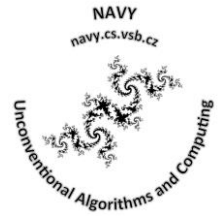




Unconventional computation and algorithms

Laboratory protocol



Topic: Artificial neural networks – simple neuron and transfer functions

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Name and student ID:

Date:

Note: *please remember that laboratory examples and studies are designed for students that regularly visit NAVY lectures. Laboratory staff is for you there to help you with programming and examples collection, but not for teaching of materials, that is done on lectures!!!*

Problem definition:

Create inside your framework for artificial neural networks (ANN) a

1. Subroutines that represent basic transfer functions like linear, binary bipolar (unipolar), logistic, hyperbolic tangent
2. An arguments of those subroutines shall be all adjustable parameters that will change their shape
3. Simple neuron with 2 inputs that will summarize all weighted inputs and will pass them through selected transfer function
4. Create training set for XOR problem and test it on all 4 transfer functions
5. Discuss behavior of neuron output and also dependence of output on when adjustable parameters of transfer functions are changed.

Solution design:

Results and facts:

Conclusion:

