**Варианты лабораторной работы № 2**

«Применение многослойной нейронной сети

для аппроксимации функций»

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| **Вариант** | **Аппроксимируемая функция** | **Диапазон изменения входной переменной** | **Объем выборки** | **Режим обучения** |
| 1 | sin(3x) | [–10; 10] | 300 | Batch |
| 2 | sin(5x)\*exp(x/2) | [-3; 3] | 200 | Stochastic |
| 3 | 3sin(5x)+x | [0; 10] | 200 | Mini-batch, bs = 20 |
| 4 | sin(x2)+cos(x) | [-5; 5] | 200 | Stochastic |
| 5 | 5abs(sin(2x))+abs(x) | [-10; 10] | 300 | Batch |
| 6 | ln(x)\*sin(20x) | [0.1; 3] | 200 | Stochastic |
| 7 | sin(20ln(x)) | [1; 20] | 400 | Mini-batch, bs = 20 |
| 8 | (x-abs(x))\*sin(x)+10cos(x2) | [-10, 10] | 400 | Batch |
| 9 | exp(–x2)\*cos(10x) | [-3; 3] | 200 | Stochastic |
| 10 | exp(–x2)+0.1cos(10x) | [-5; 5] | 200 | Batch |
| 11 | abs(x–2)-abs(x+2)+5sin(5x) | [-10; 10] | 400 | Mini-batch, bs = 20 |
| 12 | sin(abs(5x))\*exp(-abs(x)) | [-5; 5] | 300 | Stochastic |
| 13 | sin(x3) | [-3; 3] | 300 | Mini-batch, bs = 20 |
| 14 | sin(x2)+cos(abs(x)) | [-10; 10] | 500 | Mini-batch, bs = 20 |
| 15 | exp(-abs(5sin(x))) | [-10;10] | 500 | Batch |