List of changes made in this version of the program code

This **version#3** of the program code differs from the previous **version#2** in the following items:

1) In this version the crevasse-ridden ice shelf (Freed-Brown et al., 2012) is considered.

   The parameters of the crevasses are listed in the **line 28-32** of the program code. They are

   a) the spatial periodicity of the crevasses T_{cr}
   b) the crevasses depth D_{cr};
   c) the crevasses width W_{cr}.

   The shape of the crevasses was assumed as rectangular (**lines 161-181** in the code) or as triangular (**lines 184-211** in the code)

2) The **lines 18628-18724** in the code contain the algorithm, which allows to derive the wavenumber for the mode obtained for a given frequency of the forcing. The algorithm is based on the counting of the maxima and the minima in the deflection profile along the central line. The case of the frontal forcing is considered in the program code. Some of the modes generated by the model are listed below (Fig.1-18).

3) Respectively, the output results of the code are the dispersion spectra (wave number versus periodicity/frequency of the forcing): **lines 18750-18784**

This program code was used for obtaining the results published in the manuscript (Konovalov, 2021), in which the case of $\alpha_1 = 1, \alpha_2 = 0$ (Konovalov, 2019) was considered.

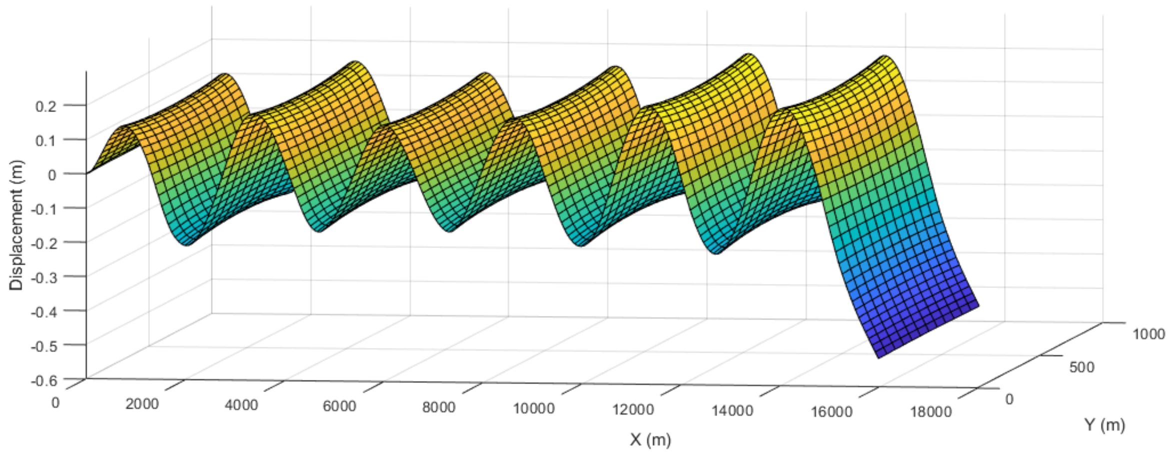

Figure 1. Ice shelf vertical deflections result from the impact of the frontal incident wave. The parameters of the model $\boldsymbol{\alpha_1 = 1, \alpha_2 = 0}$. $\boldsymbol{T_{cr} = 1.5km}$; $\boldsymbol{D_{cr} = 20m}$; The periodicity of the forcing $\boldsymbol{T = 50s}$.

