GNU Octave, version 3.8.2

Octave was configured for "i586-pc-linux-gnu".

Additional information about Octave is available at http://www.octave.org.

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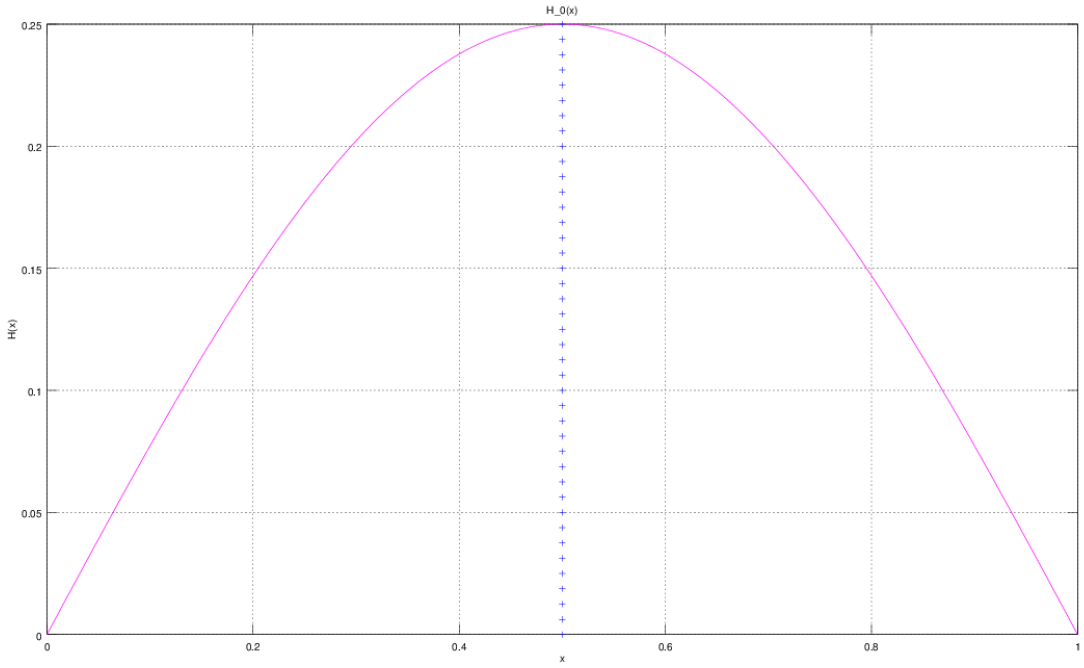
For information about changes from previous versions, type 'news'.

