

1125-Q5-2067      **Ryan W. Morrill\*** (rmorrill@ualberta.ca). *A grid of liars.*

In this session we tackle an unusual variant of a familiar style of problem to give us a wide variety of puzzles. In this problem, we will assume liars always lie, and truthful people always tell the truth. We will also assume every person is either one or the other, and everyone knows what everyone else is. In an  $n \times n$  grid there stands a person in each cell. Each person states “There is exactly one liar adjacent to me.” What are all the possible different distributions of liars and truth tellers? This easy-to-state problem gives students a many avenues to explore and experiment, and it can inspire many other problems to investigate. (Received September 19, 2016)