SPECTRUM

Academic News Letter

Issue I

Jan–Apr, 2011

Theory Division, SINP

Here is the 1st issue of the SPECTRUM of Academic Activities of our Theory Division covering the 1st quarter of 2011.

We apologize for any omission/errors that we hope to rectify in the next issue. We thank all who have helped in bringing out this issue #1.

Let's keep up our:

S– Sincerity

P– Progress

E– Enthusiasm

C– Creativity

T– Tenacity

R– Rigor

U– Usefulness

M– Mystery–Magic–Magnificence

Publications

1)"Graviton plus vector boson production to NLO in QCD at the LHC",
M.C.Kumar, Prakash Mathews, V. Ravindran, Satyajit Seth,
Nuclear Physics B 847, 54-92, (2011).

2) "Vector boson production in association with KK modes of the ADD model to NLO in QCD at LHC",
M.C.Kumar, Prakash Mathews, V.Ravindran, Satyajit Seth,
Journal of Physics G 38, 055001, (2011).

3) "The Effect of Topology on the Critical Charge in Graphene",
Baishali Chakraborty, Kumar S. Gupta, Siddhartha Sen,
Phys. Rev. B 83, 115412, (2011).

4) "A Pedagogical Review of Electroweak Symmetry Breaking Scenarios",
G. Bhattacharyya,
Rept. Prog. Phys. 74, 026201, (2011).

5) Exotic Higgs boson decay modes as a harbinger of S_3 flavor symmetry",
G. Bhattacharyya, P. Leser and H. Pas,
Phys. Rev. D 83, 011701(R), Rapid Communication (2011).

6) "The Spin Sutherland model of D_N type and its associated spin chain",
B. Basu-Mallick, F. Finkel and A. Gonzalez-Lopez,
Nucl. Phys. B 843, 505, (2011).

7) "Phase transitions and critical behavior of black branes in canonical

ensemble",
J. X. Lu, S. Roy, Z. Xiao
Journal of High Energy Physics, 1101, 133, (2011).

8) "Generalisation of Gunion-Bertsch Formula for Soft Gluon Emission",
Raktim Abir, Carsten Greiner, Mauricio Martinez, Munshi G. Mustafa
Phys.Rev.D 83, 011501(R), Rapid Communication, (2011).

9) "Low-mass dilepton rate from the deconfined phase",
Carsten Grainer, Najmul Haque, Munshi G Mustafa, Markus H. Thoma
Phys. Rev. C 83, 014908 (2011)

10) "Many-body quantum chaos: Recent developments and applications to nuclei",
J.M.G. Gomez, K. Kar, V.K.B. Kota, R.A. Molina, A. Relano and J. Retamosa
Phys. Reports 499 103-226 (2011)

School/Conference/Workshop

Participation:

1) SERC Main School on Theoretical High Energy Physics
29th Jan to 21st February,
Arindam Mazumdar

2) Advanced School on Radiative Corrections for the LHC
SINP, Kolkata
Satyajit Seth, Raktim Abir

3) Lecture Series by Prof. Lance Dixon
HRI, Allahabad

Satyajit Seth, Prakash Mathews

4) National Workshop on Recent Trends in Theoretical Physics, Cochin, University of Science and Technology, Kochi, 19-21, March, 2011
Prakash Mathews

5) Asian School on Lattice Field Theory
14 Mar, 2011 -25 Mar 2011, TIFR, Mumbai
Santanu mondal, Sangita De Sarkar, Abhishek Chowdhury, Anwesa Sarkar

Talks/Lectures:

1)G. Bhattacharyya
"R parity violation: Flavor-LHC interplay",
Workshop on Synergy between High Energy and High Luminosity Frontiers, TIFR, Mumbai,
January 2011.

2)Shibaji Roy (Invited talk)
"Phase structure of black branes in canonical ensemble",
in International conference ``ISM2011'' held in Puri, India during January 4-11, 2011.

3)Anjan Kundu (Plenary Talk)
"Nonholonomic deformation of NLS and DNLS equations and application to fiber optic communication"
in National Conference on "Nonlinear Dynamics & Integrable Systems (NCNLDIS'11), Trichy (January 27-30, 2011)

4)P. Mitra (Invited Talk)
"Symmetries and Regularizations of QCD
International Conference on "Recent Trends in Field Theories", BHU,

Varanasi,
February 7-12, 2011

5)Anjan Kundu (Invited Talk)
"Systematic construction of integrable 1D anyon Lattice and field models"
International Conference on "Recent trends in Field Theory",
BHU, Varanasi, India,
February 5-12, 2011

6)Harvendra Singh (Invited Talk)
"Perturbative QCD for the LHC Physics",
National workshop on "Recent Trends in Field Theory"
BHU, Varanasi, India
Feb 19-21, 2011

7)Kamales Kar
"Nuclear Physics of WIMP-nucleus scattering"
in Workshop on Dark Matter in the LHC era: Direct and Indirect Searches, SINP,
January 4-8, 2011

8)Prakash Mathews (invited talk)
"Perturbative QCD for the LHC Physics",
National Workshop on Recent Trends in Theoretical Physics
Cochin University of Sicence and Technology,Kochi
BHU, Varanasi,
Feb 19-21, 2011

9)G. Bhattacharyya
"New Physics at LHC (Part-I)",

SERC main school in Theoretical High Energy Physics (9 lectures),
Jamia Millia Islamia, New Delhi,
Jan/Feb 2011.

10) Anjan Kundu
"Coordinate and algebraic Bethe ansatz in quantum integrable systems",
A Course of 8 lectures
SERC School (DST) on "Nonlinear Dynamics"
Bharathidasan University , Trichy
January 16–26, 2011

11) Anjan Kundu
Two Lectures,
i) Integrable Systems and Application to Optical Soliton Communication
ii) Topological Charges in Field Theory with Application
in "Workshop in Nonlinear Dynamics" organized jointly by three Academies (IASc, INSA, NASI) in Tezpur University
April 26–28, 2011.

