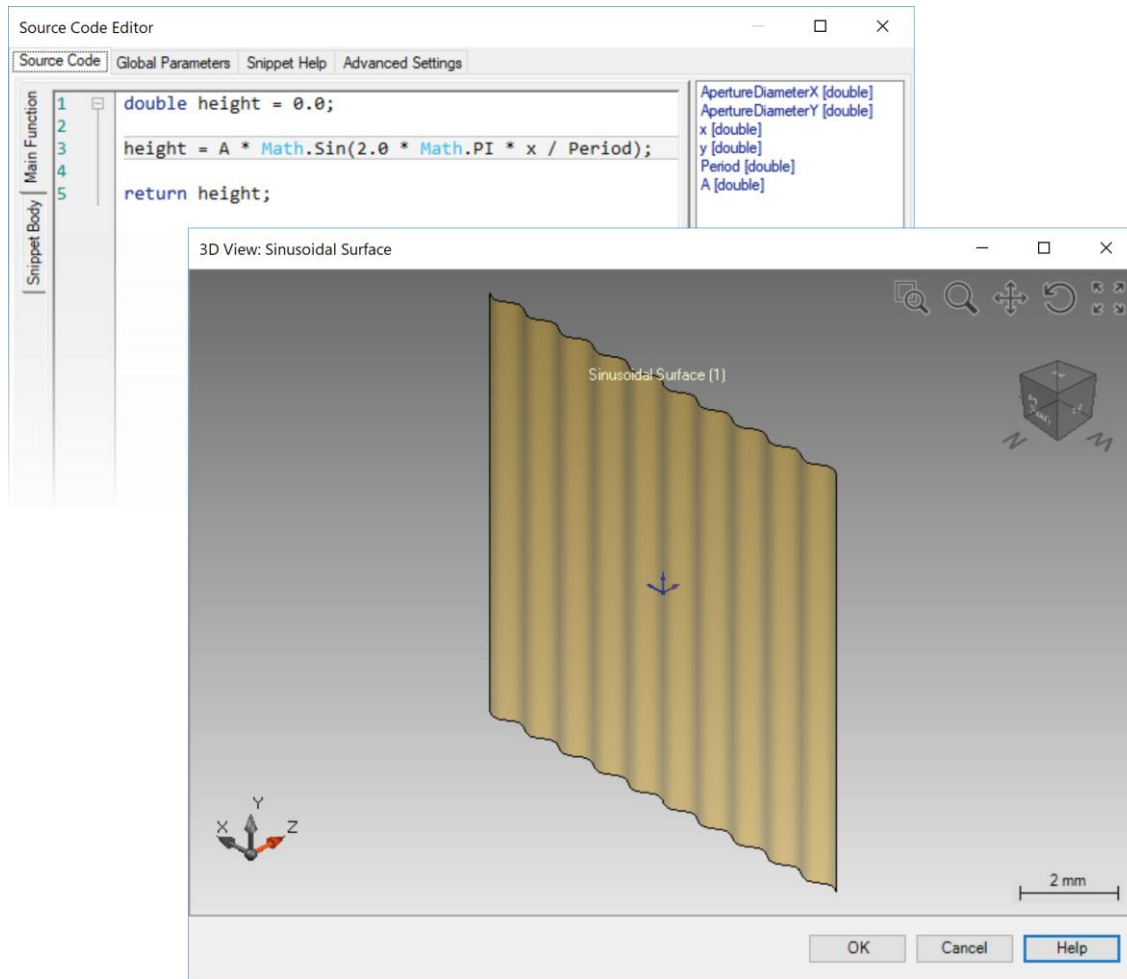


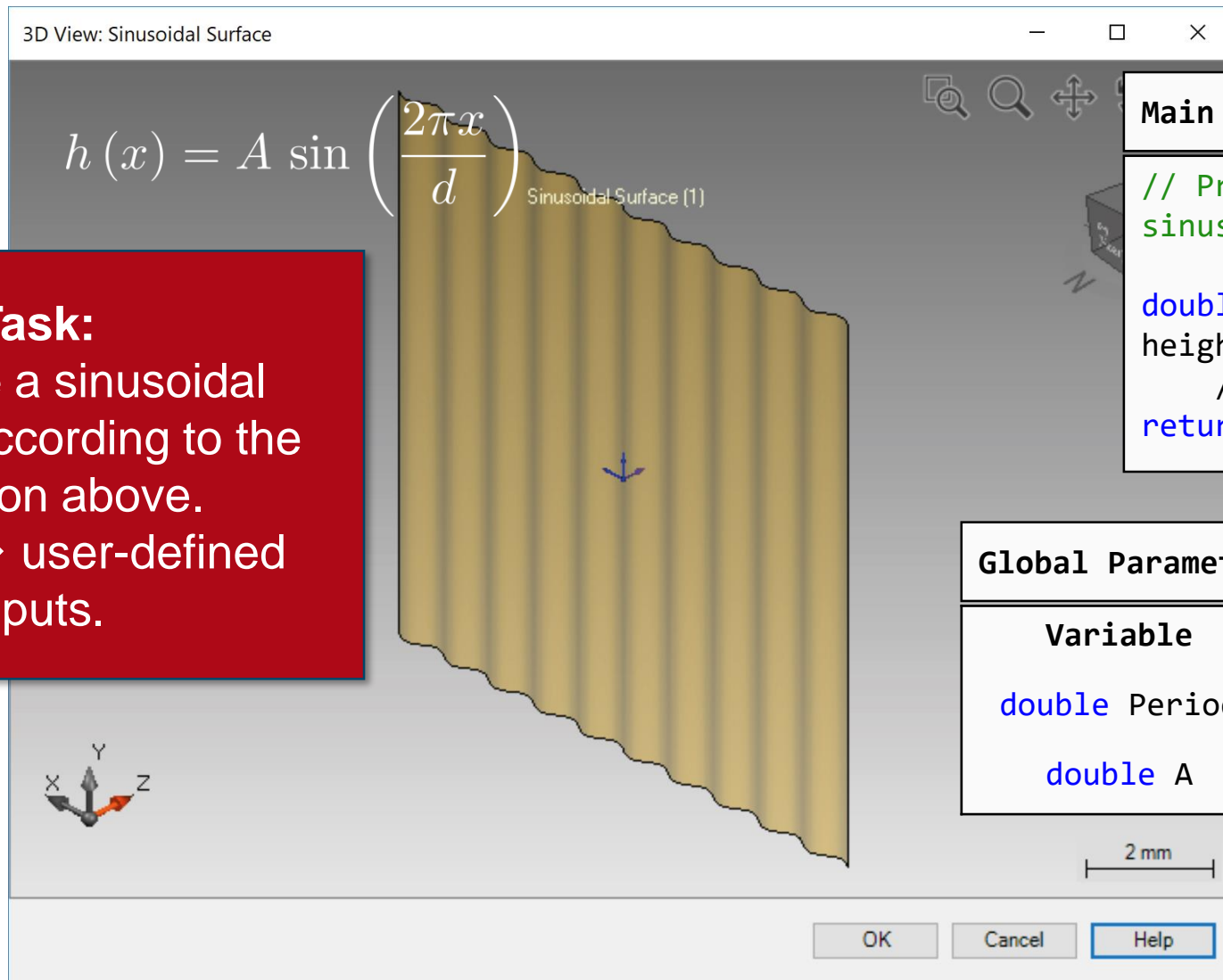
Programming a Sinusoidal Surface

Abstract



Providing maximum versatility for your optical simulations is one of our most fundamental objectives. That is why you can find so many customization options in VirtualLab Fusion, including programmable elements. In this document you can find an example for the Programmable Interface. Although the sinusoidal surface is included ready-made in the VirtualLab catalog, we give instructions here on how to program it for illustration purposes. The period and maximum modulation of the interface are given as user-defined parameters.

Programming a Sinusoidal Surface



Task:

Generate a sinusoidal interface according to the equation above.
 d and $A \rightarrow$ user-defined inputs.

Main Function

```
// Programmable interface with  
sinusoidal modulation:  
  
double height = 0.0;  
height = A * Math.Sin(2.0 * Math.PI * x  
    / Period);  
return height;
```

Global Parameters (User Defined)

Variable	Value	Allowed range
double Period	1 mm	0 mm - 1 m
double A	100 mm	0 mm - 1 m

Document Information

title	Programming a Sinusoidal Surface
document code	CZT.0078
version	1.0
toolbox(es)	Starter Toolbox
VL version used for simulations	7.4.0.49
category	Feature Use Case
further reading	<ul style="list-style-type: none">- How to Work with the Programmable Interface & Example (Spherical Surface)- Customizable Help for Programmable Elements- Programmable Light Source, Function, Interface and Medium