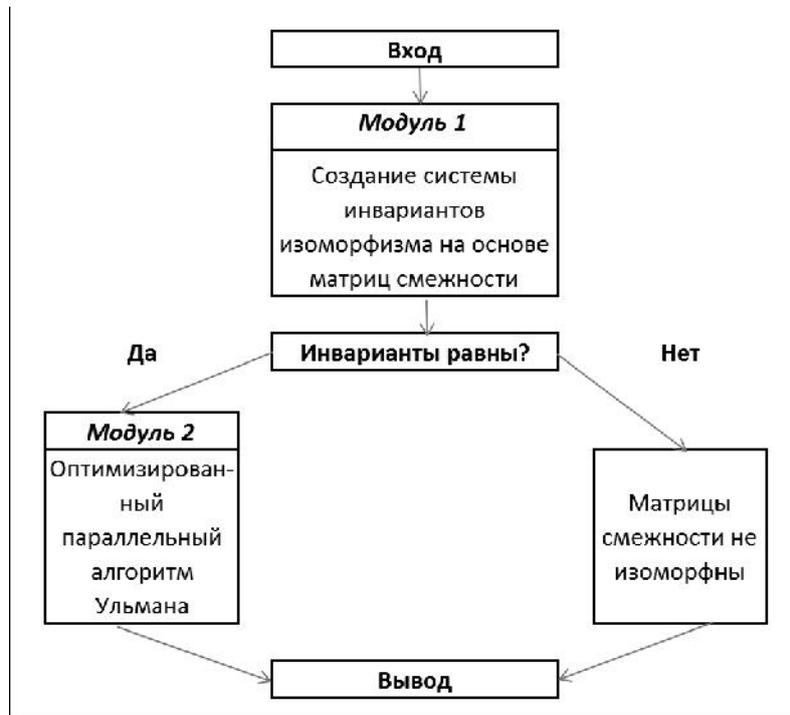


1.

1.



1.

(

),

...
 MPI (www.mpich.org) Win-
 dows.
 $O(tm^n n^2)$.
 $O((k/p)!m^n n^2)$.
 Windows 7,
 – Windows XP.

(k)			(), 1	(), 2	(), 4
100	20×20	0,18	0,20	0,17	0,13
	40×40	0,46	0,53	0,37	0,29
	60×60	1,22	1,30	0,93	0,72
	80×80	4,24	4,41	3,36	2,97
	100×100	10,51	11,55	8,14	5,73
1000	20×20	2,40	2,85	1,85	1,24
	40×40	6,36	6,73	4,27	3,04
	60×60	17,84	19,49	13,38	9,72
	80×80	57,11	61,05	49,62	37,84
	100×100	147,42	152,74	119,63	88,12
5000	20×20	63,04	68,72	52,79	38,07
	40×40	162,94	172,93	126,37	82,83
	60×60	437,87	448,25	312,63	183,06
	80×80	1183,02	1203,72	837,71	682,37
	100×100	2943,74	3006,23	2139,58	1193,94

[1].

• (.6);

• ;

• .

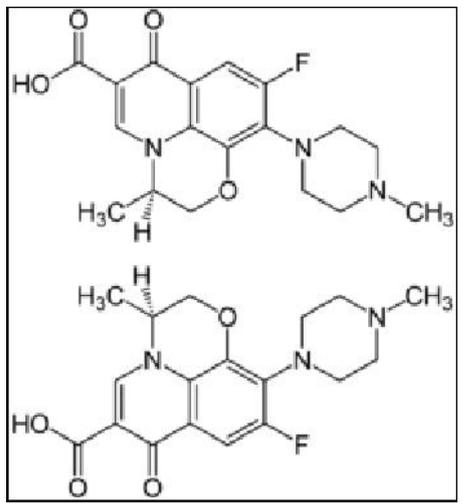
2. ,

« » [5]. () .

3. () .

0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0
0	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0
0	0	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0
0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0
0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0
0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

.5. , -



.6.

A.P. Sergeyev

PARALLEL ALGORITHM FOR SEARCH AND IDENTIFICATION OF SIMILAR INFORMATION STRUCTURES

The paper gives an overview of parallel algorithm for searching and identification of similar information structures. This algorithm can be applied to filter the equivalent information structures and retrieving data in a predetermined pattern. The evaluation of the computational complexity is given and results of the test series and parallel version of the algorithm are presented. The application of the algorithm in computational chemistry is described.

1. *Sergeyev A.P.* Fast algorithm of identification of similar chemical compounds // In Proceedings of conference PDCS 2013, Ukraine, Charkiv, March 13 – 14, 2013. – . 299 – 300.
2. *Sergeyev A.P.* Parallel algorithm of identification of similar chemical compounds // In Proceedings of conference HPC-UA 2014, Ukraine, Kyiv, October 14, 2013. – . 104 – 107.
3. XSD- // HPC-UA 2011, , 12 – 14 2014. – . 122 – 126.
4. *Ulmann J.R.* An algorithm for Subgraph Isomorphism // National Physical Laboratory, Teddington, Middlesex, England, 1976.
5. *Johnson M.A., Maggiora G.M.* Concepts and Applications of Molecular Similarity // New York: John Wiley & Sons, 1990.

02.02.2015

Об авторе: