

WORKSHOP
NEMO - NumERical MOdelling using high performance computing
infrastructures

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Solid Earth Dynamics Department,
Institute of Geodynamics of the Romanian Academy, Romania.
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1) PRESENTATION TITLE:

Using high performance hardware platforms for parallel processing algorithms implementation

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3) ABSTRACT:

While, during the early stages of personal computer's development, the video signal was processed and rendered by the central processing unit with severe negative influences over its performances, the specialization stage of video cards is characterized by an impressive increase in processing speed, mostly given by the dedicated processor and a generous amount of memory. Nowadays, we witness a real competition between the graphic processing units and central processing units, which is won by the former especially when the software applications present a high degree of parallelism. More and more software applications exploit the advantages of the graphic processing unit which explains why, in a short time, it turned into an additional processing unit also gained the name of GPGPU (General Purpose Graphic Processing Unit). In this paper, a parallel processing platform (CUDA), based on a GPGPU is presented along with several software applications developed for the study and performance testing of GPGPU in various fields.

4) POSITION OF CORRESPONDING AUTHOR:

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