|  |  |
| --- | --- |
| **Gerb-BMSTU_01** | **Министерство науки и высшего образования Российской Федерации**  **Федеральное государственное бюджетное образовательное учреждение**  **высшего образования**  **«Московский государственный технический университет**  **имени Н.Э. Баумана**  **(национальный исследовательский университет)»**  **(МГТУ им. Н.Э. Баумана)** |

ФАКУЛЬТЕТ «Информатика и системы управления» (ИУ)

КАФЕДРА «Информационная безопасность» (ИУ8)

Отчёт

по лабораторной работе № 2

по дисциплине «Теория Систем и Системный Анализ»

**Тема: «Исследование алгоритма имитации отжига»**

Вариант 18

Выполнила: Чумичкина Евгения, студент группы ИУ8-32

Проверил: Коннова Н. С.,

доцент каф. ИУ8

г. Москва,

2020 г.

# 1. Цель работы

Изучение метода имитации отжига для поиска экстремума на примере

унимодальной и мультимодальной функций одного переменного.

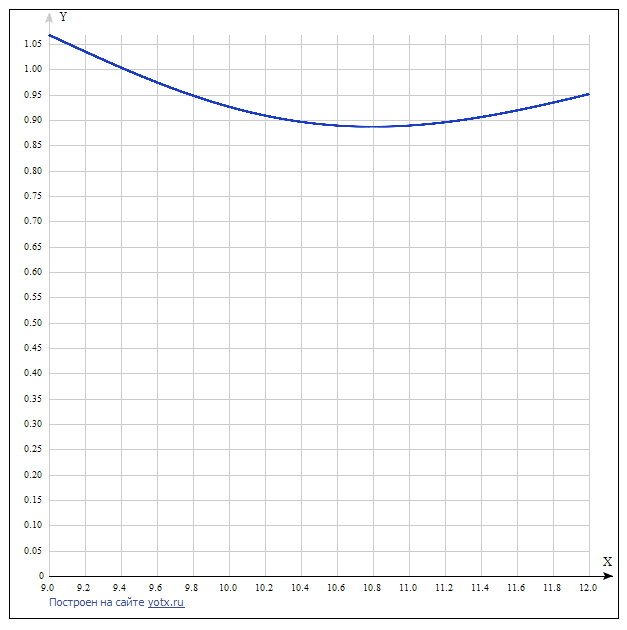
# 2. Постановка задачи

Отрезок поиска: 9,12

Функция

# 3. Ход работы

Рисунок 1 демонстрирует график унимодальной функции.

