

Hyperbolic tangent function "one side"

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Description:

Monotonic increasing function.
Cell size refined at the left tip of the segment.

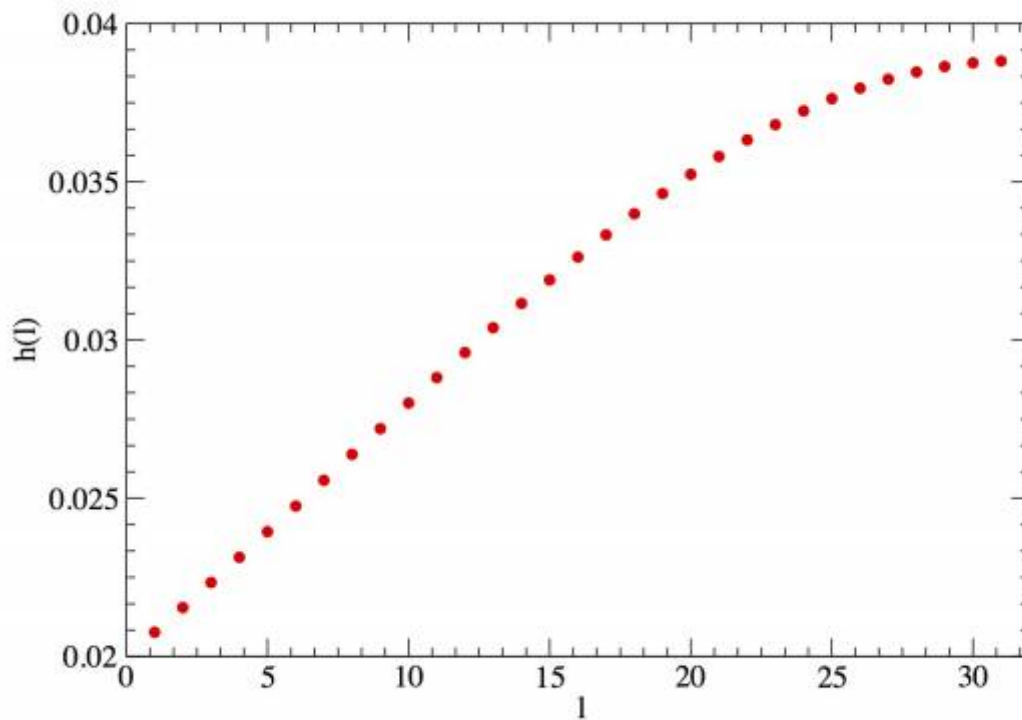
Namelist :

```
&MESH_FUNCTION_DATA  Function_Name="TANH_ONE_SIDE"  ,
                      Number_of_Cells= 32  ,
                      Length= 1.0  ,
                      Left_Cell_Size= 1.0d-03  ,
                      Reverse_Ordering= .false. /
```

Cell size distribution $h(l)$:

L is the Length.
 N is the Number_of_Cells.
 h_{\min} is the Left_Cell_Size.
 $h(l)$ is the cell size.
 l is the cell index

$$\begin{aligned} h(1) &= 0 \\ h(l) &= L \cdot (1 + \tanh(\frac{1}{2} \\ & \alpha \frac{l-1}{N}) / \tanh(\frac{1}{2} \alpha)), \quad 2 \leq l \leq N \\ h(N+1) &= L \cdot \alpha = \frac{L}{N} \\ & \cdot h_{\min} \end{aligned}$$



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