```
In[164]:= ClearAll["Global`*"]

       (* Basic information of A₂ *)
       α₁ = {√2, 0}; T = {{Cos[2 π / 3], -Sin[2 π / 3]}, {Sin[2 π / 3], Cos[2 π / 3]}};
       δ = α₁ + T.α₁; λ1 = (1 / 3) * (2 α₁ + T.α₁); λ2 = (1 / 3) * (α₁ + 2 T.α₁);   a1 = α₁;  a2 = T.α₁;

In[167]:=
       (* Weyl group of A₂ *)

In[168]:= (* Liouville measure of I_δ  *)
       scale = 10000;

In[169]:= region1 = ParametricRegion[{t * (-δ) 〚1〛 + s * (-δ - a1) 〚1〛, t * (-δ) 〚2〛 + s * (-δ - a1) 〚2〛},
          {{t, 0, scale}, {s, 0, scale}}];
       factor1 = 1;
       f1[x_, y_] := factor1 * Piecewise[{{1, {x, y} ∈ region1}}, 0];
       h1[x_, y_] = Integrate[f1[x - t * (-δ - a2) 〚1〛, y - t * (-δ - a2) 〚2〛], {t, 0, scale}];

In[173]:= region2 = ParametricRegion[{t * (a2 - a1) 〚1〛 + s * (-a1) 〚1〛, t * (a2 - a1) 〚2〛 + s * (-a1) 〚2〛},
          {{t, 0, scale}, {s, 0, scale}}];
       factor2 = 1;
       f2[x_, y_] := factor2 * Piecewise[{{1, {x, y} ∈ region2}}, 0];
       h2[x_, y_] = Integrate[f2[x - t * (-δ - a1) 〚1〛, y - t * (-δ - a1) 〚2〛], {t, 0, scale}];

In[177]:= region3 = ParametricRegion[{t * (a1 - a2) 〚1〛 + s * (-a2) 〚1〛, t * (a1 - a2) 〚2〛 + s * (-a2) 〚2〛},
          {{t, 0, scale}, {s, 0, scale}}];
       factor3 = 1;
       f3[x_, y_] := factor3 * Piecewise[{{1, {x, y} ∈ region3}}, 0];
       h3[x_, y_] = Integrate[f3[x - t * (-δ - a2) 〚1〛, y - t * (-δ - a2) 〚2〛], {t, 0, scale}];

In[181]:= region4 = ParametricRegion[
          {t * (δ) 〚1〛 + s * (a1) 〚1〛, t * (δ) 〚2〛 + s * (a1) 〚2〛}, {{t, 0, scale}, {s, 0, scale}}];
       factor4 = 1;
       f4[x_, y_] := factor4 * Piecewise[{{1, {x, y} ∈ region4}}, 0];
       h4[x_, y_] = Integrate[f4[x - t * (a2) 〚1〛, y - t * (a2) 〚2〛], {t, 0, scale}];

In[185]:= region5 = ParametricRegion[{t * (δ + a2) 〚1〛 + s * (δ) 〚1〛, t * (δ + a2) 〚2〛 + s * (δ) 〚2〛},
          {{t, 0, scale}, {s, 0, scale}}];
       factor5 = 1;
       f5[x_, y_] := factor5 * Piecewise[{{1, {x, y} ∈ region5}}, 0];
       h5[x_, y_] = Integrate[f5[x - t * (δ + a1) 〚1〛, y - t * (δ + a1) 〚2〛], {t, 0, scale}];

In[189]:= region6 = ParametricRegion[{t * (δ + a2) 〚1〛 + s * (a2) 〚1〛, t * (δ + a2) 〚2〛 + s * (a2) 〚2〛},
          {{t, 0, scale}, {s, 0, scale}}];
       factor6 = 1;
       f6[x_, y_] := factor6 * Piecewise[{{1, {x, y} ∈ region6}}, 0];
       h6[x_, y_] = Integrate[f6[x - t * (-a1 + a2) 〚1〛, y - t * (-a1 + a2) 〚2〛], {t, 0, scale}];

       region7 = ParametricRegion[{t * (δ + a1) 〚1〛 + s * (a1) 〚1〛, t * (δ + a1) 〚2〛 + s * (a1) 〚2〛},
          {{t, 0, scale}, {s, 0, scale}}];
       factor7 = 1;
       f7[x_, y_] := factor7 * Piecewise[{{1, {x, y} ∈ region7}}, 0];
       h7[x_, y_] = Integrate[f7[x - t * (-a2 + a1) 〚1〛, y - t * (-a2 + a1) 〚2〛], {t, 0, scale}];
```
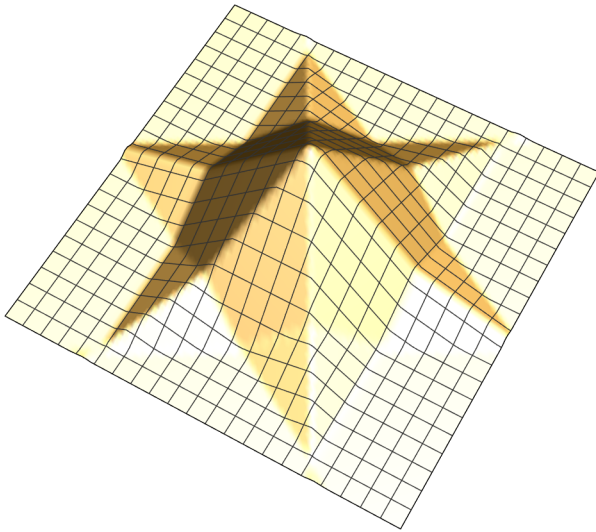
In[197]:= `h[x_, y_] := h1[x – δ[[1]], y – δ[[2]]] + h2[x – a1[[1]], y – a1[[2]]] + h3[x – a2[[1]], y – a2[[2]]] + h5[x + δ[[1]], y + δ[[2]]] + h6[x + a2[[1]], y + a2[[2]]] + h7[x + a1[[1]], y + a1[[2]]];`

```
In[203]:= range = 1.305;
data2 = Table[{x, y, h[x, y]}, {x, -range, range, 0.03}, {y, -range, range, 0.03}];
data1 = Flatten[data2, 1];
temp = ListPointPlot3D[data1];
ListPlot3D[data1, AspectRatio → Automatic,
 PlotLabel → Style["v_{I_λ}, Moment Set I_δ", FontSize → 12] PlotRange → All,
 Mesh → {20}, Axes → False, Boxed → False, Lighting → "Accent"]
```

PlotRange v_{I_λ}, Moment Set I_δ → All

PlotRange v_{I_λ}, Moment Set I_δ → All