

Московский государственный технический университет им. Н.Э. Баумана  
Факультет «Информатика и системы управления»  
Кафедра «Системы обработки информации и управления»



**Лабораторная работа № 4**  
**по дисциплине «Имитационное моделирование**  
**дискретных процессов»**

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(тема работы)

ИСПОЛНИТЕЛЬ:

студент ИУ5-72Б  
Васильев Д.А.

ПРЕПОДАВАТЕЛЬ:

Черненький М.В.

"\_\_" \_\_\_\_\_ 2021 г.

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Москва, 2021

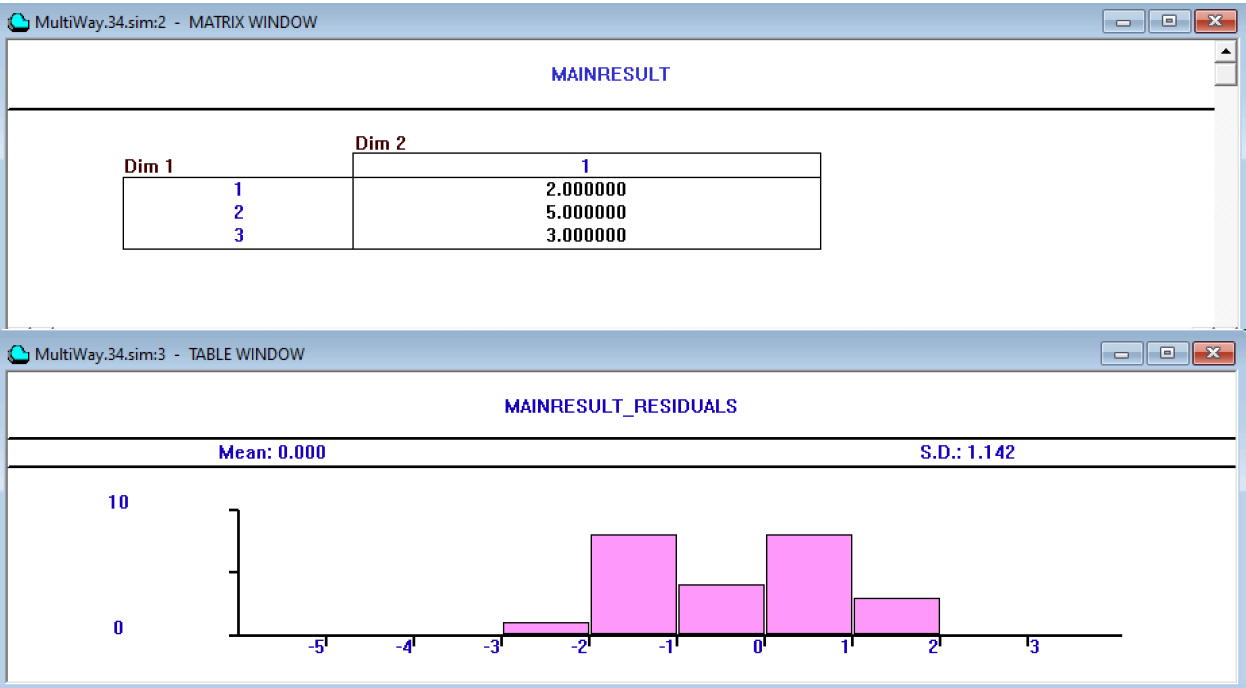
MULTIWAY.GPS

11/12/21 11:10:03	Treatment Level	Count	Mean	Minimum	Maximum	95% C.I. (SE)
11/12/21 11:10:03	A B					
11/12/21 11:10:03						
11/12/21 11:10:03	1 1	2	3.000	2.000	4.000	( 0.564, 5.436 )
11/12/21 11:10:03	1 2	2	1.000	1.000	1.000	( -1.436, 3.436 )
11/12/21 11:10:03	1 3	2	4.500	4.000	5.000	( 2.064, 6.936 )
11/12/21 11:10:03	1 4	2	1.500	1.000	2.000	( -0.936, 3.936 )
11/12/21 11:10:03	2 1	2	4.000	3.000	5.000	( 1.564, 6.436 )
11/12/21 11:10:03	2 2	2	4.500	3.000	6.000	( 2.064, 6.936 )
11/12/21 11:10:03	2 3	2	5.500	4.000	7.000	( 3.064, 7.936 )
11/12/21 11:10:03	2 4	2	6.000	4.000	8.000	( 3.564, 8.436 )
11/12/21 11:10:03	3 1	2	2.000	1.000	3.000	( -0.436, 4.436 )
11/12/21 11:10:03	3 2	2	2.000	1.000	3.000	( -0.436, 4.436 )
11/12/21 11:10:03	3 3	2	5.000	4.000	6.000	( 2.564, 7.436 )
11/12/21 11:10:03	3 4	2	3.000	2.000	4.000	( 0.564, 5.436 )
11/12/21 11:10:03						

