***Low complexity coherent detection for short reach links using compressed sensing and self-interference in optical OFDM subcarriers.***

Pattern classification using Neural networks using simulated and experimental data. In the process several neural network architectures are tested along with different ranges of SNR values affecting the signals to train and test the models obtained.

1. Experimental Data models.

|  |  |
| --- | --- |
| ANN configuration | (6,12,18,36) |
| Data SNR ranges (dB) | (-6,50) |
| Model file name | MLP\_1\_CV\_1.pkl |

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
| Model configuration | (6,12,18) |
| Data SNR ranges | (-6,50) |
| Model file name | MLP\_1\_CV\_2.pkl |

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
| Model configuration | (12,18,36) |
| Data SNR ranges | (-6,50) |
| Model file name | MLP\_1\_CV\_3.pkl |

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
| Model configuration | (6,12,24) |
| Data SNR ranges | (-6,50) |
| Model file name | MLP\_1\_CV\_4.pkl |

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
| Model configuration | (12,18,36) |
| Data SNR ranges | (0,50) |
| Model file name | MLP\_1\_CV\_5.pkl |

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
| Model configuration | (12,18,36) |
| Data SNR ranges | (10,50) |
| Model file name | MLP\_1\_CV\_6.pkl |

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
| Model configuration | (12,18,36) |
| Data SNR ranges | (15,50) |
| Model file name | MLP\_1\_CV\_7.pkl |

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
| Model configuration | (12,18,36) |
| Data SNR ranges | (20,50) |
| Model file name | MLP\_1\_CV\_8.pkl |

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
| Model configuration | (12,18,36) |
| Data SNR ranges | (25,30) |
| Model file name | MLP\_1\_CV\_9.pkl |

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
| Model configuration | (12,18,36) |
| Data SNR ranges | (30,35) |
| Model file name | MLP\_1\_CV\_10.pkl |

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
| Model configuration | (12,18,36) |
| Data SNR ranges | (35,40) |
| Model file name | MLP\_1\_CV\_11.pkl |

|  |  |
| --- | --- |
|  |  |

1. Simulated Data models.

|  |  |
| --- | --- |
| ANN configuration | (6,12,18,36) |
| Data SNR ranges (dB) | (-6,50) |
| Model file name | MLP\_1\_CV\_1s.pkl |

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
| Model configuration | (6,12,18) |
| Data SNR ranges | (-6,50) |
| Model file name | MLP\_1\_CV\_2s.pkl |

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
| Model configuration | (12,18,36) |
| Data SNR ranges | (-6,50) |
| Model file name | MLP\_1\_CV\_3s.pkl |

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
| Model configuration | (6,12,24) |
| Data SNR ranges | (-6,50) |
| Model file name | MLP\_1\_CV\_4s.pkl |

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
| Model configuration | (12,18,36) |
| Data SNR ranges | (0,50) |
| Model file name | MLP\_1\_CV\_5s.pkl |

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
| Model configuration | (12,18,36) |
| Data SNR ranges | (10,50) |
| Model file name | MLP\_1\_CV\_6s.pkl |

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
| Model configuration | (12,18,36) |
| Data SNR ranges | (15,50) |
| Model file name | MLP\_1\_CV\_7s.pkl |

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
| Model configuration | (12,18,36) |
| Data SNR ranges | (20,50) |
| Model file name | MLP\_1\_CV\_8s.pkl |

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
| Model configuration | (12,18,36) |
| Data SNR ranges | (25,30) |
| Model file name | MLP\_1\_CV\_9s.pkl |