a = 1.000000
l = 1.000000
T = 0.080000

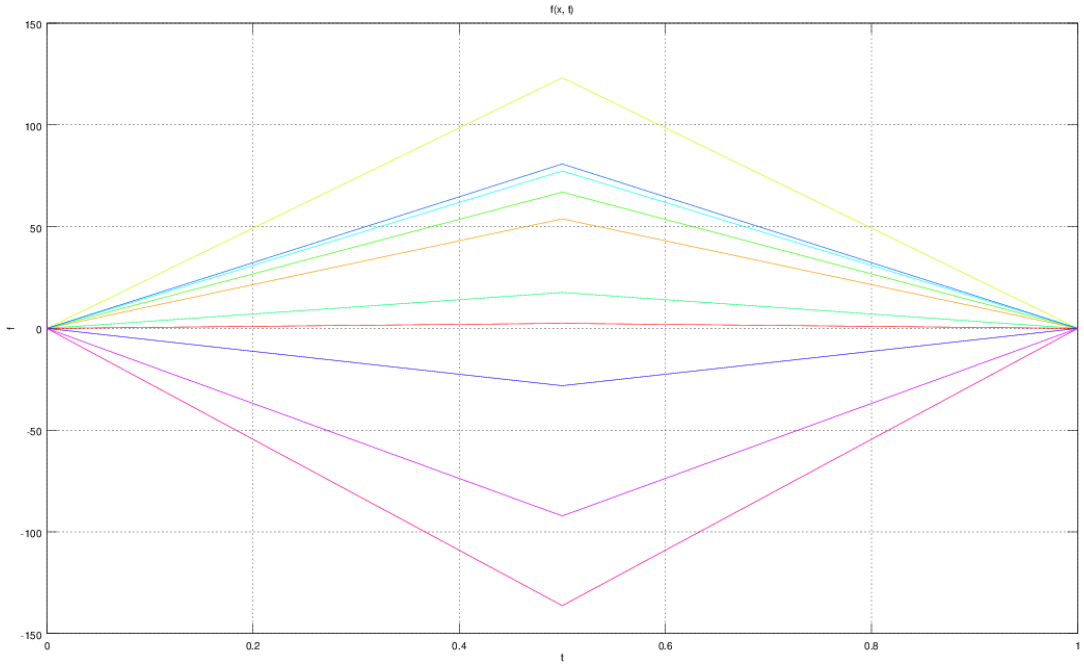
ε =
   1.0000e-10

n = 80
k = 32
hx = 0.012500
ht = 0.002500

Начальное возмущение =
0.25 * sin(pi * x)



f(x, t)



Всего демпферов: 1

Демпфер # 1

x_1 = 0.500000

Верхнее предельное значение w_1(t) =
NaN

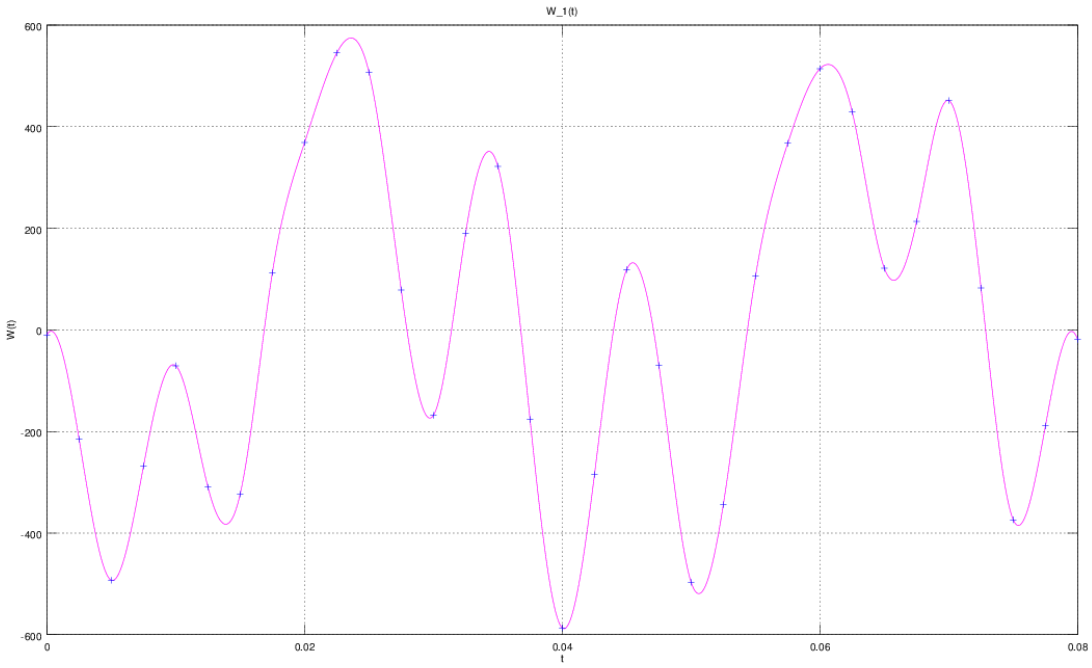
Нижнее предельное значение w_1(t) =
NaN

Управляющая функция w_1(t):
   -9.9376
  -215.3047
  -492.7332
  -267.9763
   -70.5620
  -309.4895
  -323.3094
   112.6743
   368.6876
   545.0719
   506.9271

