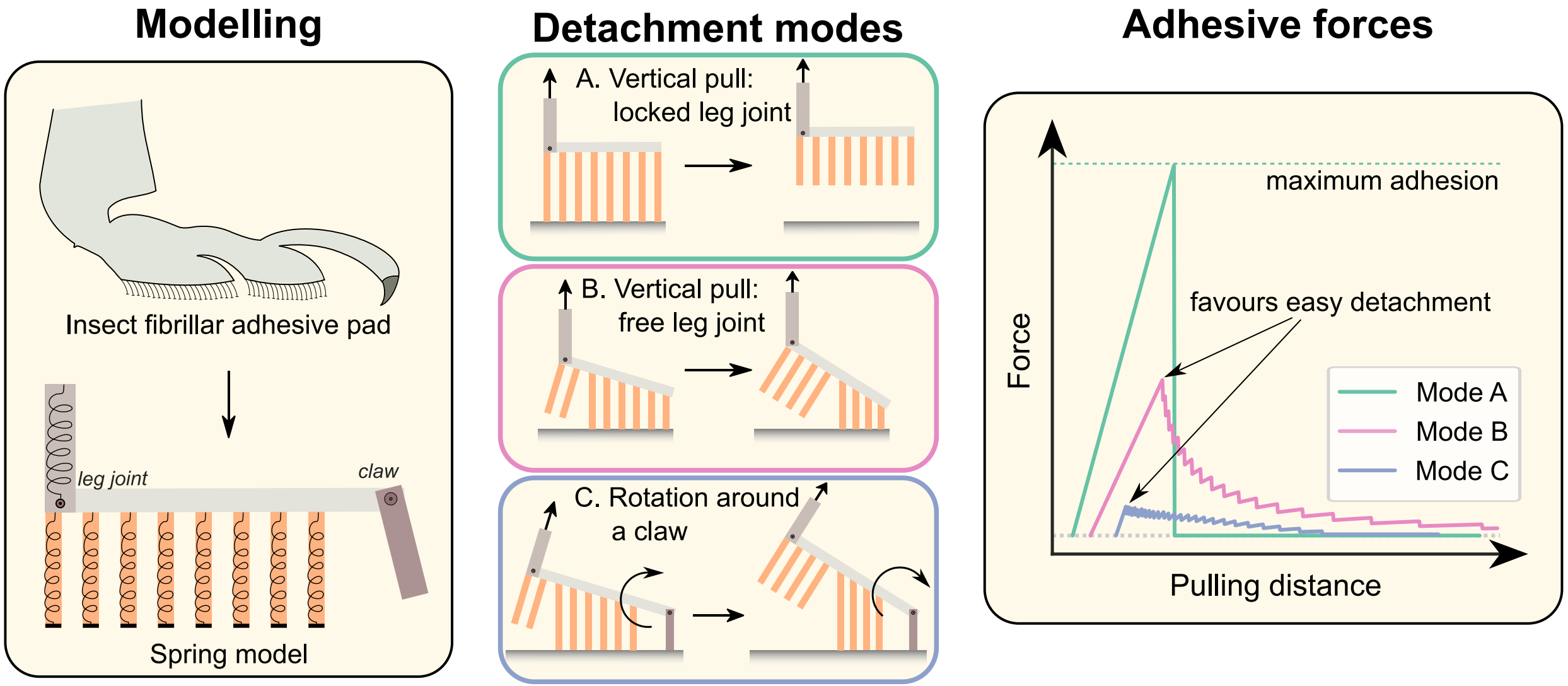
Modelling
Insect fibrillar adhesive pad
leg joint
claw
Spring model
Detachment modes
A. Vertical pull:
locked leg joint
B. Vertical pull:
free leg joint
C. Rotation around
a claw
Adhesive forces
maximum adhesion
favours easy detachment
Force
Pulling distance
Mode A
Mode B
Mode C