**Our Method**

**Input**
- Time-series 3D polygonal mesh sequences with different number of vertices and faces.

**Output**
- Best viewpoint $p_{\text{best}}$
- Worst viewpoint $p_{\text{worst}}$

**Ease of Perception**

**Occlusion**
- Less occluded objects

**Spatial Feature**
- Visible geometric features (e.g. wave tip, splash)

**Temporal Feature**
- Viewing the movement of objects from the side

**Occlusion Term**
\[ \text{Oc}(p) = \sum_{i}^{\text{frame}} |C_i| \]

$C_i$: A set of visible vertices in $i$th frame

**Spatial Feature Term**
\[ \text{Sf}(p) = \sum_{i}^{\text{frame}} \sum_{v_j \in C_i} \gamma(v_j) \]
\[ \gamma(v_j) = \begin{cases} 1 & \text{if threshold} \leq q_1(v_j) \\ 0 & \text{else} \end{cases} \]

$q_1(v_j)$: Maximum view-dependent curvature [1]

**Temporal Feature Term**
\[ \text{Tf}(p) = \sum_{i}^{\text{frame}} \sum_{v_j \in C_i} \tau(v_j) \]
\[ \tau(v_j) = \text{proj}_V (\text{vel}_{v_j}) \]
The magnitude of projected velocity of a vertex to the screen

**Viewpoint Evaluation Function**
\[ F(p) = \text{Oc}(p) \cdot \text{Sf}(p) \cdot \text{Tf}(p) \]

**Experiment: Candidate Viewpoints**
- All viewpoints are directed to the center of a sphere
- Center: the center of entire scene
- Radius: twice the length of BB of entire scene

Sample 108 viewpoints uniformly on its hemisphere

**Results**

Scene 1
- Best view
- Worst view

Scene 2
- Best view
- Worst view

Scene 3
- Best view
- Worst view

Scene 4
- Best view
- Worst view

**References**