**Рисунок 1** – график функции

**Таблица 1**

| N | T | x | f(x) |

| 1 | 1000 | 10.7692 | 0.886923 |

| 2 | 950 | 9.59461 | 0.886923 |

| 3 | 902.5 | 11.7362 | 0.929417 |

| 4 | 857.375 | 11.423 | 0.907345 |

| 5 | 814.506 | 10.9142 | 0.907345 |

| 6 | 773.781 | 10.7848 | 0.887652 |

| 7 | 735.092 | 11.9543 | 0.886884 |

| 8 | 698.337 | 11.1668 | 0.894399 |

| 9 | 663.42 | 10.5326 | 0.891145 |

| 10 | 630.249 | 11.4827 | 0.891145 |

| 11 | 598.737 | 10.6331 | 0.911096 |

| 12 | 568.8 | 10.7537 | 0.88699 |

| 13 | 540.36 | 10.7513 | 0.88699 |

| 14 | 513.342 | 10.7331 | 0.887003 |

| 15 | 487.675 | 11.3774 | 0.887124 |

| 16 | 463.291 | 10.4645 | 0.893659 |

| 17 | 440.127 | 9.88747 | 0.893659 |

| 18 | 418.12 | 11.8017 | 0.938217 |

| 19 | 397.214 | 10.5865 | 0.934652 |

| 20 | 377.354 | 10.5408 | 0.889576 |

| 21 | 358.486 | 10.7178 | 0.887257 |

| 22 | 340.562 | 11.683 | 0.887257 |

| 23 | 323.534 | 10.5131 | 0.891805 |

| 24 | 307.357 | 10.8495 | 0.887027 |

| 25 | 291.989 | 9.60316 | 0.887027 |

| 26 | 277.39 | 10.5086 | 0.891963 |

| 27 | 263.52 | 11.0923 | 0.891963 |

| 28 | 250.344 | 11.7919 | 0.891732 |

| 29 | 237.827 | 11.2666 | 0.898785 |

| 30 | 225.936 | 11.8773 | 0.898785 |

| 31 | 214.639 | 11.5785 | 0.917605 |

| 32 | 203.907 | 11.1438 | 0.893519 |

| 33 | 193.711 | 10.9455 | 0.893519 |

| 34 | 184.026 | 9.53193 | 0.888122 |

| 35 | 174.825 | 11.0727 | 0.984106 |

| 36 | 166.083 | 11.0183 | 0.889631 |

| 37 | 157.779 | 10.7963 | 0.886873 |

| 38 | 149.89 | 9.30938 | 0.886873 |

| 39 | 142.396 | 9.45562 | 1.01789 |

| 40 | 135.276 | 9.79191 | 0.949359 |

| 41 | 128.512 | 9.14637 | 0.949359 |

| 42 | 122.087 | 11.1166 | 0.892544 |

| 43 | 115.982 | 10.9085 | 0.892544 |

| 44 | 110.183 | 9.16486 | 0.887578 |

| 45 | 104.674 | 11.8537 | 0.938921 |

| 46 | 99.4403 | 10.2775 | 0.903586 |

| 47 | 94.4682 | 11.3087 | 0.900895 |

| 48 | 89.7448 | 10.2541 | 0.900895 |

| 49 | 85.2576 | 10.7861 | 0.905136 |

| 50 | 80.9947 | 9.85878 | 0.886882 |

| 51 | 76.945 | 11.198 | 0.941461 |

| 52 | 73.0977 | 10.8944 | 0.88741 |

| 53 | 69.4428 | 9.41007 | 0.88741 |

| 54 | 65.9707 | 9.45573 | 0.99533 |

| 55 | 62.6722 | 10.915 | 0.99533 |

| 56 | 59.5386 | 11.6247 | 0.887662 |

| 57 | 56.5616 | 10.559 | 0.89033 |

| 58 | 53.7335 | 9.25797 | 0.89033 |

| 59 | 51.0469 | 10.6244 | 0.888687 |

| 60 | 48.4945 | 9.93309 | 0.888687 |

| 61 | 46.0698 | 11.5795 | 0.917673 |

| 62 | 43.7663 | 9.45373 | 0.917673 |

