

Research Program: Cosmology and String Theory Program

Date : 3 Jan 2011 - 31 Aug 2011

Venue : HKUST

Coordinators: Prof Henry Tye (Director of HKUST IAS) and Prof Gary Shiu (University of Wisconsin-Madison, Fellow of HKUST IAS)

This is an informal focused program which its goal is to bring together researchers working at the rich interface between Cosmology and String Theory to discuss current status of the field and new ideas for future directions. This workshop is sponsored in part by HKUST Institute for Advanced Study, the US Department of Energy, and a Cottrell Scholar Award from Research Corporation.

Participants

Name	Institution	Dates of Visit
Henry Tye	HKUST IAS & Cornell University	Jan 1 -
Gary Shiu	Univ. of Wisconsin, Madison	Jan 1 -
Yoske Sumitomo	TIFR, Mumbai	Jan 16 - Feb 16
Dan Wohns	Cornell University & HKUST	Feb 8 - Jul 7
Gang Xu	Cornell University & HKUST	Feb 8 - Jul 7
Pablo Soler	Universid Autonoma de Madrid	Feb 13 - Mar 24
Jinn-Ouk Gong	CERN	Feb 19 - Mar 19
Fernando Marchesano	IFT, Madrid	Feb 21 - Mar 9, Apr 10 - 28
Koenraad Schalm	Leiden University	Mar 7 - 13
Paul McGuirk	Univ. of Wisconsin - Madison	Mar 9 - 31
Michael Kiewe	Univ. of Wisconsin - Madison	Mar 9 - Apr 1
Timm Wrase	Cornell University	Mar 20 - 24, Apr 5 - 20
Tsz Yan Lam	IPMU, University of Tokyo	May 25 - Jun 23
Hiroataka Hayashi	University of Tokyo & HKUST	Mar 31 - Aug 24
Sven Krippendorf	Univ. of Cambridge	Apr 2 - 26
Inaki Garcia Etxebarria	University of Pennsylvania	Apr 9 - May 2
Emille E. O. Ishida	IPMU - University of Tokyo	Apr 13 - 20
Rafael S. de Souza	IPMU - University of Tokyo	Apr 13 - 20
Raffaele Savelli	MPI - Munich	Apr 19 - May 12
Janet Hung	Perimeter Institute	May 8 - 26
Chiu-Man Ho	Vanderbilt University	May 15 - Jun 12

Wai-Yee Keung	Univ of Illinois at Chicago	May 22 - Jun 1
Minxin Huang	IPMU, University of Tokyo	May 22 - Jun 4
Qing-Guo Huang	ITP, Beijing	May 23 - 29
Lam Hui	Columbia University	May 27 - Jul 27

Activities

Date	Speaker	Title
Thu, Feb 10	Yoske Sumitomo (TIFR)	Axion Monodromy Quintessence
Thu, Feb 10	Edna Cheung (Nanjing)	Bound to bounce: a coupled scalar-tachyon model for a smooth cyclic universe
Fri, Feb 11	Gang Xu (Cornell)	Downward Spiral in D-brane Inflation(Part 1)
Wed, Feb 16	Dan Wohns (Cornell)	Resonance Tunneling in QFT: Superfluid Helium-3 Phase Transition
Tue, Feb 22	Jinn-Ouk Gong (CERN)	Informal Discussion: Higgs Inflation
Thu, Feb 24	Jinn-Ouk Gong (CERN)	A covariant approach to non-linear cosmological perturbations
Tue, Mar 1	Pablo Soler (Madrid)	D-brane instanton effects from D-particle loops, Part I
Wed, Mar 2	Pablo Soler (Madrid)	D-brane instanton effects from D-particle loops, Part II
Mon, Mar 7	Fernando Marchesano (IFT-Madrid)	Instantons, Fluxes and Yukawas in F-theory
Wed, Mar 9	Koenraad Schalm (Leiden)	A new approach to strongly coupled fermions: quantum criticality and anti-de Sitter string theory

Mon, Mar 14	Paul McGuirk (UW Madison)	Warped open strings and their applications to (dual) models of supersymmetry breaking
Fri, Mar 18	Gary Shiu (UW-Madison; HKIAS)	The promise of string cosmology
Mon, Mar 21	Pablo Soler (Madrid)	Informal discussion: Topological strings Part 1
Tue, Mar 22	Pablo Soler (Madrid)	Informal discussion: Topological strings Part 2
Wed, Mar 23	Pablo Soler (Madrid)	Informal discussion: Topological strings Part 3
Thur, Mar 24	Several speakers	Short talks: Michael Kiewe, Tsz Yan Lam, Timm Wrase, Gang Xu
Tue, Mar 29	Paul McGuirk	Informal discussion: Effective action of F-theory compactification
Tue, Mar 29	Michael Kiewe (UW Madison)	Soft Terms Induced by Non-SUSY Fluxes
Wed, Mar 30	Timm Wrase (Cornell)	dS hunting in a classical landscape
Thur, Apr 7	Hiroataka Hayashi (HKIAS)	F-theory topics, part 1
Mon, Apr 11	Hiroataka Hayashi (HKIAS)	F-theory topics, part 2
Tue, Apr 12	Sven Krippendorff (Cambridge)	Global Influences on Local Models, part 1
Wed, Apr 13	Sven Krippendorff (Cambridge)	Global Influences on Local Models, part 2
Thur, Apr 14	Rafael de Souza (IPMU)	Exploring the cosmic dawn, the first light after dark ages

Thur, Apr 14	Emille Ishida (IPMU)	SN Cosmology, Observation and data analysis
Fri, Apr 15	Timm Wrase (Cornell)	Localized Sources in Flux Compactifications
Tue, Apr 19	Inaki Garcia- Etxebarria (UPenn)	Non-perturbative effects in String Theory, part 1
Thur, Apr 21	Inaki Garcia- Etxebarria (UPenn)	Non-perturbative effects in String Theory, part 2
Tue, Apr 26	Raffaele Savelli (MPI, Munich)	Effective Field Theory of F-theory Compactifications I
Wed, Apr 27	Raffaele Savelli (MPI, Munich)	Effective Field Theory of F-theory Compactifications II
Thu, Apr 28	Raffaele Savelli (MPI, Munich)	Effective Field Theory of F-theory Compactifications III
Thu, May 12	Janet Hung (Perimeter Institute)	Holographic Entanglement Entropy
Wed, 18-May	Wai-Yee Keung (U. of Illinois at Chicago)	Introduction to Particle Phenomenology, Lecture 1
Thu, 19-May	Wai-Yee Keung (U. of Illinois at Chicago)	Introduction to Particle Phenomenology, Lecture 2
Fri, 20-May	Wai-Yee Keung (U. of Illinois at Chicago)	Introduction to Particle Phenomenology, Lecture 3
Tue, 24-May	Janet Hung (Perimeter Institute)	Informal discussion: PBH transformation and AdS/CFT
Tue, 24-May	Chiu-Man Ho (Vanderbilt University)	Non-Commutative Field Theories and non-equilibrium dynamic
Thu, 9-Jun	Lam Hui (Columbia)	NEquivalence Principle and Cosmic Acceleration