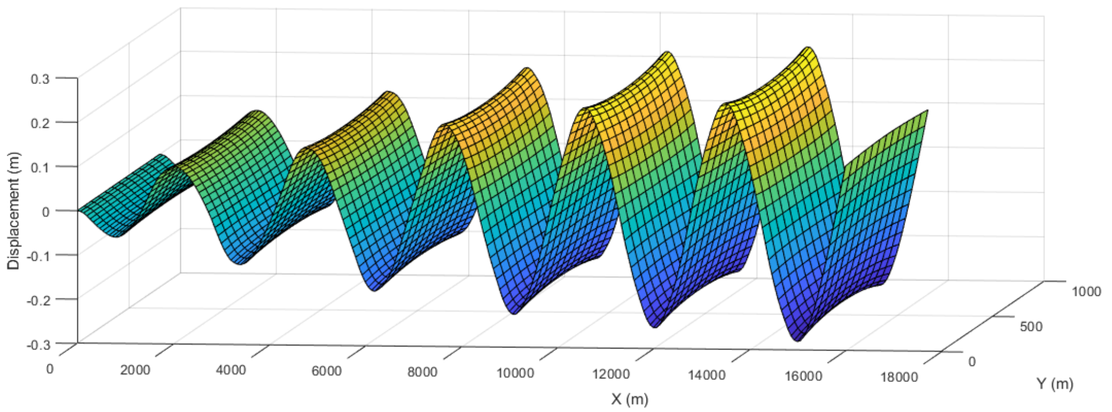

Figure 2. Ice shelf vertical deflections result from the impact of the frontal incident wave. The parameters of the model $\boldsymbol{\alpha_1 = 0.2, \alpha_2 = 0.8}$. $\boldsymbol{T_{cr} = 1.5km}$; $\boldsymbol{D_{cr} = 20m}$; The periodicity of the forcing $\boldsymbol{T = 50s}$.

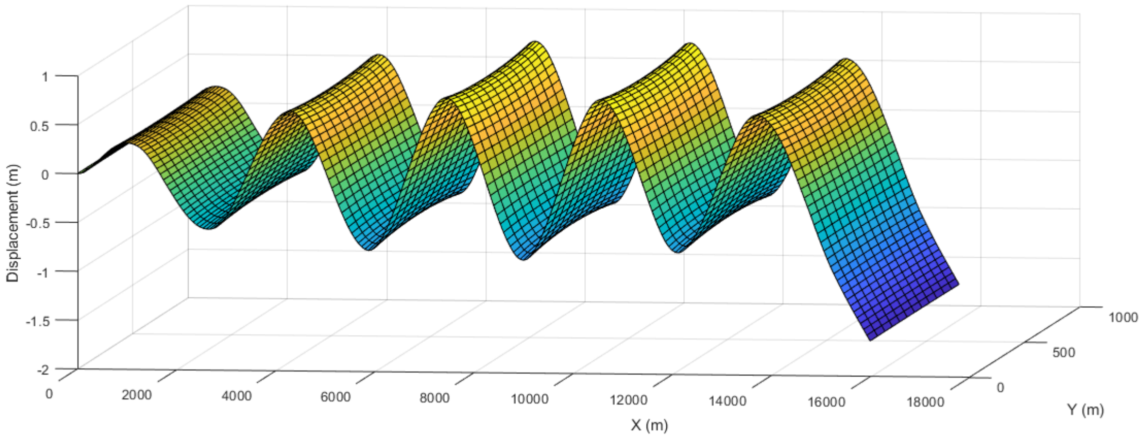

Figure 3. Ice shelf vertical deflections result from the impact of the frontal incident wave. The parameters of the model $\boldsymbol{\alpha_1 = 1, \alpha_2 = 0}$. $\boldsymbol{T_{cr} = 1.5km}$; $\boldsymbol{D_{cr} = 20m}$; The periodicity of the forcing $\boldsymbol{T = 100s}$.