| 63 | 41.578 | 10.5247 | 0.891409 |

| 64 | 39.4991 | 11.4192 | 0.891409 |

| 65 | 37.5241 | 10.8321 | 0.886941 |

| 66 | 35.6479 | 10.8216 | 0.886905 |

| 67 | 33.8655 | 9.71595 | 0.886905 |

| 68 | 32.1723 | 11.11 | 0.892317 |

| 69 | 30.5636 | 11.5657 | 0.892317 |

| 70 | 29.0355 | 10.4807 | 0.916704 |

| 71 | 27.5837 | 10.1055 | 0.893006 |

| 72 | 26.2045 | 11.4797 | 0.910901 |

| 73 | 24.8943 | 11.7377 | 0.910901 |

| 74 | 23.6496 | 10.1954 | 0.909338 |

| 75 | 22.4671 | 11.1285 | 0.909338 |

| 76 | 21.3437 | 10.3158 | 0.892962 |

| 77 | 20.2765 | 11.2891 | 0.901192 |

| 78 | 19.2627 | 10.8231 | 0.88691 |

| 79 | 18.2996 | 9.64472 | 0.88691 |

| 80 | 17.3846 | 10.7229 | 0.88721 |

| 81 | 16.5154 | 9.83291 | 0.88721 |

| 82 | 15.6896 | 11.5682 | 0.916876 |

| 83 | 14.9051 | 11.4867 | 0.911355 |

| 84 | 14.1599 | 10.0471 | 0.911355 |

| 85 | 13.4519 | 10.8794 | 0.887257 |

| 86 | 12.7793 | 11.9848 | 0.887257 |

| 87 | 12.1403 | 9.69144 | 0.950018 |

| 88 | 11.5333 | 9.85285 | 0.962067 |

| 89 | 10.9566 | 10.5749 | 0.889881 |

| 90 | 10.4088 | 9.24408 | 0.889881 |

| 91 | 9.88836 | 9.36931 | 1.00851 |

| 92 | 9.39395 | 9.78841 | 0.949785 |

| 93 | 8.92425 | 11.6116 | 0.949785 |

| 94 | 8.47804 | 9.25627 | 0.919973 |

| 95 | 8.05413 | 10.7738 | 0.886908 |

| 96 | 7.65143 | 11.6067 | 0.886908 |

| 97 | 7.26886 | 11.499 | 0.912164 |

| 98 | 6.90541 | 11.6628 | 0.912164 |

| 99 | 6.56014 | 11.1507 | 0.893778 |

| 100 | 6.23214 | 10.8847 | 0.887309 |

| 101 | 5.92053 | 10.8696 | 0.887309 |

| 102 | 5.6245 | 11.561 | 0.88717 |

| 103 | 5.34328 | 10.6133 | 0.888929 |

| 104 | 5.07611 | 9.18821 | 0.888929 |

| 105 | 4.82231 | 11.0175 | 0.889609 |

| 106 | 4.58119 | 11.3868 | 0.889609 |

| 107 | 4.35213 | 10.7961 | 0.886873 |

| 108 | 4.13453 | 10.4076 | 0.886873 |

| 109 | 3.9278 | 10.6639 | 0.896208 |

| 110 | 3.73141 | 9.28081 | 0.887952 |

| 111 | 3.54484 | 11.3016 | 0.90053 |

| 112 | 3.3676 | 11.2545 | 0.898208 |

| 113 | 3.19922 | 10.3844 | 0.897364 |

| 114 | 3.03926 | 9.53515 | 0.897364 |

| 115 | 2.88729 | 10.1917 | 0.909621 |

| 116 | 2.74293 | 9.06128 | 0.909621 |

| 117 | 2.60578 | 9.97609 | 0.928771 |

| 118 | 2.47549 | 10.8833 | 0.887294 |

| 119 | 2.35172 | 10.8472 | 0.887294 |

| 120 | 2.23413 | 10.8472 | 0.887014 |

| 121 | 2.12243 | 9.20985 | 0.887014 |

| 122 | 2.01631 | 9.25142 | 1.02711 |

| 123 | 1.91549 | 11.8399 | 0.937779 |

| 124 | 1.81972 | 10.0801 | 0.91884 |

| 125 | 1.72873 | 11.2966 | 0.900272 |

