

# Probability

R4 Cheng

January 2, 2025

## Three Axioms of Probability

1.  $0 \leq P(A) \leq 1$  for any event  $A$ .
2.  $P(\Omega) = 1$  ( $\Omega$ : sample space).
3.  $A_1, A_2, \dots$  are mutually exclusive events  $\Rightarrow P(A_1 \cup A_2 \cup \dots) = P(A_1) + P(A_2) + \dots$ .  
> mutually exclusive:  $A_i \cap A_j = \emptyset$  for  $i \neq j$ .