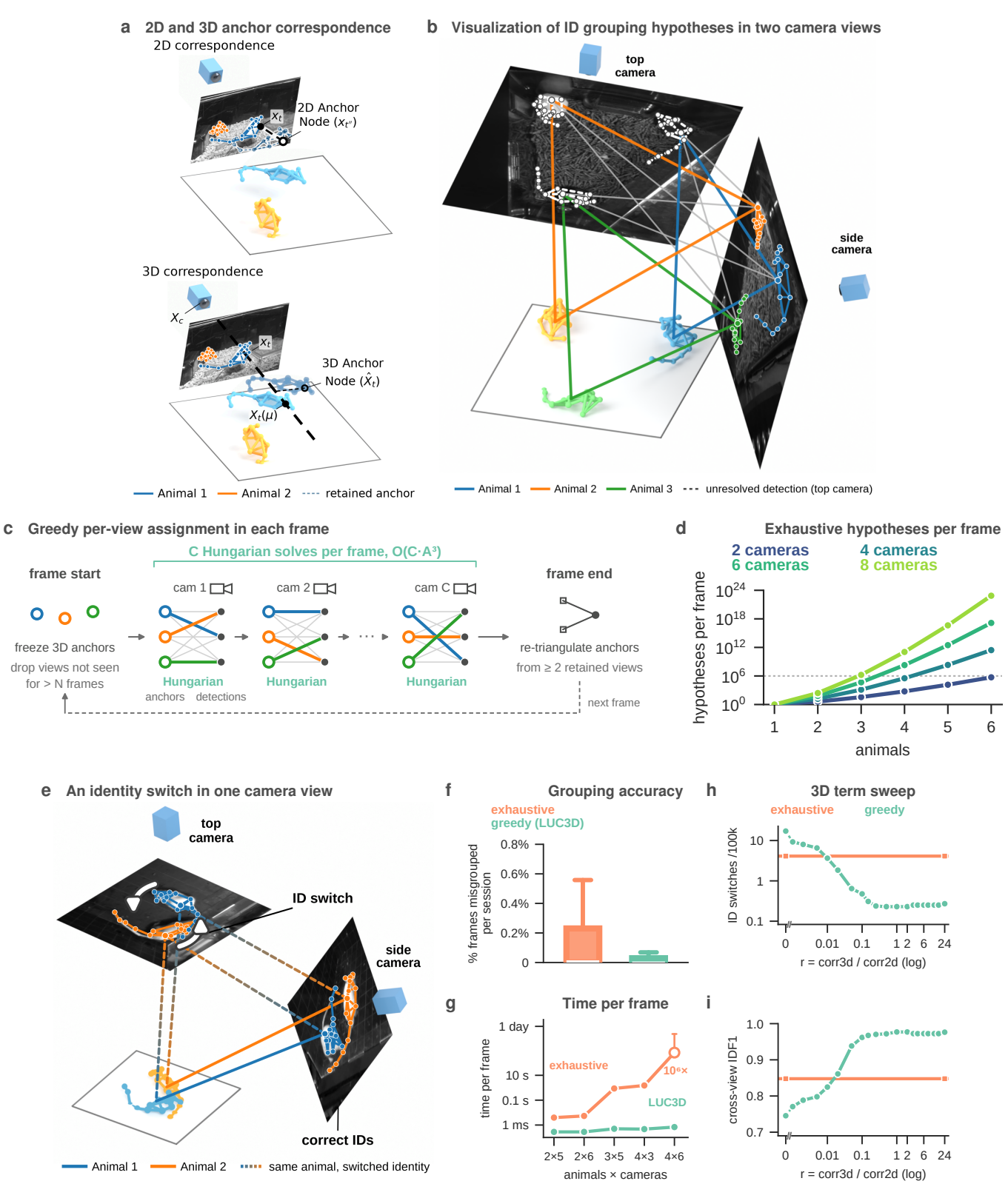

a 2D and 3D anchor correspondence
2D correspondence
2D Anchor Node ($x_{t''}$)
3D correspondence
3D Anchor Node ($\hat{X}_t$)
Animal 1
Animal 2
retained anchor
b Visualization of ID grouping hypotheses in two camera views
top camera
side camera
Animal 1
Animal 2
Animal 3
unresolved detection (top camera)
c Greedy per-view assignment in each frame
C Hungarian solves per frame, O(C·A³)
frame start
freeze 3D anchors
drop views not seen for > N frames
cam 1
cam 2
cam C
Hungarian
anchors
detections
frame end
re-triangulate anchors from ≥ 2 retained views
next frame
d Exhaustive hypotheses per frame
2 cameras
4 cameras
6 cameras
8 cameras
hypotheses per frame
animals
e An identity switch in one camera view
top camera
ID switch
side camera
correct IDs
Animal 1
Animal 2
same animal, switched identity
f Grouping accuracy
exhaustive
greedy (LUC3D)
% frames misgrouped per session
g Time per frame
exhaustive
LUC3D
time per frame
animals × cameras
h 3D term sweep
exhaustive
greedy
ID switches /100k
r = corr3d / corr2d (log)
i
cross-view IDF1
r = corr3d / corr2d (log)