EDITORIAL

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This fall issue of 2012 is rich in new developments in IT. Thus, it is a real pleasure for a geologist to write the editorial of a number of *Acta Universitaria* beginning with a research in Petrography. In **Petrografía y distribución de óxidos de Fe, Al y Si en fragipanes blancos de origen volcanico**, Otilio Acevedo-Sandoval and contributors present very interesting results about the analysis of the distribution of iron, aluminium and silicon in three white soil profiles of hardened volcanic horizons (know as "fragipanes") in the NW of the State of Mexico.

The following two articles show the performance of Compute Unified Device Architecture using GPUs (Graphics Processing Units) as compared to CPU, applied to a large set of biological data. In **Autómata Celular Estocástico paralelizado por GPU aplicado a la simulación de enfermedades infecciosas en grandes poblaciones**, Hector Cuesta-Arvizu and co-workers explain how GPU parallelized software helps in simulating large-scale infection disease events with Stochastic Cellular Automata (SCA). On the other hand, Eduardo Romero-Vivas and contributors, in their article **Implementación en GPU del Estadístico *t* para análisis de expresión genética en microarreglos**, propose the use of *t*-paired parametric analysis with GPU implementation for evaluating the gene expression levels for microarray hybridization.

The paper of Emmanuel Ortiz-Lopez and contributors (**Control de acceso usando FPGA y RFID**) presents the design and implementation of an access control system using Radio frequency Identification (RFID) controlled by a field Programmable Gate Array. This system allows supervising, managing and reporting access or movement of individuals or equipment. Beside the control, it can help in avoiding large number of human errors.

Finally, the study of Alejandro Tzompantzi Sanchez and co-workers, named **Alternativas de control para la secuencia de destilación térmicamente acoplada Petlyuk**, shows that a closed loop dynamic response of thermally coupled distillation sequences for the separation of ternary mixture is significantly improved with an Internal Model Control Non Linear, when compared with the flow in the bottom and the top.

Autumn is still well installed in Belgium. The rain and the leaves are falling. The ideal weather for taking a good chair, reading interesting papers and enjoying science development. I wish you to do so with this issue of *Acta Universitaria*, wherever you are in the world.

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