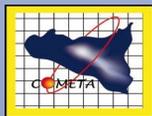


III INTERNATIONAL GEANT4 AND GPU PROGRAMMING SCHOOL

Laboratori Nazionali del Sud (INFN), Catania, Italy
November 9 – 13, 2015



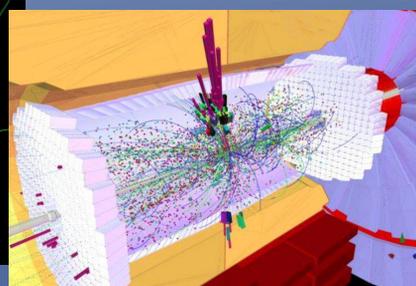
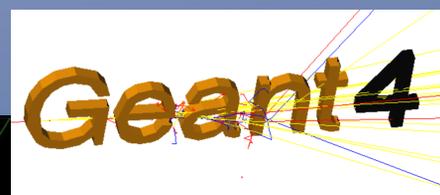
November 9-10
GPU Programming School

Introduction on GPU and manycore architecture
Fundamental concepts of GPU programming: CUDA and OpenCL
Programming using OpenCL
Practical sessions using OpenCL



November 11-13
Geant4 International School

Monte Carlo simulation
The Geant4 Monte Carlo toolkit
Practical sessions



```
CUDA C

Standard C Code
void saxpy_serial(int n,
                 float a,
                 float *x,
                 float *y)
{
    for (int i=0; i<n; ++i)
        y[i]=a*x[i]+y[i];
}

// Perform SAXPY on 1M elements
saxpy_serial(4096*256, 2.0, x, y);

Parallel C Code
global
void saxpy_parallel(int n,
                   float a,
                   float *x,
                   float *y)
{
    int i=blockIdx.x*blockDim.x+
        threadIdx.x;
    if(i<n) y[i]=a*x[i]+y[i];
}

// Perform SAXPY on 1M elements
saxpy_parallel<<<4096*256>>>(n, 2.0, x, y);
```



PARTICIPANTS

A maximum number of 55 participants will be admitted
Fee waiver available for undergraduate students (maximum 15 students)

SCHOOL FEE

GPU Programming course: 150 €
Geant4 course: 150 €
Both courses: 200 €
Attendance to the course may provide CFUs

ORGANISING COMMITTEE

Giuseppe Bilotta, UNICT
Salvatore Cavalieri, UNICT
Pablo Cirrone, INFN-LNS
Giacomo Cuttone, INFN-LNS
Luciano Pandola, INFN-LNS
Francesco Romano, INFN-LNS
Marco Scarpa, UNIME
Antonella Tramontana, INFN-LNS

More details at <http://agenda.infn.it/event/Geant4GPUInternationalSchool2015>