| 126 | 1.64229 | 11.1212 | 0.900272 |

| 127 | 1.56018 | 10.8768 | 0.892704 |

| 128 | 1.48217 | 10.1313 | 0.887232 |

| 129 | 1.40806 | 10.5766 | 0.889836 |

| 130 | 1.33766 | 11.1117 | 0.889836 |

| 131 | 1.27078 | 9.95617 | 0.892376 |

| 132 | 1.20724 | 10.5576 | 0.890372 |

| 133 | 1.14687 | 10.5576 | 0.890372 |

| 134 | 1.08953 | 10.6867 | 0.890372 |

| 135 | 1.03505 | 11.5514 | 0.887614 |

| 136 | 0.983302 | 11.2599 | 0.898463 |

| 137 | 0.934136 | 11.2599 | 0.898463 |

| 138 | 0.88743 | 11.0998 | 0.891976 |

| 139 | 0.843058 | 9.34727 | 0.891976 |

| 140 | 0.800905 | 9.34739 | 1.01192 |

| 141 | 0.76086 | 10.2206 | 0.907485 |

| 142 | 0.722817 | 9.09735 | 0.907485 |

| 143 | 0.686676 | 9.45079 | 0.996072 |

| 144 | 0.652342 | 11.0274 | 0.996072 |

| 145 | 0.619725 | 10.1391 | 0.889858 |

| 146 | 0.588739 | 10.842 | 0.886986 |

| 147 | 0.559302 | 9.39964 | 0.886986 |

| 148 | 0.531337 | 10.68 | 0.887707 |

| 149 | 0.50477 | 10.9588 | 0.887707 |

| 150 | 0.479532 | 10.9588 | 0.888355 |

| 151 | 0.455555 | 11.0555 | 0.888355 |

| 152 | 0.432777 | 11.0555 | 0.890618 |

| 153 | 0.411138 | 11.075 | 0.890618 |

| 154 | 0.390581 | 9.29558 | 0.89119 |

| 155 | 0.371052 | 10.7612 | 0.886954 |

| 156 | 0.3525 | 11.212 | 0.886954 |

| 157 | 0.334875 | 10.2394 | 0.896275 |

| 158 | 0.318131 | 10.2394 | 0.906151 |

| 159 | 0.302224 | 11.3785 | 0.904716 |

| 160 | 0.287113 | 11.2472 | 0.897862 |

| 161 | 0.272758 | 11.6468 | 0.897862 |

| 162 | 0.25912 | 11.5695 | 0.916968 |

| 163 | 0.246164 | 10.5283 | 0.916968 |

| 164 | 0.233856 | 9.54337 | 0.891289 |

| 165 | 0.222163 | 10.2029 | 0.90878 |

| 166 | 0.211055 | 10.2029 | 0.90878 |

| 167 | 0.200502 | 9.45214 | 0.90878 |

| 168 | 0.190477 | 9.45214 | 0.995869 |

| 169 | 0.180953 | 10.427 | 0.895291 |

| 170 | 0.171905 | 10.4454 | 0.895291 |

| 171 | 0.16331 | 10.5048 | 0.89447 |

| 172 | 0.155145 | 10.9099 | 0.892102 |

| 173 | 0.147387 | 10.1571 | 0.887596 |

| 174 | 0.140018 | 10.1571 | 0.912312 |

| 175 | 0.133017 | 10.1571 | 0.912312 |

| 176 | 0.126366 | 10.1571 | 0.912312 |

| 177 | 0.120048 | 10.4498 | 0.894279 |

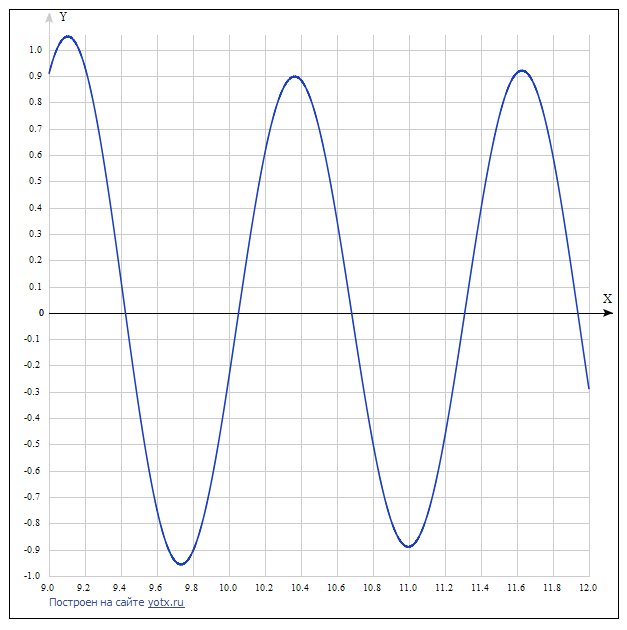
| 178 | 0.114045 | 10.9931 | 0.894279 |

| 179 | 0.108343 | 10.8178 | 0.889045 |

| 180 | 0.102926 | 10.8178 | 0.886896 |

Result: Xmin= 10.8178 Fmin= 0.886896

Минимум функции в точке , значение функции в этой точке 0.8869

Аналогичные вычисления требуется проделать для мультимодальной функции.

