction to unconstrained and linearly constrained optimization"

June 14, 2002
Kim, Jaewan (KIAS)
"Entropy and Quantum Information [2]"

June 18, 2002
Kim, Seung-Yeon (KIAS)
"Protein Folding Dynamics and Biology"

June 19, 2002
Kim, Jaewan (KIAS)
"Entropy and Quantum Information [2]"

June 20, 2002
Kim, Jaehyun (KAIST)
"Introduction to Quantum Computer"

June 21, 2002
Kim, Jaehyun (KAIST)
"Experimental Proposals of Quantum Computers"

June 21, 2002
Song, Mee Kyung (Pusan Nat'l U)
"Molecular Simulation in Solid State Materials"

June 22, 2002
Park, Haesun (U of Minnesota)
"Introduction to Support Vector Machines"

June 25, 2002
Lee, Julian (KIAS)
"CASP preparation"

July 2, 2002
Kim, Saejoon (KIAS)
Paper Review on JMB v308, p397

July 5, 2002
Shin, Hang-Cheol (Soongsil U)
"Protein Folding Experiments"

July 8, 2002
Hyun, Sangil (Johns Hopkins U)
"Topology and Optimization and its Applications"

July 9, 2002
Jang, Soonmin (Seoul Nat'l U)
"Efficient sampling of biomolecules: Replica-exchange method using Tsallis statistics"

July 11, 2002
Hyun, Sangil (Johns Hopkins U)
"Multiscale Modeling and Simulation on Nanodevice Technology"

July 16, 2002
Kim, Hyunsoo (U of Minnesota)
"Protein Secondary Structure Prediction using Support Vector Machines"

July 18, 2002
Kim, Seung-Yeon (KIAS)
Protein Folding Journal Club: "Exact Solution of Munoz-Eaton Model for Protein Folding" (PRL, Vol 88, p258101); and more

July 19, 2002
Shin, Hang-Cheol (Soongsil U)
"Protein Folding: Experimental Approaches; Part 2"

July 26, 2002
Kim, Saejoon (KIAS)
Protein Folding Journal Club (PRE Vol 65, 061907; "Classification of amino acids based on statistical results of known structures and cooperativity of protein folding")

July 31, 2002
Kim,Yup (Kyung Hee U)
"Random Laplacian Growth and Erosion"

August 2, 2002
Park, Youngki (POSTECH)
Protein folding journal club: "A physical basis for protein secondary structure" (PNAS Vol. 96, p14258-14263 (1999)

August 5, 2002
Shin, Hang-Cheol (Soongsil U)
"Protein Folding: Experimental Approaches; Part 3"

August 14, 2002
Lee, Julian (KIAS)
Protein folding journal club

September 17, 2002
Hwang, Chi-Ok (Hanyang U)
"First- and Last-Passage Monte Carlo Algorithms for the Charge Density Distribution on a Conducting Surface"

September 17, 2002
Kim, Jaewan (KIAS)
Quantum Information Science: First Meeting

September 18, 2002
Kim, E. H. (KIAS)
Paper review (PRL, Vol 88 p168101-1: "Specific and Nonspecific Collapse in Protein Folding Funnels")

September 24, 2002
Kim, Jaewan (KIAS)
Quantum Information Science: Second Meeting

September 25, 2002
Han, Kyou-Hoon (Korea Research Institute of Bioscience and Biotechnology)
"NMR structural investigation on intrinsically"

September 25, 2002
Kuwajima, Kunihiro (U of Tokyo)
"Equilibrium and Kinetics of the Allosteric Transition of GroEL Studied by Solution X-ray Scattering and Fluorescence Spectroscopy"

October 1, 2002
Kim, Jaewan (KIAS)
Quantum Information Science: Third Meeting

October 8, 2002
Kim, Jaewan (KIAS)
Quantum Information Science: 4th Meeting

October 15, 2002
Kim, Jaewan (KIAS)
Quantum Information Science: 5th Meeting

October 17, 2002
Oh, Sang-Chul (KAIST)
"Solid State Quantum Computers"

October 17, 2002
Lee, Jae-Weon (KAIST)
"Quantum Cryptography Using Single Particle Entanglement"

October 22, 2002
Kim, Jaewan (KIAS)
Quantum Information Science for Graduate Students

