Projects 2022

- You send me the results on okulicka@mini.pw.edu.pl.
- The files must have names: pr_1_<student_name>,pr_2_<student_name>, pr_3_<student_name>
- Dates are in the table.

1	21/02/24		
2	28/02/24		Program 1 – 5 points
3	06/03/24		Program 2 – 5 points
4	13/03/24		
5	20/03/24		Matrix-vector implementation
6	27/03/24		
7	03/04/24		
8	10/04/24		
9	17/04/24		Point 4 -theory
10	24/04/24		
	01/05/24	free	
11	08/05/24		Point 5 – implementation
	15/05/24		Friday
12	22/05/24		final report
13	29/05/24		
14	05/06/24		
15	12/06/24		test

Small programs – 5 points

Control points: theory, implementation, final report - 15 points each

sum=50

One week after deadline = - 5 points

Final report is presented during lecture using slides

FINAL TEST – 12.06 during lecture

Points 4,5

1. Parallel ILU for banded matrix divided by columns. We remember only band as the rectangular matrix. (lecture 11)
2. CG for dense symmetric matrix. We remember only half of the matrix. (lecture 10)
3. parallel gauss for dense matrix divided by columns (lecture 4)
4. parallel gauss for banded matrix divided by columns (lecture 4)
5. parallel shortest path algorithm (graph algorithms) using matrix representation of the graph (lecture 8)
6. parallel shortest path algorithm (graph algorithms) using matrix representation of the graph and matrix multiplication (lecture 8)
7. parallel 1D matrix-matrix multiplication with matrices divided by columns (lecture 6 – parallel processing)
8. Parallel LU for dense matrix divided by columns (lecture 6)
9. Parallel ILU for sparse matrix divided by columns (lecture 11)
10. parallel gauss for dense symmetric matrix divided by columns (lecture 4)
11. parallel gauss for banded symmetric matrix divided and columns (lecture 4)
12. Parallel LU for banded matrix divided by columns. We remember only band as the rectangular matrix. (lecture 11)
13. CG algorithm for sparse symmetric matrix. We remember the nonzeros of the matrix only. (lecture 10)
14. Parallel LLT for dense symmetric matrix divided by columns (lecture 11)
15. Parallel LLT for banded symmetric matrix divided by columns. We remember only band as the rectangular matrix. (lecture 11)
16. Parallel ILLT for banded symmetric matrix divided by columns. We remember only band as the rectangular matrix. (lecture 11)
17. Parallel ILLT for sparse symmetric matrix divided by columns. We remember only non-zeros of the matrix. (lecture 11)
18. Parallel spanning tree algorithm using matrix representation of the graph (lecture 8)
19. Parallel iterative methods (Jacobi, Gauss-Seidel, SOR) for dense matrix (lecture 10)
20. Parallel iterative methods (Jacobi, Gauss-Seidel, SOR) for sparse matrix (lecture 10)

Additional remark:

Data should be in the Matrix Market format.
Other format = -5 points