**Symmetry Measure** *(Marola, Zielke, Kiryati & Gofman)*

Symmetric + antisymmetric decomposition of 1-D function:

\[
f(x) = f_s(x) + f_{as}(x)
\]

1-D symmetry measure

\[
S\{f(x)\} = \frac{\|f_s(x)\|^2}{\|f(x)\|^2} = \frac{\|f_s(x)\|^2}{\|f_s(x)\|^2 + \|f_{as}(x)\|^2} \in [0, 1]
\]

In 2-D, with respect to the \( t \) axis,

\[
S_\theta\{f\} = \frac{\int \|f_s(s, t)\|^2 dt}{\int \|f(s, t)\|^2 dt} \in [0, 1]
\]

(\( \forall t \) the norm is of a 1-D function along a line parallel to the \( s \) axis).

\[
S_\theta\{f\} = \frac{1}{2} \frac{\int\int f(t, s)f(t, -s)dsdt}{\int\int f^2(t, s)dsdt} + \frac{1}{2}
\]