11) Munshi Golam Mustafa (Invited talk)
Analysis of Vector Correlation function and its spectral representation : Properties of the strongly interacting matter
Star –CBM collaboration Meeting, VECC, Kolkata
April 16–19, 2011.

Visits/ Seminar

Visits:

1)G. Bhattacharyya
T.U. Dortmund, Germany and Saclay France
12 April–June 2011

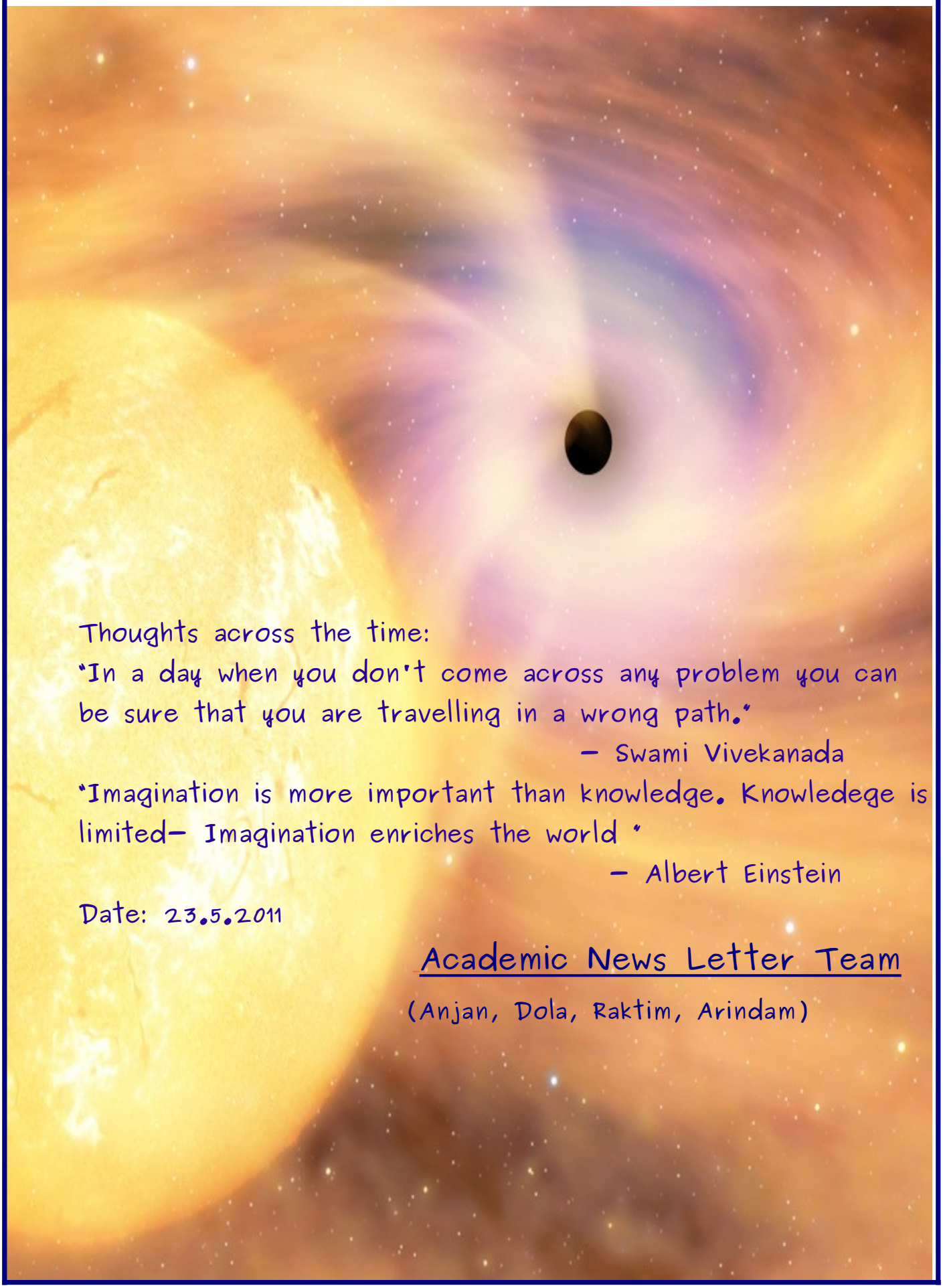
2)Kumar S. Gupta
Department of Physics, Chulalongkorn University
Bangkok, Thailand
16–22 Feb, 2011

3)Radhey Shyam
Univ. of Adelaide, Adelaide, Australia for collaborative work with Prof. A.W. Thomas
from 4 April, 2011 for 90 days.

Seminars:

Kumar S. Gupta
Department of Physics,
Chulalongkorn University, Bangkok, Thailand,
1)"Spin and Statistics in Quantum Space–time",
February 16, 2011
2)"Holography and Quasinormal Modes of Black Holes",
February 17, 2011
3)"Effect of Topology on the Critical Charge in Graphene",
February 21, 2011

4)Anjan Kundu
Seminar, "Modelling of recent experiment on magnetic pattern by topological skyrmion" Institute of Mathematical Sciences, Chennai, India,
February 1, 2011



Thoughts across the time:

"In a day when you don't come across any problem you can be sure that you are travelling in a wrong path."

– Swami Vivekanada

"Imagination is more important than knowledge. Knowledege is limited– Imagination enriches the world "

– Albert Einstein

Date: 23.5.2011

Academic News Letter Team

(Anjan, Dola, Raktim, Arindam)