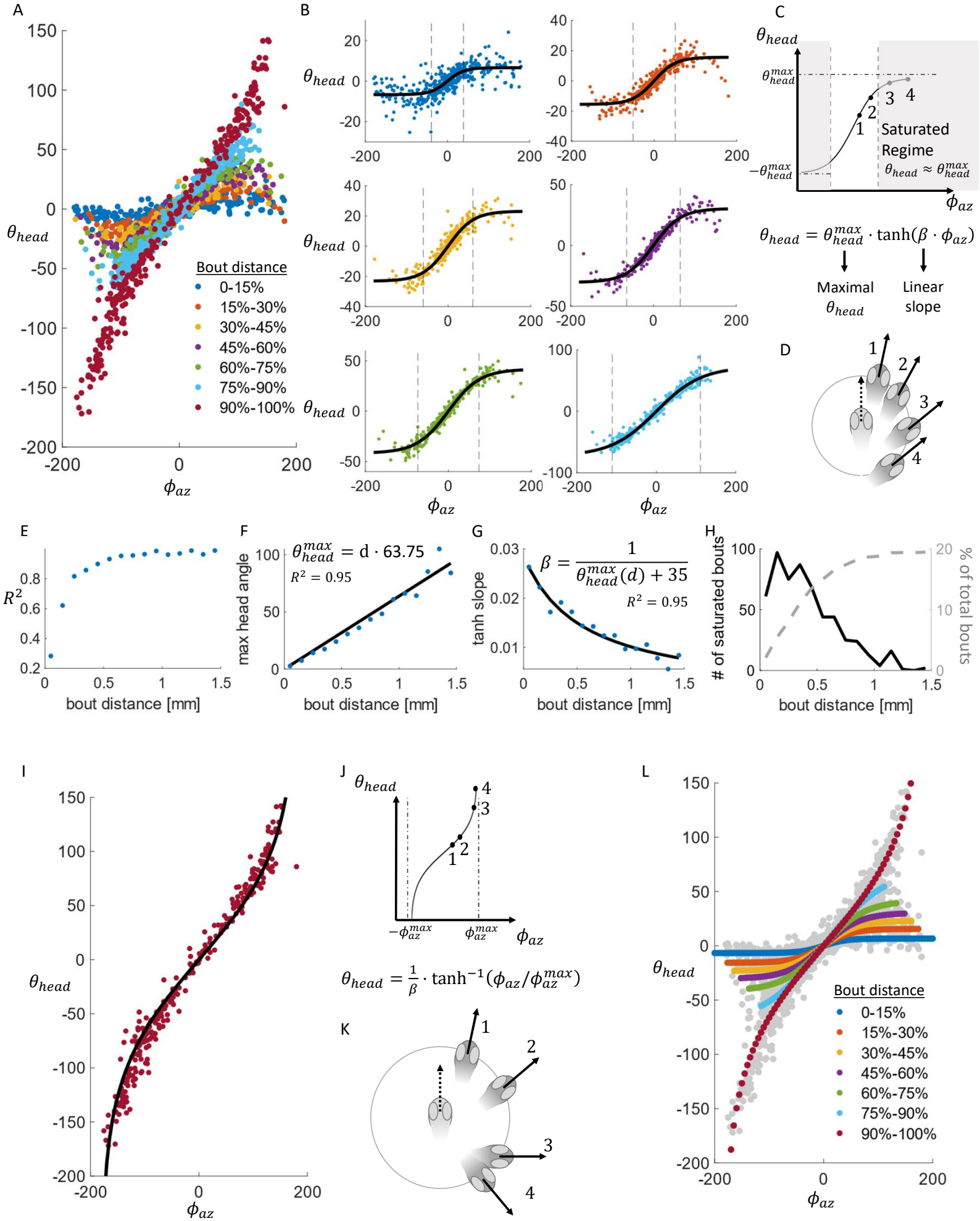
A
B
C
D
E
F
G
H
I
J
K
L
θ_{head}
ϕ_{az}
Bout distance
0-15%
15%-30%
30%-45%
45%-60%
60%-75%
75%-90%
90%-100%
θ_{head}^{max}
$-\theta_{head}^{max}$
Saturated Regime
$\theta_{head} \approx \theta_{head}^{max}$
$\theta_{head} = \theta_{head}^{max} \cdot \tanh(\beta \cdot \phi_{az})$
Maximal θ_{head}
Linear slope
R^2
bout distance [mm]
$\theta_{head}^{max} = \mathrm{d} \cdot 63.75$
$R^2 = 0.95$
max head angle
$\beta = \frac{1}{\theta_{head}^{max}(d) + 35}$
$R^2 = 0.95$
tanh slope
# of saturated bouts
% of total bouts
$-\phi_{az}^{max}$
ϕ_{az}^{max}
$\theta_{head} = \frac{1}{\beta} \cdot \tanh^{-1}(\phi_{az}/\phi_{az}^{max})$