1158-97-359   **Oleg Gleizer*** (`prof1140g@math.ucla.edu`). *The Josephus problem.*
A Jewish general turned Roman historian, Josephus Flavius lived in the first century AD. His book, The Judean War, describes a Jewish rebellion against the Roman Empire that ended up with the destruction of Jerusalem in AD 70.

During the war, Josephus and his forty soldiers were trapped in a cave, with Romans blocking the exit. The Jews chose suicide over capture. Since suicide is not allowed in Judaism, the Jews decided to proceed the following way. They formed a circle. Then a fighter killed his neighbor on the right with a blow of his sword and passed the sword further right. They kept doing so until there was one man left standing. That one had no other choice but to kill himself. The last one happened to be Josephus. Instead of committing a suicide, he turned himself over to the Romans. Josephus proceeded to become a friend of the Roman emperor Vespasian Flavius and a popular historian.

The above story gave rise to a family of problems all bearing the common name, the Josephus Problem. In this lecture, we will discuss the following:

Problem. Suppose that there are n soldiers, including Josephus, in the cave. What should the position of Josephus be in order for him to stay alive? (Received March 03, 2020)