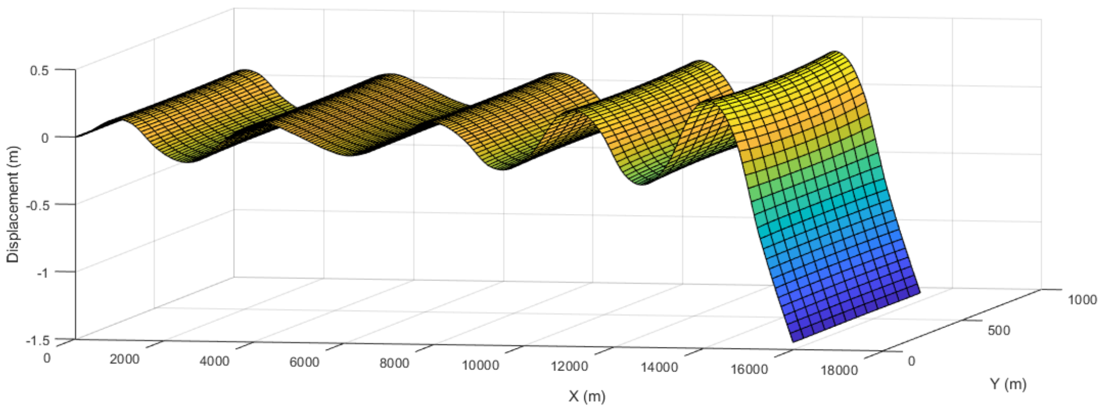

Figure 4. Ice shelf vertical deflections result from the impact of the frontal incident wave. The parameters of the model $\boldsymbol{\alpha_1 = 0.2, \alpha_2 = 0.8}$. $\boldsymbol{T_{cr} = 1.5km}$; $\boldsymbol{D_{cr} = 20m}$; The periodicity of the forcing $\boldsymbol{T = 100s}$.

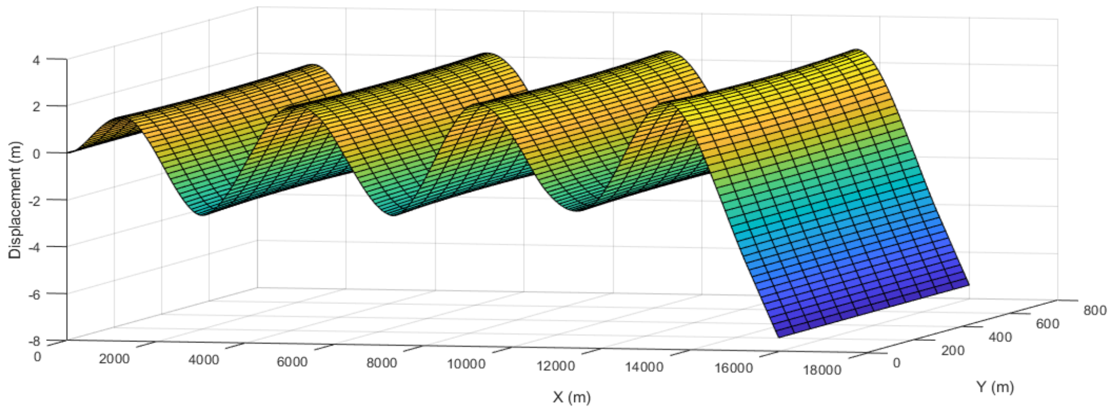

Figure 5. Ice shelf vertical deflections result from the impact of the frontal incident wave. The parameters of the model $\boldsymbol{\alpha_1 = 1, \alpha_2 = 0}$. $\boldsymbol{T_{cr} = 1.5km}$; $\boldsymbol{D_{cr} = 20m}$; The periodicity of the forcing $\boldsymbol{T = 200s}$.