11/12/21 11:10:03	1 1	2	3.000	2.000	4.000	( 0.564, 5.436 )
11/12/21 11:10:03	1 2	2	1.000	1.000	1.000	( -1.436, 3.436 )
11/12/21 11:10:03	1 3	2	4.500	4.000	5.000	( 2.064, 6.936 )
11/12/21 11:10:03	1 4	2	1.500	1.000	2.000	( -0.936, 3.936 )
11/12/21 11:10:03	2 1	2	4.000	3.000	5.000	( 1.564, 6.436 )
11/12/21 11:10:03	2 2	2	4.500	3.000	6.000	( 2.064, 6.936 )
11/12/21 11:10:03	2 3	2	5.500	4.000	7.000	( 3.064, 7.936 )
11/12/21 11:10:03	2 4	2	6.000	4.000	8.000	( 3.564, 8.436 )
11/12/21 11:10:03	3 1	2	2.000	1.000	3.000	( -0.436, 4.436 )
11/12/21 11:10:03	3 2	2	2.000	1.000	3.000	( -0.436, 4.436 )
11/12/21 11:10:03	3 3	2	5.000	4.000	6.000	( 2.564, 7.436 )
11/12/21 11:10:03	3 4	2	3.000	2.000	4.000	( 0.564, 5.436 )
11/12/21 11:10:03						

11/12/21 11:10:03 1.5811388

11/12/21 11:10:03 AB 11.000 6 1.833 0.733 3.00



# EXPERETHER.GPS

ExperEther.14.sim - JOURNAL						
11/12/21 11:22:04	Alias	Effect	Sum of	Degrees of	F - for Only	Critical Value
11/12/21 11:22:04	Group		Squares	Freedom	Main Effects	of F (p=.05)
11/12/21 11:22:04						
11/12/21 11:22:05	A = BCDE	0.015	0.001	1	0.000	4.96
11/12/21 11:22:05	B = ACDE	0.055	0.012	1	0.000	4.96
11/12/21 11:22:05	AB = CDE	2.087				
11/12/21 11:22:05	C = ABDE	14.934	892.108	1	25.431	4.96
11/12/21 11:22:05	AC = BDE	0.014				
11/12/21 11:22:05	BC = ADE	0.055				
11/12/21 11:22:05	DE = ABC	2.086				
11/12/21 11:22:05	D = ABCE	5.525	122.124	1	3.481	4.96
11/12/21 11:22:05	AD = BCE	0.023				
11/12/21 11:22:05	BD = ACE	-0.011				
11/12/21 11:22:05	CE = ABD	-6.962				
11/12/21 11:22:05	CD = ABE	5.524				
11/12/21 11:22:05	BE = ACD	0.023				
11/12/21 11:22:05	AE = BCD	-0.011				
11/12/21 11:22:05	E = ABCD	-6.963	193.952	1	5.529	4.96
11/12/21 11:22:05						
11/12/21 11:22:05	Error		350.801	10		
11/12/21 11:22:05	Total		1558.998	15		
11/12/21 11:22:05	Grand Mean	7.468				
11/12/21 11:22:05						
11/12/21 11:22:05	Experiment ended.					

Open Matrix Cross Section

Matrix

SCREENETHERNET\_RESULTS

Shape

2X2X2X2X2

Cross Section

Dimension	Row	Column	Index
1	<input checked="" type="radio"/>	<input type="radio"/>	<div>1</div>
2	<input type="radio"/>	<input checked="" type="radio"/>	<div>1</div>
3	<input type="radio"/>	<input type="radio"/>	<div>1</div>
4	<input type="radio"/>	<input type="radio"/>	<div>1</div>
5	<input type="radio"/>	<input type="radio"/>	<div>1</div>
6	<input type="radio"/>	<input type="radio"/>	<div>0</div>