**Таблица 2**

| N | T | x | f(x) |

| 1 | 1000 | 9.57473 | -0.501613 |

| 2 | 950 | 11.136 | -0.681846 |

| 3 | 902.5 | 11.2808 | -0.681846 |

| 4 | 857.375 | 11.1009 | -0.77117 |

| 5 | 814.506 | 9.08226 | -0.77117 |

| 6 | 773.781 | 9.49528 | -0.341622 |

| 7 | 735.092 | 11.0096 | -0.887232 |

| 8 | 698.337 | 9.34475 | -0.887232 |

| 9 | 663.42 | 9.05671 | 0.394369 |

| 10 | 630.249 | 10.6614 | 0.0887379 |

| 11 | 598.737 | 11.9134 | 0.0887379 |

| 12 | 568.8 | 10.7639 | -0.355399 |

| 13 | 540.36 | 10.9488 | -0.864019 |

| 14 | 513.342 | 10.8482 | -0.864019 |

| 15 | 487.675 | 10.9571 | -0.871916 |

| 16 | 463.291 | 10.9785 | -0.885513 |

| 17 | 440.127 | 10.9582 | -0.885513 |

| 18 | 418.12 | 9.41038 | -0.872894 |

| 19 | 397.214 | 9.63864 | -0.849794 |

| 20 | 377.354 | 9.77027 | -0.940354 |

| 21 | 358.486 | 11.3326 | -0.940354 |

| 22 | 340.562 | 10.3422 | 0.10311 |

| 23 | 323.534 | 11.9254 | 0.0598377 |

| 24 | 307.357 | 10.0448 | -0.0382719 |

| 25 | 291.989 | 9.33503 | -0.0382719 |

| 26 | 277.39 | 10.7437 | -0.271842 |

| 27 | 263.52 | 11.2809 | -0.271842 |

| 28 | 250.344 | 10.2297 | -0.129448 |

| 29 | 237.827 | 9.76014 | -0.947917 |

| 30 | 225.936 | 11.7172 | -0.947917 |

| 31 | 214.639 | 11.4109 | 0.439364 |

| 32 | 203.907 | 9.72778 | -0.955869 |

| 33 | 193.711 | 10.9524 | -0.955869 |

| 34 | 184.026 | 11.591 | -0.867615 |

| 35 | 174.825 | 10.3304 | 0.885048 |

| 36 | 166.083 | 10.2908 | 0.837554 |

| 37 | 157.779 | 10.6795 | 0.00837623 |

| 38 | 149.89 | 9.663 | -0.897047 |

| 39 | 142.396 | 11.0052 | -0.897047 |

| 40 | 135.276 | 9.8097 | -0.888544 |

| 41 | 128.512 | 9.81568 | -0.888544 |

| 42 | 122.087 | 11.4831 | -0.877661 |

| 43 | 115.982 | 10.0639 | 0.694433 |

| 44 | 110.183 | 10.824 | 0.0495116 |

| 45 | 104.674 | 10.9621 | -0.876023 |

| 46 | 99.4403 | 10.373 | -0.876023 |

| 47 | 94.4682 | 9.75215 | -0.952187 |

| 48 | 89.7448 | 11.7045 | -0.952187 |

| 49 | 85.2576 | 10.1719 | 0.510115 |

| 50 | 80.9947 | 11.5023 | 0.510115 |

| 51 | 76.945 | 11.8125 | 0.549497 |

| 52 | 73.0977 | 9.9751 | -0.353132 |

| 53 | 69.4428 | 11.2384 | -0.353132 |

| 54 | 65.9707 | 11.1705 | -0.573522 |

| 55 | 62.6722 | 11.8628 | -0.573522 |

| 56 | 59.5386 | 11.3222 | 0.0561344 |

| 57 | 56.5616 | 10.8053 | 0.0561344 |

| 58 | 53.7335 | 9.89414 | -0.669074 |

| 59 | 51.0469 | 11.4239 | -0.669074 |

| 60 | 48.4945 | 9.96199 | -0.409222 |

| 61 | 46.0698 | 9.98637 | -0.409222 |

| 62 | 43.7663 | 10.7385 | -0.303833 |

| 63 | 41.578 | 9.8462 | -0.810519 |

| 64 | 39.4991 | 11.0181 | -0.810519 |

