

The diagram illustrates the structure of the augmented system matrix  $\tilde{\mathbf{X}}$  for a 2D system. The matrix is partitioned into blocks along the time axis  $t$ , which is marked from  $0$  to  $7N$ . The blocks are arranged in a grid. The first two rows show the first two rows of the matrix, with the first column containing  $\tilde{\mathbf{X}}_{1,1,1}^1$  and  $\tilde{\mathbf{X}}_{1,2,1}^1$ . The subsequent rows show the continuation of the matrix, with the first column containing  $\tilde{\mathbf{X}}_{2,1,1}^1$  and  $\tilde{\mathbf{X}}_{2,2,1}^1$ . The matrix is partitioned into blocks of size  $N$  along the time axis. The blocks are arranged in a grid, with the first two rows showing the first two rows of the matrix, and the subsequent rows showing the continuation of the matrix. The matrix is partitioned into blocks of size  $N$  along the time axis. The blocks are arranged in a grid, with the first two rows showing the first two rows of the matrix, and the subsequent rows showing the continuation of the matrix.