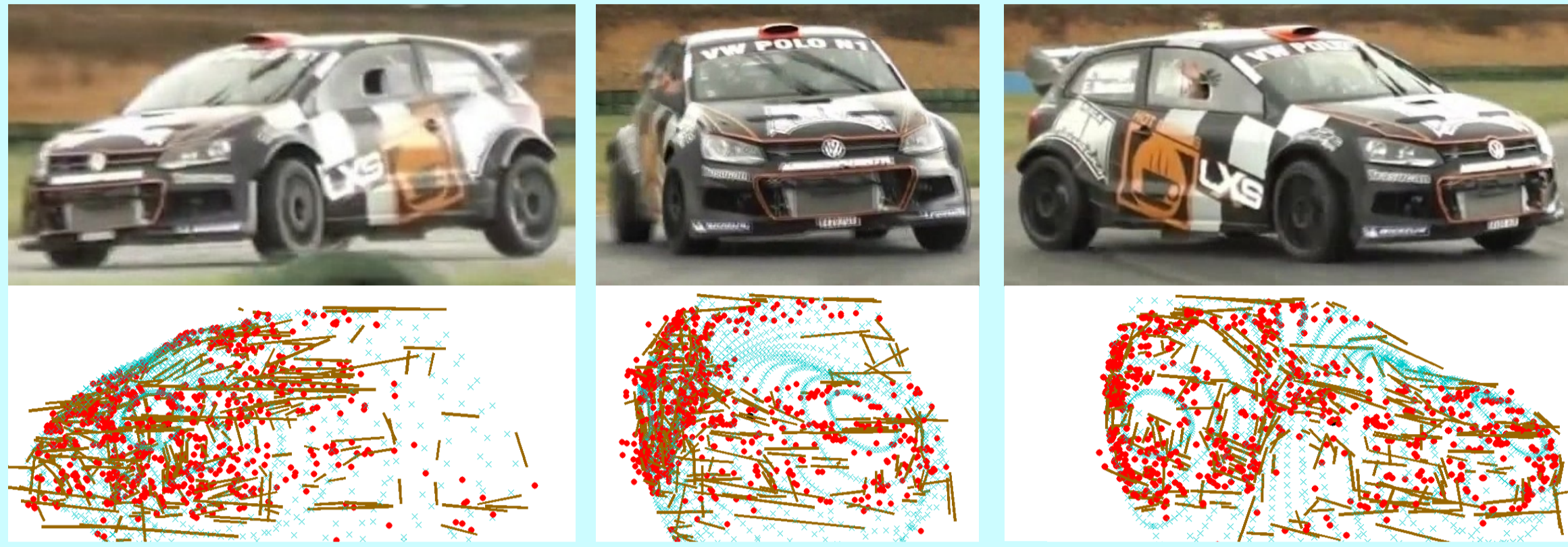


# 2D Or Not 2D: Bridging the Gap Between Tracking and Structure from Motion

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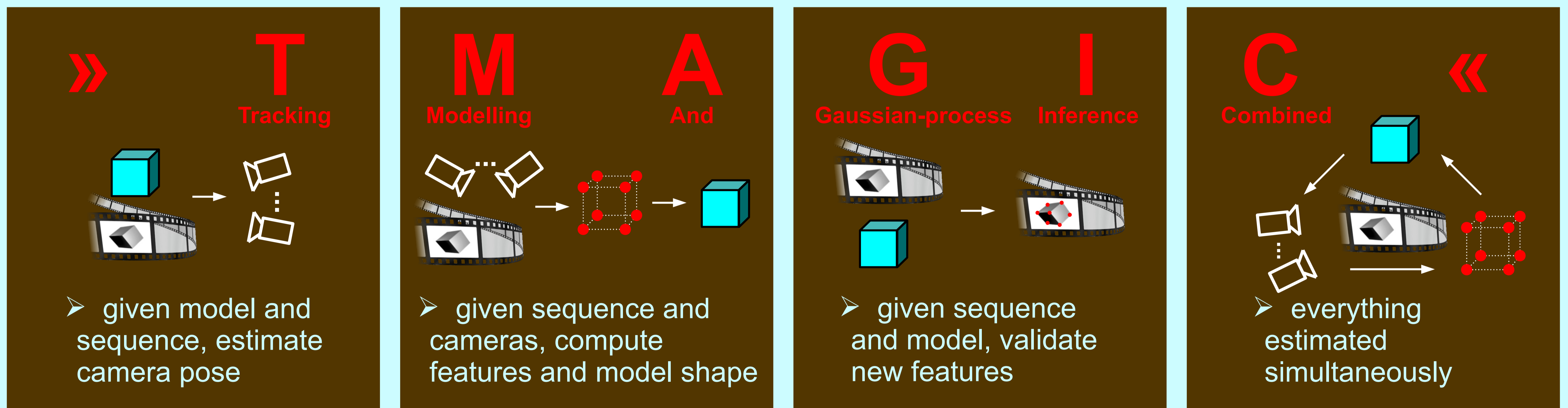
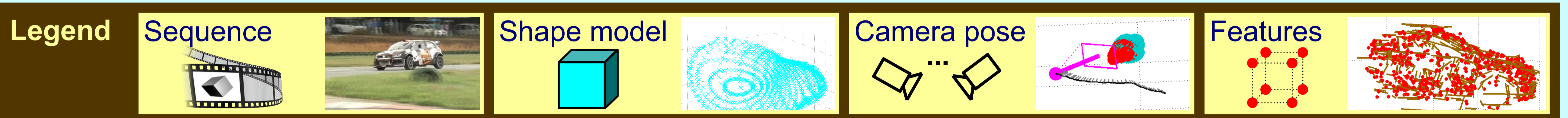
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## MOTIVATION

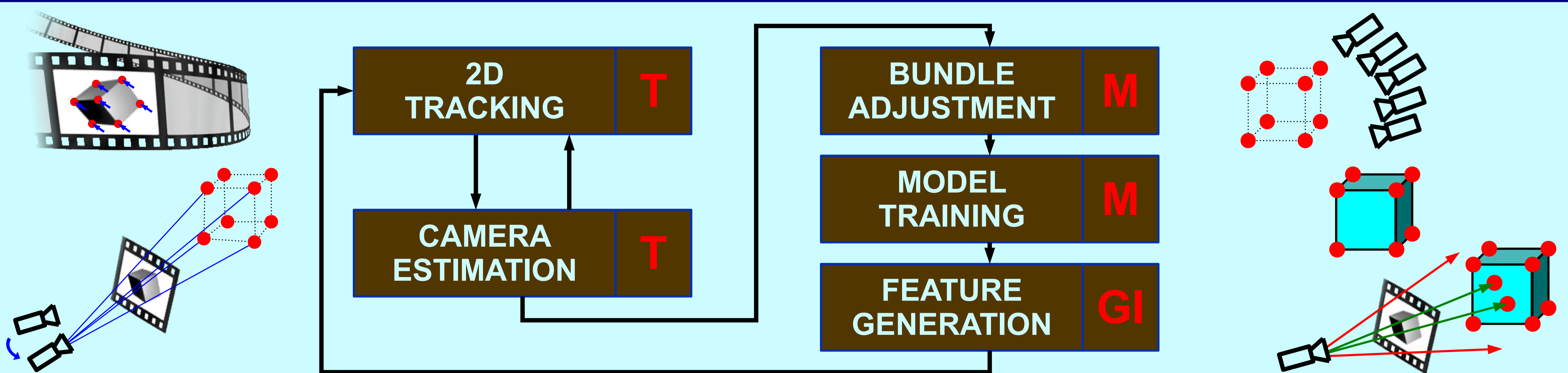


- Real-world sequences contain **out-of-plane rotations**.
- Tracker often has to rapidly **learn a change** in appearance...
- But the **object does not change!**
- Only the **viewpoint** has changed, why not **model it explicitly?**

## PRINCIPLE



## ALGORITHM



## OUTPUTS

- **Shape model:** what does the object look like?
  - comparable to the state-of-the-art
- **3D trajectory:** what is the camera position?
  - 72 % better than VisualSFM
- **2D trajectory/segmentation:** where is the object?
  - 22/58 % better than the state-of-the-art

## RESULTS