October 22, 2002
Kim, Jaewan (KIAS)
Quantum Information Science: 6th Meeting

October 23, 2002
Protein folding group (KIAS)
Protein folding group meeting

October 29, 2002
Kim, Jaewan (KIAS)
Quantum Information Science for Graduate Students

October 29, 2002
Kim, Jaewan (KIAS)
Quantum Information Science: 7th Meeting

October 29, 2002
Protein folding group (KIAS)
Protein folding group meeting

November 5, 2002
Protein folding group (KIAS)
Protein folding group meeting

November 5, 2002
Lee, Soojoon (KIAS)
"Quantum Information Science: Entanglement of formation #1"

November 11, 2002
Kim, Jin Min (Soongsil U)
"Growth Model"

November 12, 2002
Lee, Soojoon (KIAS)
"Quantum Information Science: Entanglement of formation #2"

November 12, 2002
Lee, Jooyoung (KIAS)
Protein folding group meeting

November 13, 2002
Kim, Jaewan (KIAS)
"Quantum Information Science for Pedestrian"

November 14, 2002
Lee, Jooyoung (KIAS)
Protein Folding Journal Club

November 14, 2002
Lee, Byungkook (Nat'l Institute of Health)
"Protein fold recognition using pair-to-pair substitution matrices"

November 15, 2002
Lee, Seung Yup (KAIST)
"Protein folding simulation with balanced physical energy function and Go-like terms: IgG binding domain of protein G"

November 18, 2002
Kim, Jeong-Yoo (Dongguk U)
"Network as an Alternative to the Market: A Model of Consumer Referral"

November 19, 2002
Lee, Byungkook (Nat'l Institute of Health)
"Free energy of cavity formation in protein molecules"

November 19, 2002
Oh, Sangchul (KIAS)
Quantum Information Science: Group meeting

November 19, 2002
Lee, Hyukjae (U of Seoul)
"Quantum Distillation"

November 19, 2002
Lee, Jooyoung (KIAS)
Protein Folding Journal Club

November 25, 2002
Kim, Jin Min (Soongsil U)
"Directed polymer in random potentials and growth models : Part 2"

November 26, 2002
Lee, Hyukjae (U of Seoul)
"Quantum Distillation"

November 26, 2002
Kim, Jaewan (KIAS)
Quantum Information Science for Graduate Students

November 26, 2002
Lee, Jooyoung (KIAS)
Protein Folding Journal Club

November 26, 2002
Lee, Soojoon (KIAS)
Quantum Information Science: Group meeting

November 27, 2002
Kim, Jaewan (KIAS)
"Quantum Information for Pedestrians #1"

December 3, 2002
Lee, Hyukjae (U of Seoul)
Quantum Information Science for Graduate Students

December 3, 2002
Kim, Heon-O (Ulsan U)
"Photon entanglement in parametric down-conversion and Quantum interference experiments"

December 4, 2002
Kim, Jaewan (KIAS)
"Quantum Information for Pedestrians #2"

December 16, 2002
Lee, Jooyoung (KIAS)
Protein folding group meeting

December 16, 2002
Choi, Byong-Seok (KAIST)
"Solution Structure of DNA Duplex Containing Photoproduct"

December 17, 2002
Kim, Jaewan (KIAS)
Quantum information science group meeting

December 24, 2002
Lee, Jooyoung (KIAS)
Protein folding group meeting

December 24, 2002
Kuwajima, Kunihiro (U of Tokyo)
"Search for a Universal View of Protein Folding: Is the Classic View in Conflict with the New View"

December 27, 2002
Kuwajima, Kunihiro (U of Tokyo)
"The Mechanism of Protein Folding: Case Studies in α-Lactalbumin and Staphylococcal Nuclease"

December 30, 2002
Lee, Jooyoung (KIAS)
Protein folding group meeting

December 30, 2002
Park, Hwa-Kyun (KIAS)
"Intrinsic decoherence and classical-quantum correspondence"

Publications

Kim JW
Nonlocality of Hardy type in experiments using independent particle sources
PHYS LETT A 305: 354-358 2002

Lee J, Park K, Lee J
Full optimization of linear parameters of a united residue protein potential
J PHYS CHEM B 106 (44): 11647-11657 NOV 7 2002

