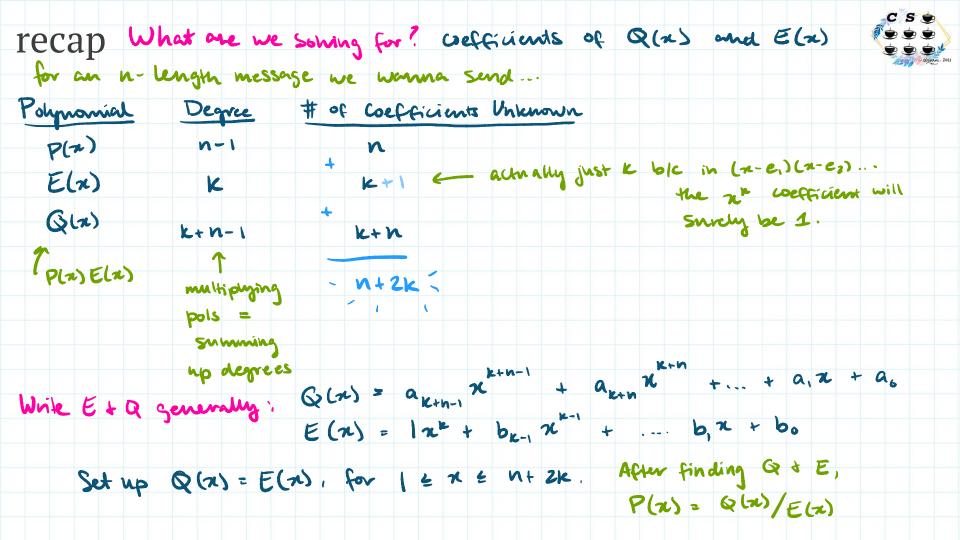


recap Berlekamp-Welch get back original pol. And where the errors are ! CS () 🗩 🗩 🗩 work in mod of (of large enough st. all chreacters you want to encode are unique) Message: 2136 Recipient gets all 6 Scuder will find P(m) packets but up to 1 is that goes thru (1,2), (2,1), we know channel has compted. (3,3), and (4,6) and 1 comption. they know at least 5 sends P(1) ... P(6) thru (ntic) points are convect the channel (6 = 4 + 2(1)) but don't know which ones Plas is still deg 3 E(x) = (x-e,)(x-ez) ··· (x-ek) ~ deg k polynomial Error Locator Polynomial e: = index of error. Consider the expression P(i) E(i) = ri E(i), where ri is the received me Lo if P(i) > ri so no comption @ index i this is the blc same terms on both sides L> if P(i) = ri so index i was compled + there's error there E(i) = 0 on both sides, 0 = 0.

Idea! Set up system of n+2k equations like above and some.



things to remember

Unknown • reason through why we need not 2k points Polynomial Degree Coefficients CS

ahrys

be 1

for when

Course on

there is

k+n

- P(2) n-1 n • if you get multiple sol'us for Q(x)and E(x), dividing the respective ones should E(x)K K+1 c- one will Q(x) k+n-1 - n+2k -
- Still give the same P(x)
- · crasure errors simplest, just send more points
- dug of P(x) is len(original_message) 1
- · the hypothetical polynomial that you get by interpolating over the received points in case of general errors is not relevant to us (the compt points will give us a bad polynomial so we do not want to consider it in any way) WE SOLVE FOR EVERYTHING wITH BERLEKAMP-WEICH.

thanks for coming! help me help you $\rightarrow https://www.tinyurl.com/aishani-sp21-fb$