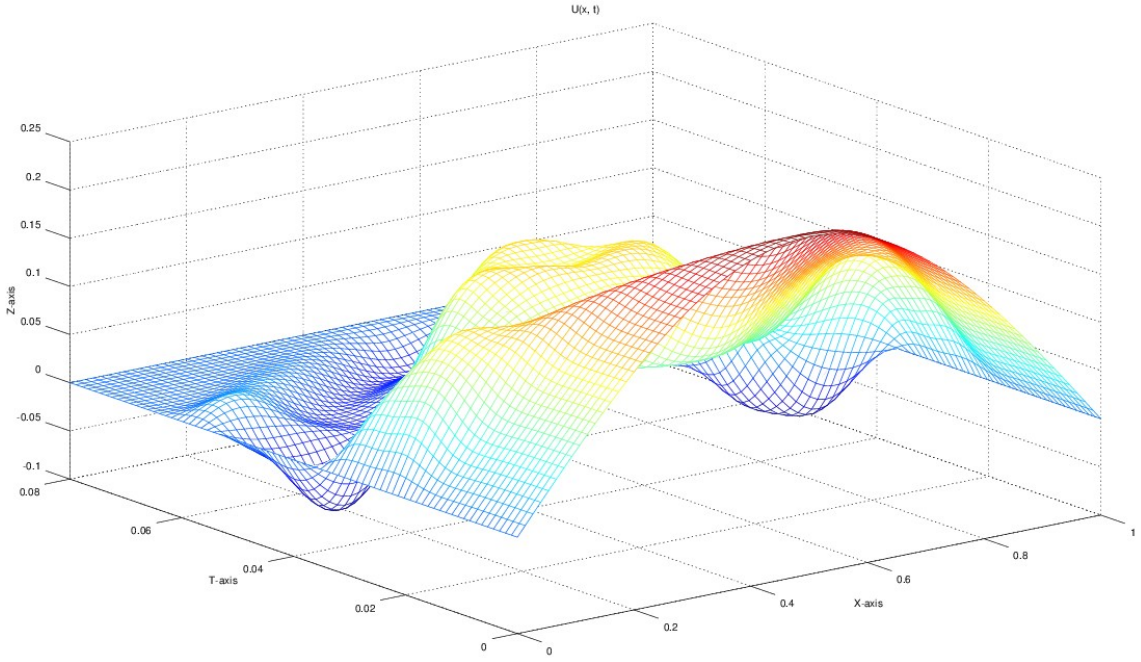
78.7342
-168.2066
190.2821
322.0639
-176.4228
-586.7108
-284.7539
118.6413
-70.0530
-496.7566
-343.8716
105.9184
367.2258
514.0291
429.4834
121.2265
213.3421
451.4942
82.4290
-373.7194
-189.0911
-18.7667

$$E(T) = \int_0^l \left[{u_t}^2(t,x) + a^2 {u_x}^2(t,x) \right] dx$$

E(T) =
5.7281e-08



u(x, t)


U(x, t)
Z-axis
0.25
0.2
0.15
0.1
0.05
0
-0.05
-0.1
T-axis
0.08
0.06
0.04
0.02
0
X-axis
0
0.2
0.4
0.6
0.8
1

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Демпфер # 1

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Верхнее предельное значение w_1(t) =
NaN

