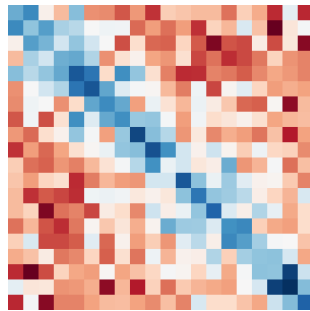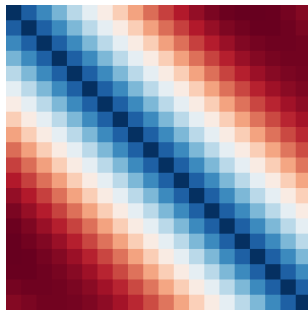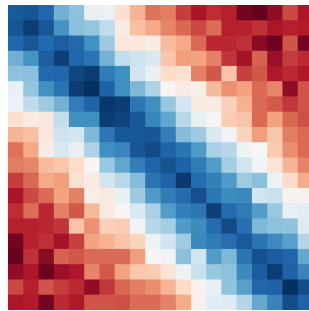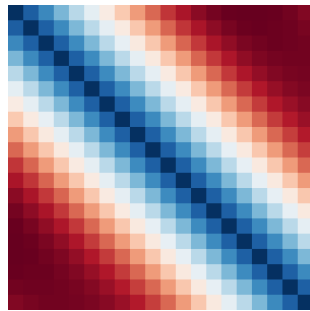L2 noiseless L2 noisy W1 noiseless W1 noisy W2 noiseless W2 noisy