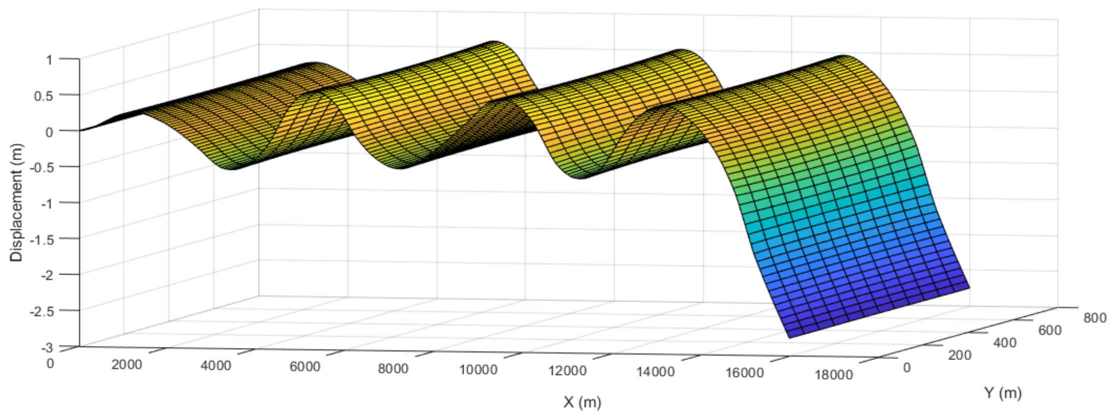

Figure 6. Ice shelf vertical deflections result from the impact of the frontal incident wave. The parameters of the model $\boldsymbol{\alpha_1 = 0.2, \alpha_2 = 0.8}$. $\boldsymbol{T_{cr} = 1.5km}$; $\boldsymbol{D_{cr} = 20m}$; The periodicity of the forcing $\boldsymbol{T = 200s}$.

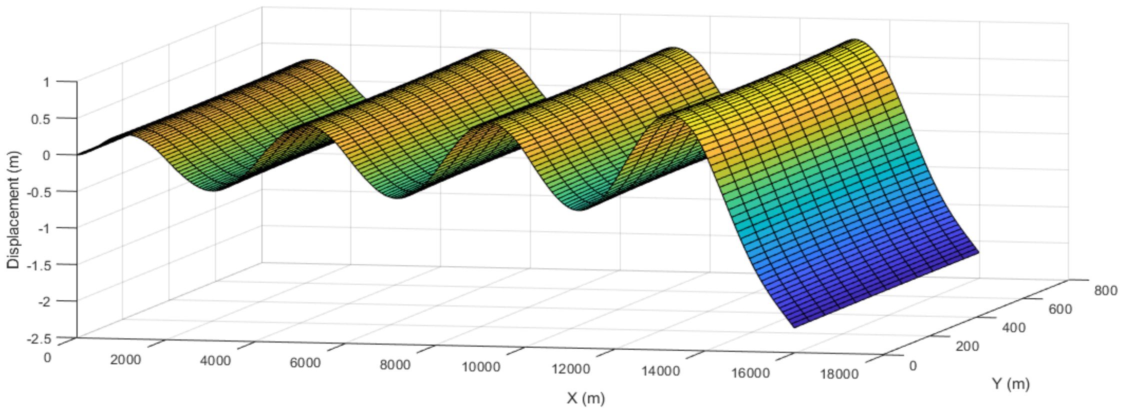

Figure 7. Ice shelf vertical deflections result from the impact of the frontal incident wave. The parameters of the model $\boldsymbol{\alpha_1 = 1, \alpha_2 = 0}$. $\boldsymbol{T_{cr} = 2km; D_{cr} = 20m}$; The periodicity of the forcing $\boldsymbol{T = 150s}$.

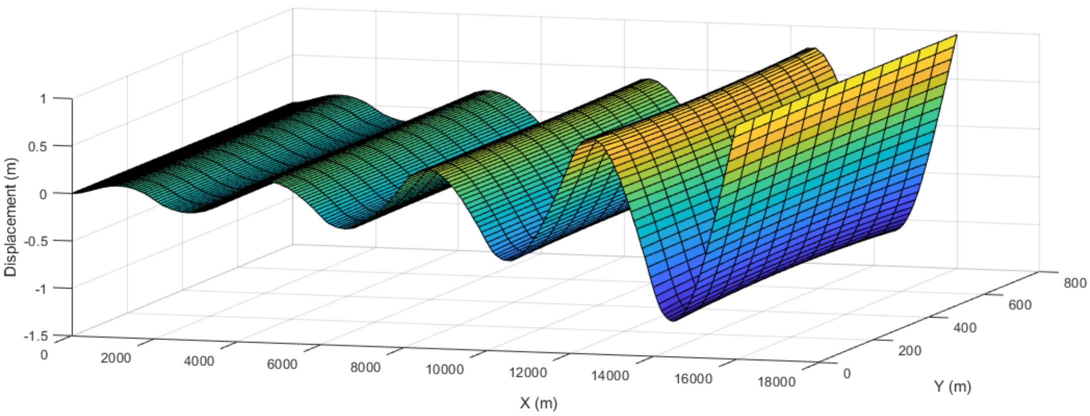

Figure 8. Ice shelf vertical deflections result from the impact of the frontal incident wave. The parameters of the model $\boldsymbol{\alpha_1 = 0.2, \alpha_2 = 0.8}$. $\boldsymbol{T_{cr} = 2km; D_{cr} = 20m}$; The periodicity of the forcing $\boldsymbol{T = 150s}$.