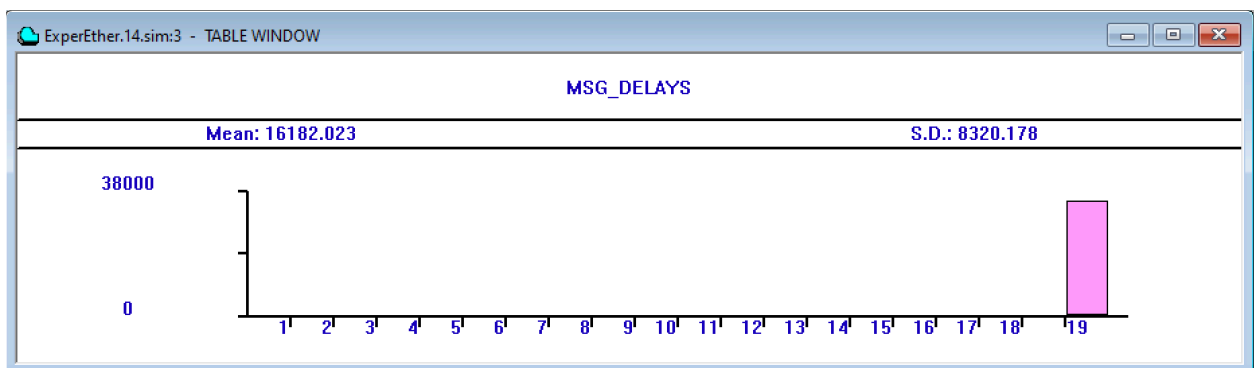
OK

Cancel

ExperEther.14.sim:2 - MATRIX WINDOW

SCREENETHERNET\_RESULTS

Dim 1		Dim 2	
1	2	1	.0003746922 N.A.



ANOVA

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Critical Value of F (p=.05)
A	732008.284	3	244002.761	44165.048	4.07
Error	44.198	8	5.525		
Total	732052.482	11			

Treatment Level	Count	Mean	Minimum	Maximum	95% C.I. (SE)
A					

Treatment Level	Count	Mean	Minimum	Maximum	95% C.I. (SE)
1	3	579.795	575.314	583.590	[ 576.665, 582.924 ]
2	3	22.797	21.272	25.255	[ 19.668, 25.927 ]
3	3	3.319	3.267	3.355	[ 0.190, 6.449 ]
4	3	3.019	3.011	3.029	[ -0.110, 6.148 ]

Experiment ended.

# Оптимизирующий эксперимент

## EXPERETHER.GPS

```
/* SET UP YOUR OWN RUN CONDITIONS. */
DoCommand("START 10,NP"); /* Get past the Startup Period. */
DoCommand("RESET"); /* Begin the Measurement Period. */
DoCommand("START 100,NP"); /* Run the Simulation. */
END;
*****
```

ExperEther.15.sim - JOURNAL

```
11/12/21 11:49:48 A Simulation in an Experiment has ended. Clock is 10000.000000.
11/12/21 11:49:48 Simulation in Progress.
11/12/21 11:49:50 A Simulation in an Experiment has ended. Clock is 110000.000000.
11/12/21 11:49:50 "Run 26.00000. Yield=.0006379003. Node_Count=300.0000; Min_Msg=512.0000; Max_Msg=6072.000;
Fraction_Short_Msgs=600.0000; Intermesage_Time=.5000000;"
11/12/21 11:49:51 Simulation in Progress.
11/12/21 11:49:51 A Simulation in an Experiment has ended. Clock is 10000.000000.
11/12/21 11:49:51 Simulation in Progress.
11/12/21 11:49:52 A Simulation in an Experiment has ended. Clock is 110000.000000.
11/12/21 11:49:52 "Run 27.00000. Yield=.0006906738. Node_Count=300.0000; Min_Msg=512.0000; Max_Msg=6072.000;
Fraction_Short_Msgs=300.0000; Intermesage_Time=1.000000;"
11/12/21 11:49:52 Simulation in Progress.
11/12/21 11:49:53 A Simulation in an Experiment has ended. Clock is 10000.000000.
```

## ANOVA.GPS

anova1.1.sim - JOURNAL

11/12/21 13:03:56

### ANOVA

11/12/21 13:03:56

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Critical Value of F (p=.05)
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A	0.000	I 1	0.000		
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11/12/21 13:03:56

anova1.1.sim - JOURNAL

11/12/21 13:03:56	Total	0.000	5			
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11/12/21 13:03:56

11/12/21 13:03:56

Treatment Level	Count	Mean	Minimum	Maximum	95% C.I. (SE)
A					I

1	3	0.000	0.000	0.000	( 0.000, 0.000 )
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2	3	0.000	0.000	0.000	( 0.000, 0.000 )
---	---	-------	-------	-------	------------------

11/12/21 13:03:56

11/12/21 13:03:56	1	3	0.000	0.000	0.000	( 0.000, 0.000 )
11/12/21 13:03:56	2	3	0.000	0.000	0.000	( 0.000, 0.000 )
11/12/21 13:03:56	<hr/>					
11/12/21 13:03:56	0					