

School Nova  
Challenge Problem  
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Name Jars

Ten people write their names on pieces of paper, then place them into ten opaque, identical jars, one name per jar. The jars are randomized and placed in a line, and each person will get a chance to look in exactly 5 of the jars to see if they can find their name.

Interested in mathematical theory, the group comes up with a strategy involving no communication (or dishonesty of any sort) so that each person's chance of finding their own name is greater than  $1/2$ .

What's the optimal strategy?

(Offered prize: cookies/fruits. Submit any solutions or partial solutions to me during next week's meeting (23 October) in writing or verbally (either is fine) (and partial credit is given for solution progress).)