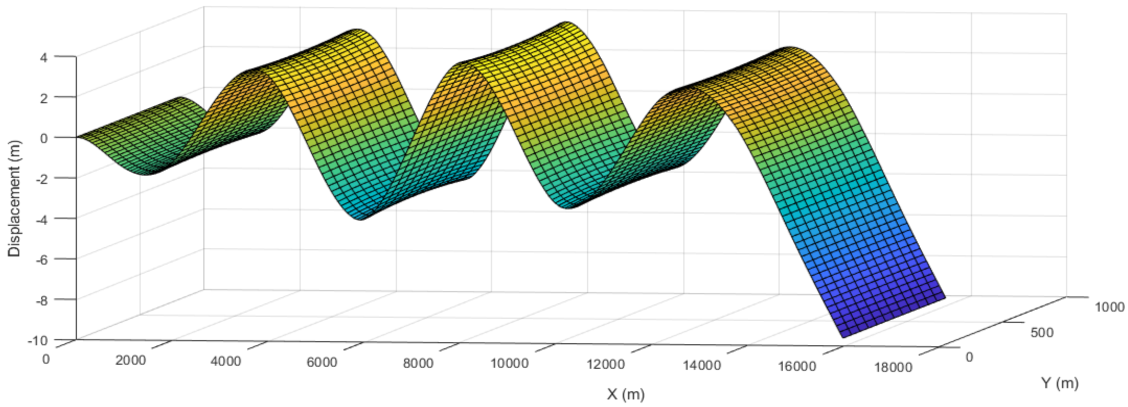

Figure 9. Ice shelf vertical deflections result from the impact of the frontal incident wave. The parameters of the model $\boldsymbol{\alpha_1 = 1, \alpha_2 = 0}$. $\boldsymbol{T_{cr} = 2km}$; $\boldsymbol{D_{cr} = 20m}$; The periodicity of the forcing $\boldsymbol{T = 300s}$.

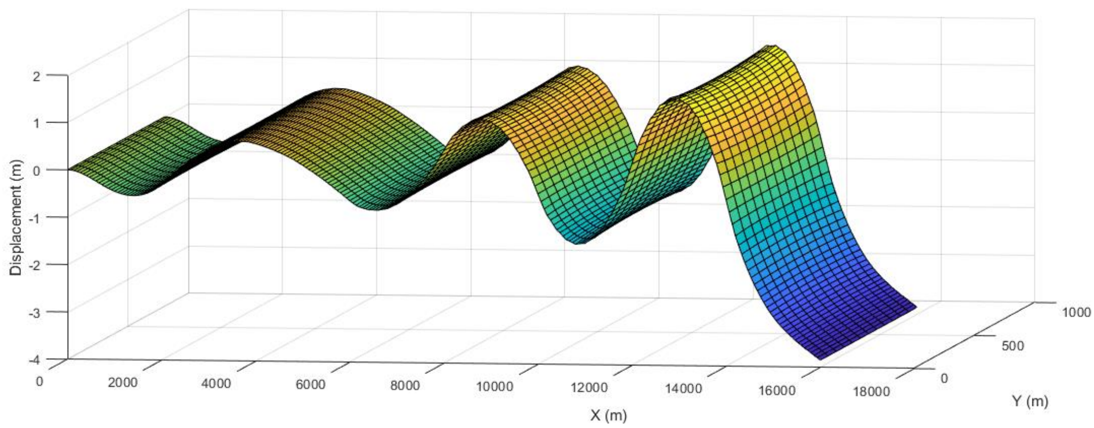

Figure 10. Ice shelf vertical deflections result from the impact of the frontal incident wave. The parameters of the model $\boldsymbol{\alpha_1 = 0.2, \alpha_2 = 0.8}$. $\boldsymbol{T_{cr} = 2km}$; $\boldsymbol{D_{cr} = 20m}$; The periodicity of the forcing $\boldsymbol{T = 300s}$.