| 65 | 37.5241 | 10.5204 | -0.883968 |

| 66 | 35.6479 | 9.83545 | -0.836357 |

| 67 | 33.8655 | 10.5323 | -0.836357 |

| 68 | 32.1723 | 9.95214 | -0.450348 |

| 69 | 30.5636 | 9.85627 | -0.784272 |

| 70 | 29.0355 | 9.71905 | -0.784272 |

| 71 | 27.5837 | 9.01778 | -0.953744 |

| 72 | 26.2045 | 10.1662 | 0.488558 |

| 73 | 24.8943 | 10.5824 | 0.422533 |

| 74 | 23.6496 | 10.0333 | -0.0911998 |

| 75 | 22.4671 | 10.9953 | -0.0911998 |

| 76 | 21.3437 | 11.9817 | -0.889092 |

| 77 | 20.2765 | 10.7202 | -0.205467 |

| 78 | 19.2627 | 9.80902 | -0.889727 |

| 79 | 18.2996 | 11.8272 | -0.889727 |

| 80 | 17.3846 | 10.3476 | 0.493164 |

| 81 | 16.5154 | 9.51106 | -0.41276 |

| 82 | 15.6896 | 11.0433 | -0.41276 |

| 83 | 14.9051 | 11.0821 | -0.865035 |

| 84 | 14.1599 | 10.443 | -0.809316 |

| 85 | 13.4519 | 9.75471 | -0.950985 |

| 86 | 12.7793 | 11.3371 | -0.950985 |

| 87 | 12.1403 | 9.34347 | 0.123304 |

| 88 | 11.5333 | 10.655 | 0.11675 |

| 89 | 10.9566 | 10.6367 | 0.11675 |

| 90 | 10.4088 | 9.3569 | 0.196932 |

| 91 | 9.88836 | 9.52014 | 0.336408 |

| 92 | 9.39395 | 10.422 | -0.452449 |

| 93 | 8.92425 | 11.3197 | 0.0448045 |

| 94 | 8.47804 | 9.72655 | -0.95568 |

| 95 | 8.05413 | 11.7699 | -0.95568 |

| 96 | 7.65143 | 10.6054 | 0.329851 |

| 97 | 7.26886 | 10.6718 | 0.329851 |

| 98 | 6.90541 | 10.8513 | -0.666033 |

| 99 | 6.56014 | 9.47773 | -0.666033 |

| 100 | 6.23214 | 9.13747 | -0.259577 |

| 101 | 5.92053 | 9.54886 | -0.570699 |

| 102 | 5.6245 | 11.1071 | -0.756959 |

| 103 | 5.34328 | 10.843 | -0.756959 |

| 104 | 5.07611 | 9.73019 | -0.641046 |

| 105 | 4.82231 | 10.2701 | -0.956135 |

| 106 | 4.58119 | 10.4856 | 0.799426 |

| 107 | 4.35213 | 11.2121 | 0.741095 |

| 108 | 4.13453 | 9.76593 | -0.943885 |

| 109 | 3.9278 | 11.3713 | -0.943885 |

| 110 | 3.73141 | 11.2901 | -0.0880815 |

| 111 | 3.54484 | 9.83394 | -0.839787 |

| 112 | 3.3676 | 10.1289 | -0.839787 |

| 113 | 3.19922 | 9.46967 | -0.221067 |

| 114 | 3.03926 | 11.2333 | -0.221067 |

| 115 | 2.88729 | 10.3405 | -0.334452 |

| 116 | 2.74293 | 9.54913 | -0.571764 |

| 117 | 2.60578 | 9.97836 | -0.571764 |

| 118 | 2.47549 | 9.76179 | -0.946848 |

| 119 | 2.35172 | 9.16453 | -0.946848 |

| 120 | 2.23413 | 11.1837 | -0.527441 |

| 121 | 2.12243 | 9.66927 | -0.527441 |

| 122 | 2.01631 | 11.8814 | -0.90705 |

| 123 | 1.91549 | 9.56498 | -0.631687 |

| 124 | 1.81972 | 11.9363 | -0.631687 |

| 125 | 1.72873 | 11.9363 | 0.00821767 |

| 126 | 1.64229 | 9.97946 | -0.334156 |

| 127 | 1.56018 | 10.4491 | -0.334156 |

| 128 | 1.48217 | 9.68247 | 0.820413 |

