

# d-layer Networks of Cubes

**Walter Wenzel**<sup>1,\*</sup>

<sup>1</sup>*Universität Leipzig, Mathematisches Institut, Germany*

\*Email: [wenzel@math.uni-leipzig.de](mailto:wenzel@math.uni-leipzig.de)

We investigate universal approximation properties of multi-layered binary neural networks. This leads – in cooperation with Nihat Ay – to separate arbitrary vertex classes in  $n$ -cubes, thereby continuing a former paper by both of us, together with Frank Pasemann, where we devoted ourselves to the particular case of only one hidden layer.