

# Homework 2

*Due: 26 October 2021*

## Problem 2.1

Would it ever make sense to use multiple redundant-bit algorithms? Could 2D parity be used with Hamming codes, for instance (and would that make sense)? Could either of those be used together with a CRC code? When, or why not?

## Problem 2.2

A payload to be transmitted is the value 0x95B (as represented in hex). If the CRC code were used with  $G(x) = x^5 + x^4 + x + 1$ , how many redundant bits would there be? How many bits wide is the checksummed frame  $T(x)$ ? What kinds of errors can it detect and/or correct? Calculate the transmitted frame  $T(x)$  (and show your work).