

RESUME OF PH.D. THESIS

”Parallel and distributed procedures in solving of some operator equations”

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Domain: Informatics, Year of public presentation: 2002

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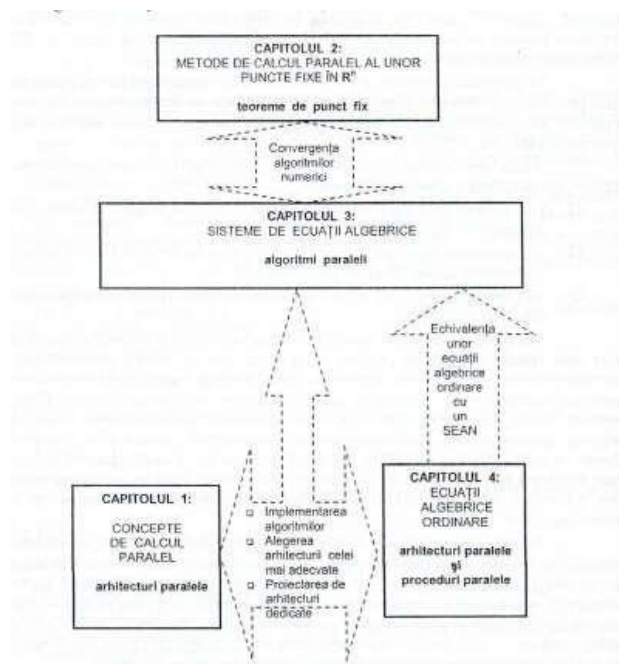
This thesis add some original contributions, of mathematics and informatics point of view, related to parallel and distributed computing focused on efficient and interdependent exploit of parallelism generated by architecture and algorithms, in four chapters (232 pages):

C1. Parallel Computing Concepts (an original synthesis of taxonomy of parallel architectures, parallel algorithm acceleration and efficiency etc.),

C2. Computing methods of parallel fixed points in \mathbb{R}^n (parallelization of classical algorithms, original proof of some fixed point theorems, the introduction of the original algorithm: randomized filtered asynchronous iterations method – RFAIM),

C3. Systems of algebraic equations (parallelization of classical algorithms for solving nonlinear algebraic equations and comparative studies with RFAIM),

C4. Ordinary algebraic equations (the most efficient parallel methods for solving the polynomial equations of higher grade).



Facsimile: Logical structure of Ph.D. Thesis

Some results obtained in Ph.D. Thesis has been disseminated in over of 20 author’s papers and, in the following books; *Parallel Computing/Calcul paralel* (I. Dzițac, Ed. Univ. Oradea, 2001), *Parallel programming using PVM/ Programarea paralelă utilizând PVM* (I. Dzițac, E. Laslo, Ed. Univ. Oradea, 2003), *Distributed Systems: Information Models/ Sisteme distribuite: Modele informatice* (I. Dzițac, G. Moldovan, Ed. Univ. Agora, 2006) and *Distributed Systems: Mathematical Models/ Sisteme distribuite: Modele matematice* (G. Moldovan, I. Dzitac, Ed. Univ. Agora, 2006).

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