| 129 | 1.40806 | 11.0229 | -0.925105 |

| 130 | 1.33766 | 11.0229 | -0.881427 |

| 131 | 1.27078 | 9.70725 | -0.881427 |

| 132 | 1.20724 | 9.87178 | -0.947977 |

| 133 | 1.14687 | 10.4111 | -0.740153 |

| 134 | 1.08953 | 11.973 | -0.164944 |

| 135 | 1.03505 | 11.973 | -0.164944 |

| 136 | 0.983302 | 9.92629 | -0.164944 |

| 137 | 0.934136 | 11.4978 | -0.553294 |

| 138 | 0.88743 | 11.2106 | 0.736603 |

| 139 | 0.843058 | 9.54264 | -0.426154 |

| 140 | 0.800905 | 9.63126 | -0.546094 |

| 141 | 0.76086 | 9.63126 | -0.8329 |

| 142 | 0.722817 | 9.63126 | -0.8329 |

| 143 | 0.686676 | 9.63126 | -0.8329 |

| 144 | 0.652342 | 9.63126 | -0.8329 |

| 145 | 0.619725 | 10.5158 | -0.8329 |

| 146 | 0.588739 | 9.71708 | -0.953013 |

| 147 | 0.559302 | 9.71708 | -0.953013 |

| 148 | 0.531337 | 10.3432 | -0.953013 |

| 149 | 0.50477 | 10.7829 | -0.430826 |

| 150 | 0.479532 | 11.5346 | -0.430826 |

| 151 | 0.455555 | 9.54688 | -0.562938 |

| 152 | 0.432777 | 9.54688 | -0.562938 |

| 153 | 0.411138 | 9.54688 | -0.562938 |

| 154 | 0.390581 | 9.54688 | -0.562938 |

| 155 | 0.371052 | 9.93141 | -0.562938 |

| 156 | 0.3525 | 9.93141 | -0.533534 |

| 157 | 0.334875 | 10.2865 | -0.533534 |

| 158 | 0.318131 | 11.0856 | -0.802805 |

| 159 | 0.302224 | 11.0856 | -0.802805 |

| 160 | 0.287113 | 11.0856 | -0.802805 |

| 161 | 0.272758 | 11.0144 | -0.885579 |

| 162 | 0.25912 | 11.0144 | -0.885579 |

| 163 | 0.246164 | 11.0144 | -0.885579 |

| 164 | 0.233856 | 11.0144 | -0.885579 |

| 165 | 0.222163 | 11.0144 | -0.885579 |

| 166 | 0.211055 | 11.0144 | -0.885579 |

| 167 | 0.200502 | 11.0144 | -0.885579 |

| 168 | 0.190477 | 10.101 | -0.885579 |

| 169 | 0.180953 | 11.065 | -0.837761 |

| 170 | 0.171905 | 11.065 | -0.837761 |

| 171 | 0.16331 | 11.065 | -0.837761 |

| 172 | 0.155145 | 11.065 | -0.837761 |

| 173 | 0.147387 | 11.065 | -0.837761 |

| 174 | 0.140018 | 9.17148 | -0.837761 |

| 175 | 0.133017 | 11.3534 | 0.19555 |

| 176 | 0.126366 | 11.9332 | 0.0231309 |

| 177 | 0.120048 | 11.9332 | 0.0231309 |

| 178 | 0.114045 | 11.9332 | 0.0231309 |

| 179 | 0.108343 | 10.8711 | -0.720764 |

| 180 | 0.102926 | 10.8711 | -0.720764 |

Result Xmin = 10.8711 Fmin = -0.720764

# 4. Выводы

В данной лабораторной работе был найден минимум унимодальной функции с помощью метода имитации отжига (SA) поиска экстремума унимодальной и мультимодальной функций одного переменного. В отличие от других алгоритмов поиска экстремума функции, метод имитации отжига допускает увеличение значений фитнес-функции, что не влияет на результат поиска, что и было показано в ходе работы.