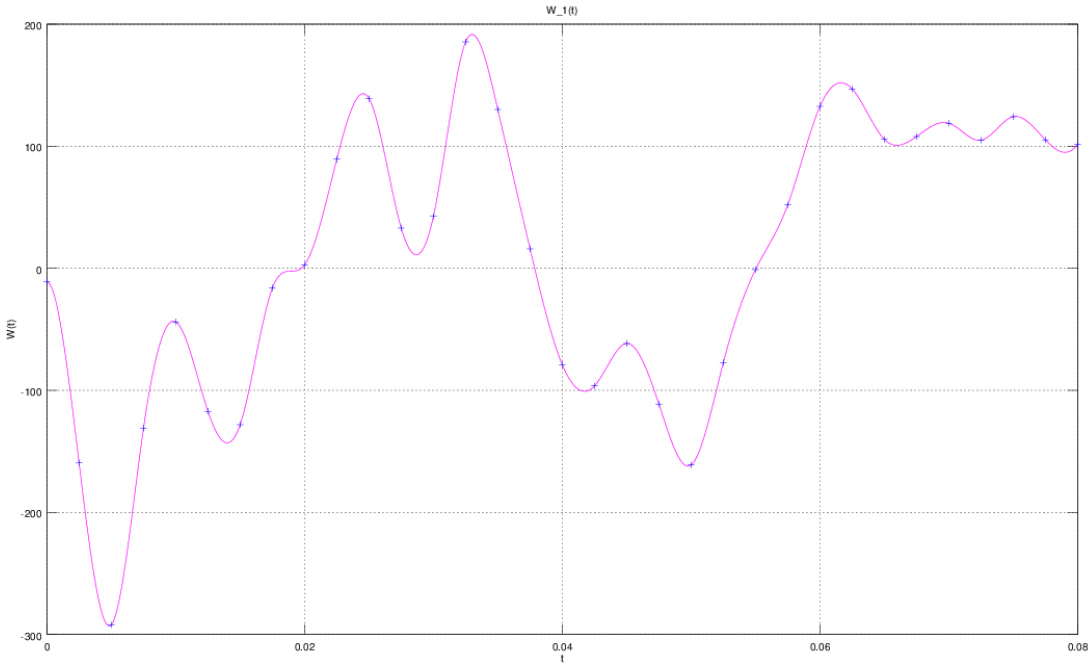
Нижнее предельное значение w_1(t) =
NaN

Управляющая функция w_1(t):
   -10.9046
  -159.4070
  -291.8945
  -130.9609
   -43.8010

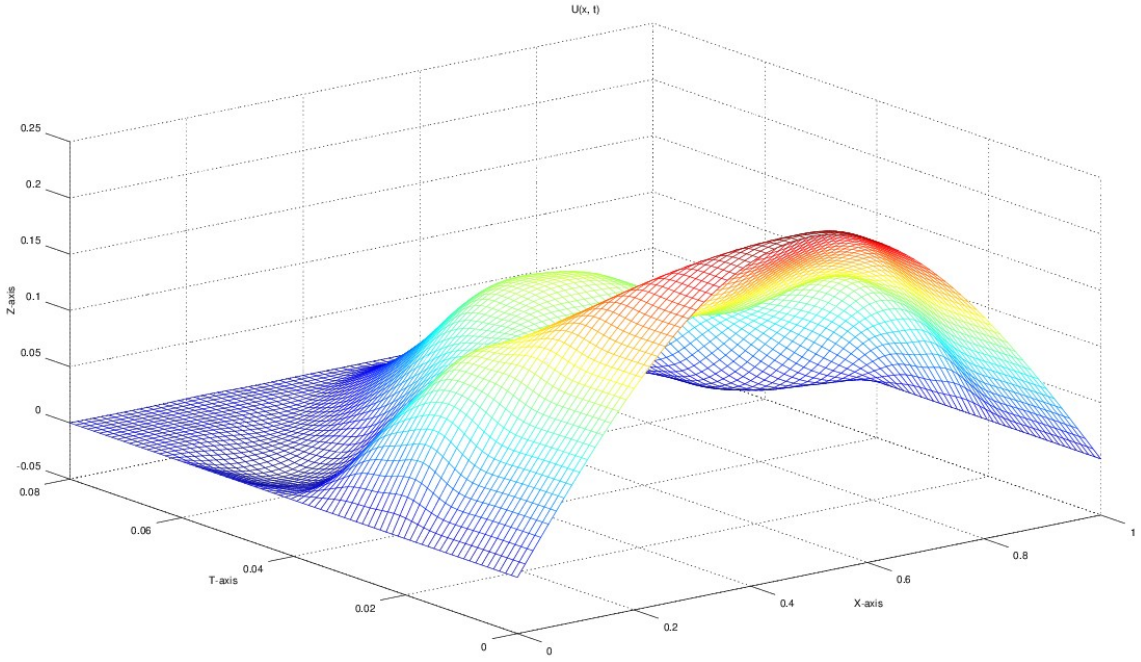
-117.1356
-127.9488
-16.1669
2.8488
89.3578
139.0053
33.0441
42.5805
185.5037
130.0907
16.0195
-78.8960
-96.3259
-61.5075
-111.1872
-161.0780
-77.2402
-1.0049
51.9923
132.6278
146.9550
105.6134
107.9939
118.8868
104.9573
124.2439
105.2861
101.7274

$$E(T) = \int_0^l \left[{u_t}^2(t,x) + a^2 u^2(t,x) \right] dx$$

E(T) =
1.4977e-07



u(x, t)


U(x, t)
Z-axis
0.25
0.2
0.15
0.1
0.05
0
-0.05
T-axis
0.08
0.06
0.04
0.02
0
X-axis
0
0.2
0.4
0.6
0.8
1