Lee SJ, Kim B, Lee J
Infinite ground state degeneracy and glassy dynamics in the frustrated XY model and lattice Coulomb gas with f=1/6
PHYSICA A 315 (1-2): 314-320 NOV 15 2002

Quan WY, Kim DM, Cho MK
Unified compact theory of tunneling gate current in metal-oxide-semiconductor structures: Quantum and image force barrier lowering
J APPL PHYS 92 (7): 3724-3729 OCT 1 2002

Quan WY, Kim DM, Kim YJ
A new quantum effect in metal-oxide-semiconductor field-effect transistor: Threshold voltage creep with gate voltage
JPN J APPL PHYS 1 41 (7A): 4484-4488 JUL 2002

Quan WY, Kim DM, Lee HD
Quantum C-V modeling in depletion and inversion: Accurate extraction of electrical thickness of gate oxide in deep submicron MOSFETs
IEEE T ELECTRON DEV 49 (5): 889-894 MAY 2002

KIAS Alumni

School of Mathematics

Name	*Position*	*Period*	*Current Affiliation*
Koh, Jee Heub	Professor	1/1/1998-1/31/2000	Indiana U
Kim, Minhyong	Professor	6/1/2001-5/31/2002	U of Arizona
Bae, Hyeong Ohk	Research Fellow	3/1/1998-2/28/1999	Ajou U
Byeon, Dong Ho	Research Fellow	3/1/1998-8/31/2001	Seoul Nat'l U
Byeon, Jaeyoung	Research Fellow	7/1/1997-7/31/1998	POSTECH
Choi, Youn-Seo	Research Fellow	6/14/1999-2/28/2001	Korea U
Grinenko, Mikhail	Research Fellow	1/10/2001-1/16/2002	Steklov Inst. of Math.
Hong, Jin	Research Fellow	9/1/2000-9/22/2002	ETRI
Igor, Potemine	Research Fellow	6/1/1997-6/21/1998	Grenoble U
Kim, Hong Chan	Research Fellow	3/15/2000-8/31/2000	Korea U
Kim, Inkang	Research Fellow	11/1/1996-1/31/1997	Seoul Nat'l U
Kim, Joonil	Research Fellow	3/7/2000-7/12/2001	U of Missouri
Kim, Kyung Hee	Research Fellow	8/1/1998-2/28/2001	
Kim Seok-Woo	Research Fellow	4/1/2000-8/31/2002	Chosun U
Kim, Sung Guen	Research Fellow	8/1/1998-2/28/1999	Kyungpook Nat'l U
Ku, Hyae Jin	Research Fellow	9/1/1998-6/15/2001	UNCC
Kwak, Si Jong	Research Fellow	10/1/1996- 9/31/1999	KAIST
Kwon, Dae Sung	Research Fellow	4/8/1999-2/28/2001	ETRI
Lee, Jae Sung	Research Fellow	3/15/1999-3/14/2001	Sogang U
Lee, Seunghun	Research Fellow	9/1/1998-8/31/1999	Konkuk U
Lee, Yongnam	Research Fellow	9/1/1997-8/31/1999	Sogang U
Lee, Yong Ha	Research Fellow	10/1/1999-8/31/2000	Ewha Womans U
Moon, Dongho	Research Fellow	8/1/1998-2/28/1999	Sejong U
Oh, Byeong-Kweon	Research Fellow	3/15/1999-6/11/2001	KIAS (School of Computational Sci.)
Oh, Jang Heon	Research Fellow	8/1/1997-12/30/1999	Sejong U
Oleg, Y. Imanuvilov	Research Fellow	12/1/1996-8/22/1998	Iowa State U
Ouyang, Yong	Research Fellow	7/1/2000-6/30/2002	
Paeng, Sung Hoon	Research Fellow	3/1/1998-8/31/2000	ETRI
Park, Jin Sung	Research Fellow	7/15/1998-8/10/2000	KOSEF
Rim, Kyung Soo	Research Fellow	2/1/1998-12/30/2001	DIP Lab Corp.
Yoon, Jeong Rok	Research Fellow	3/12/2001-3/12/2002	Rensselaer Polytechic Inst.