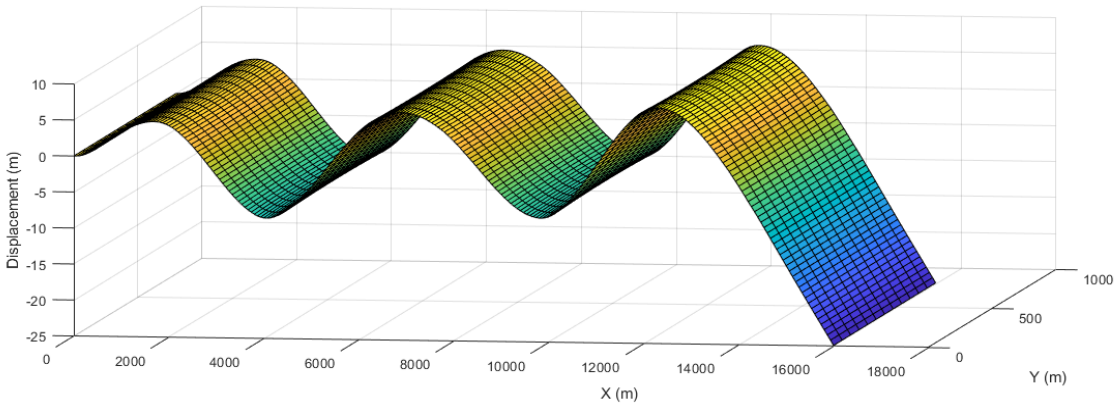

Figure 11. Ice shelf vertical deflections result from the impact of the frontal incident wave. The parameters of the model $\boldsymbol{\alpha_1 = 1, \alpha_2 = 0}$. $\boldsymbol{T_{cr} = 2km}$; $\boldsymbol{D_{cr} = 20m}$; The periodicity of the forcing $\boldsymbol{T = 500s}$.

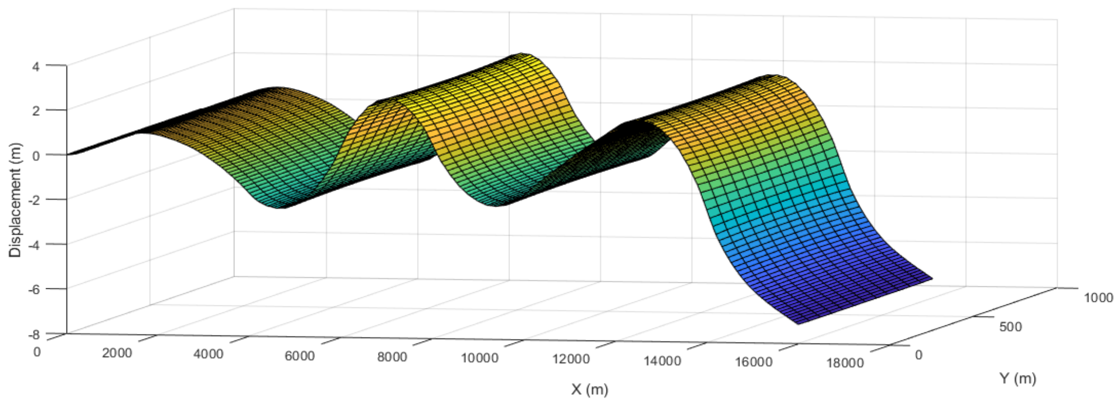

Figure 12. Ice shelf vertical deflections result from the impact of the frontal incident wave. The parameters of the model $\boldsymbol{\alpha_1 = 0.2, \alpha_2 = 0.8}$. $\boldsymbol{T_{cr} = 2km}$; $\boldsymbol{D_{cr} = 20m}$; The periodicity of the forcing $\boldsymbol{T = 500s}$.

