



Tuesday, April 18th, 4:10 - 5:00 p.m.

In Surge 268

"From Hat Guessing Games to Error Correcting Codes "

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Imagine 3 people in a room, each of whom is wearing either a red or a white hat. They can't see their own hats, but they can see everybody else's hat. Can they always guess the color of the own hat? If not, how often? And can they collude to make sure that **SOMEBODY** at least guesses their own color?

Now imagine that you're trying to send a sequence of 0s and 1s to someone. An adversary comes along and may (or may not) change one of the numbers you send. Can you set things up so that your recipient can tell that your message got corrupted? Or better yet, so that they can correct the wrong number?

As it turns out, these problems are highly related!