School of Physics

Name	*Position*	*Period*	*Current Affiliation*
Yi, Insu	Professor	9/1/1999-8/31/2002	
Hyun, Seungjoon	KIAS Asst. Professor	3/1/1998-4/5/2001	Yonsei U
Kang, Sin Kyu	KIAS Asst. Professor	10/1/1997-9/30/2001	KEK
Lee, Chang Hwan	KIAS Asst. Professor	9/1/2000-2/28/2002	Seoul Nat'l U
Lee, Hyun-Woo	KIAS Asst. Professor	11/1/1999-4/30/2002	POSTECH
Chen, Xiao-Shuang	Research Fellow	8/3/1998-9/27/1999	Hamboldt
Choi, Mahn-Soo	Research Fellow	10/1/2000-8/31/2002	Korea U
Choi, Seong-Youl	Research Fellow	10/1/1998-2/29/2000	Chonbuk Nat'l U
Deng, Zhen-Yan	Research Fellow	7/6/1998-3/31/1999	
Guslienko, K. Y.	Research Fellow	10/7/1998-11/17/2001	Seagate
Kiem, Youngjai	Research Fellow	10/1/1997-9/30/2000	KAIST
Kim, Jae Kwon	Research Fellow	8/20/1998-10/29/2000	
Kim, Se Yong	Research Fellow	9/1/1997-2/28/1998	Sejong U
Kim, Tae Suk	Research Fellow	8/1/1997-7/31/1999	APCTP
Kim, Chanju	Research Fellow	9/1/1998-4/5/2001	Seoul Nat'l U
Lee, In-ho	Research Fellow	7/1/1998-6/17/2001	KRISS
Lee, Jae Sik	Research Fellow	9/1/1998-10/31/2000	KEK
Lee Sangmin	Research Fellow	12/1/1998-4/8/2002	CERN
Liu, Chun	Research Fellow	6/24/1998-8/28/1999	Inst. of Theo. Physics in Beijing
Liu, Qui-Yu	Research Fellow	10/1/2000-7/2/2002	Tsinghua U
Park, Seung Yong	Research Fellow	3/12/2001-3/10/2002	Ohio State U
Shin, Hyunjoon	Research Fellow	5/1/1998-4/30/2002	Sungkyunkwan U

School of Computational Sciences

Name	*Position*	*Period*	*Current Affiliation*
Hong, Seung Jun	KIAS Asst. Professor	5/7/2001-7/31/2002	
Park, Kibeom	Research Fellow	10/16/2000-1/31/2002	ETRI

Other Activities

KIAS Cooperative Activities

Mutual Agreement with:
-Japan Association for Mathematical Sciences (March 1999)
-Mathematical Sciences Research Institute (MSRI), Berkeley (May 1999)
-Institute for Advanced Study (IAS), Princeton (June 1999)
-Korea University (October 1999)
-Institute of Particle and Nuclear Studies, KEK (November 1999)
-Ewha Womans University (December 1999)
-Research Institute for Mathematical Sciences (RIMS) (March 2000)
-National Center for Theoretical Sciences (NCTS), Taiwan (March 2000)
-Information Center for Mathematical Sciences, Korea (June 2000)
-Information Center for Physics Research, Korea (June 2000)
-Johns Hopkins University (September 2000)
-Yonsei University (January 2001)
-Sogang University (February 2001)
-Korea Institute of Science and Technology Information (November 2001)
-Pacific Institute for the Mathematical Sciences (December 2001)
-Sungkyunkwan University (April 2002)
-Mongolian Academy of Sciences (September 2002)

KIAS, a Member of SIG

Science Institutes Group (SIG) is an organization of research institutions, which exemplify the characteristics desired for Millennium Science Institutes. SIG seeks to ensure that institutes are led by excellent scientists who work at the frontiers of research and are also equipped to apply their research to economic, environmental, agricultural, and health needs of the country and region; in some cases they will apply modern sciences to develop indigenous technologies. Specific activities of SIG are to provide strategic direction, scout for potential new institutes, seek financial support, publicize the Millennium Science Initiative, and organize an annual scientific meeting. SIG is serving in a leadership position in the Third World Academy of Sciences and the International Council of Scientific Unions. The founding members of SIG are Korea Institute for Advanced Study (KIAS) Seoul, Korea, Instituto de Matematica Pura e Aplicada (IMPA) Rio de Janeiro, Brazil, Jawaharlal Nehru Center for Advanced Scientific Research, Bangalore, India and Institute for Advanced Study, Princeton, New Jersey, USA.