Many thanks to our great Volunteers from Applied Physics

4th year

1) Anish Adhikari

2) Bijaya Basnet

3) Bikash Timalsina

4) Tek Narsingh Malla

3rd year

5) Anupa Kattel

6) Binita Sedhai

7) Rakshya Thapa

2nd year

8) Reema Shrestha

Song of Rain

Rain rain go away,

come again another day.

Our guests want to play (hike / fly),

rain rain go away.

Rain rain go away,

come again another day.

High E Physics wants to play,

rain rain go away.

Rain rain go away,

come again another day.

Students want to learn,

rain rain go away.

Journey to High Energy(?) Physics

Acquaintance (as pleasant surprise)
ICFA2001, Instrumentation School

Then National Accelerator Center (NAC), Cape Town, South Africa.

2004 Make a radiation lab of Northern Kathmandu Valley (2004).

A work with Arjun Pathak and Prof. Kamal Krishna Shrestha.

Working on Prof. A. E. Meyorovich (**2005**), University of Rhode Island, USA.

Motion of **ultra cold neutrons** (low energy) in gravitational rough wave guide.

Visited Rhode Island Nuclear Science Center (summer of **2006**). Repaired and wrote a control

 interface program to calibrate gonimeter (rotate and tilt)

with Prof. Anthony Nunes and engineer Mike Middleton.

2008-2010

Geant4 (installed and wrote some boundaries for UCN) with Ashish Desai and Prof. Albert Steyerl.

This work was later experimentally done at Grenoble, France by Ashish Desai as part of his PhD work.

Thanks to organizing committee

International Advisory Committee

Charlotte Warakaulle (CERN)
Emmanuel Tsesmelis (CERN)
Archana Sharma (CERN)
Suyog Shrestha (CERN/OSU)
Abha Eli Phoboo

Local organizing and program committee

Deepak Prasad Subedi (KU)
Raju Khanal (TU)
Jyoti Devkota (KU)
Ujjwal Man Joshi (KU)
Rajendra Adhikari (KU)
Navendra Poudel (KU)
Bharat Kumar Shrestha (KU)
Mahendra Niraula (KU)
Rajesh Shrestha (KU)

Thanks to All the presenters and participants

Thanks to all the guests from SAARC countries and Mauritius who have graciously accepted our invitation and arrived here to present or participate.

Special thanks to Emmanuel Tsesmelis, Archana Sharma and Charlotte Warakaulle from CERN

Scientific computation in general

Linear

$$y = mx + c$$

Quadratic

$$ax^2 + bx + c = 0$$

Ordinary Differential equation

$$\frac{dy}{dx} = f(x, y)$$

Exponential

$$n = n_0 e^{-\lambda t}$$

Simultaneous equations

$$a_{11} x + a_{12} y = b_1$$
$$a_{21} x + a_{22} y = b_2$$

Simultaneous Differential Equations

$$a_{11}\dot{x} + a_{12}\dot{y} = b_1$$
$$a_{21}\dot{x} + a_{22}\dot{y} = b_2$$

Implicit equation

$$g(x) = f(x, y)$$

Modified Laplacian equation

$$\nabla^2 f(x, y, z) = g(x, y, z)$$

Divergence equation

$$\nabla \cdot f(x, y, z) = \vec{g}(x, y, z)$$

Time dependent Laplacian equation

$$\nabla^2 f(x, y, z) = \frac{dy}{dt}$$

Complexity with theory

Image credit, unknown

Problems with computations

Error propagation

Ill conditioning in solution

Hardware

Thank you all again making this workshop
a great success.