

Presents a Seminar followed by a Tutorial

Dr. Veljko Milutinovic

Fellow IEEE, University of Belgrade, Serbia

“DataFlow SuperComputing”

Wednesday, September 25, 2013 • 2:00 p.m. • HEC 450

ABSTRACT

This presentation analyses the essence of DataFlow SuperComputing, defines its advantages and sheds light on the related programming model. DataFlow computers, compared to ControlFlow computers, offer speedups of 20 to 200 (even 2000 for some applications), power reductions of about 20, and size reductions of also about 20. However, the programming paradigm is different. The later part of the talk explains the paradigm, using Maxeler as an example (Maxeler is 20% owned by JPMorgan), and sheds light on the ongoing research in the field. Examples include GeoPhysics, FinancialRiskAnalysis, DataMining. A case study is related to MindGenomics.

BIOGRAPHY

Dr. Veljko Milutinovic is a professor at the School of Electrical Engineering, University of Belgrade, Serbia. Prof. Milutinovic is on the Senior Advisory Board of Maxeler. Back in early 80s, he was responsible for the architecture/design of the world's first 200MHz microprocessor, for the US defense agency DARPA, about a decade before Intel (in GaAs technology). Responsible also for a number of applications related to computer intelligence in general, and data mining in particular. On these two subjects, he published about 50 papers in IEEE and ACM journals and about 20 books. He is a Life Member of the ACM, a Fellow of the IEEE, and a Member of Academia Europaea.