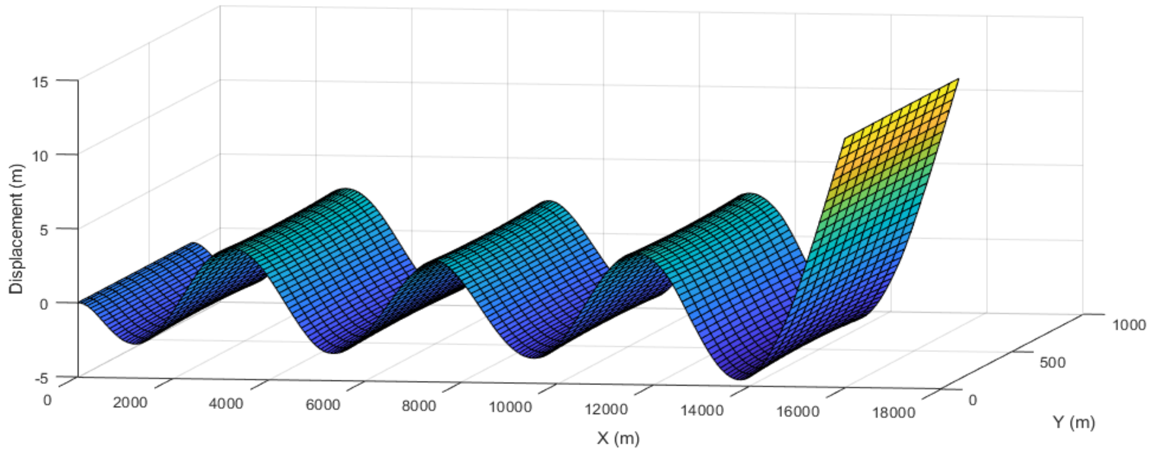

Figure 13. Ice shelf vertical deflections result from the impact of the frontal incident wave. The parameters of the model $\boldsymbol{\alpha_1 = 1, \alpha_2 = 0}$. $\boldsymbol{T_{cr} = 2.5km}$; $\boldsymbol{D_{cr} = 20m}$; The periodicity of the forcing $\boldsymbol{T = 200s}$.

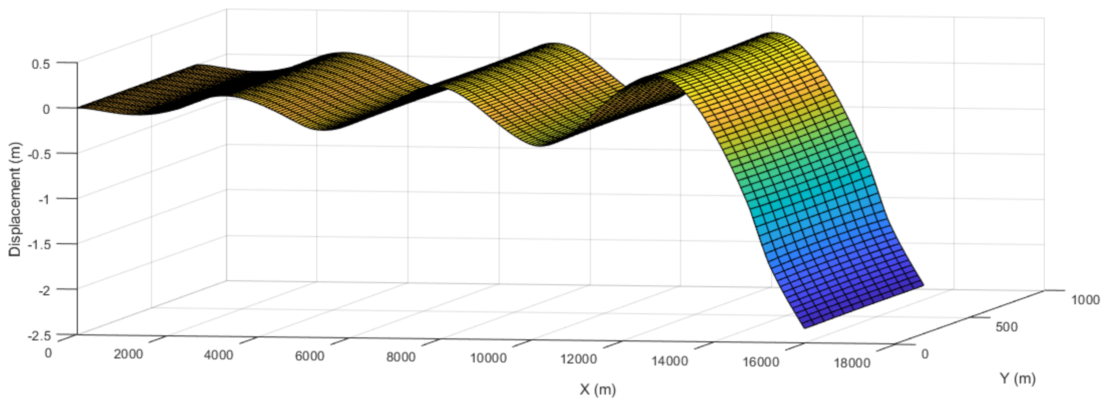

Figure 14. Ice shelf vertical deflections result from the impact of the frontal incident wave. The parameters of the model $\boldsymbol{\alpha_1 = 0.2, \alpha_2 = 0.8}$. $\boldsymbol{T_{cr} = 2.5km}$; $\boldsymbol{D_{cr} = 20m}$; The periodicity of the forcing $\boldsymbol{T = 200s}$.

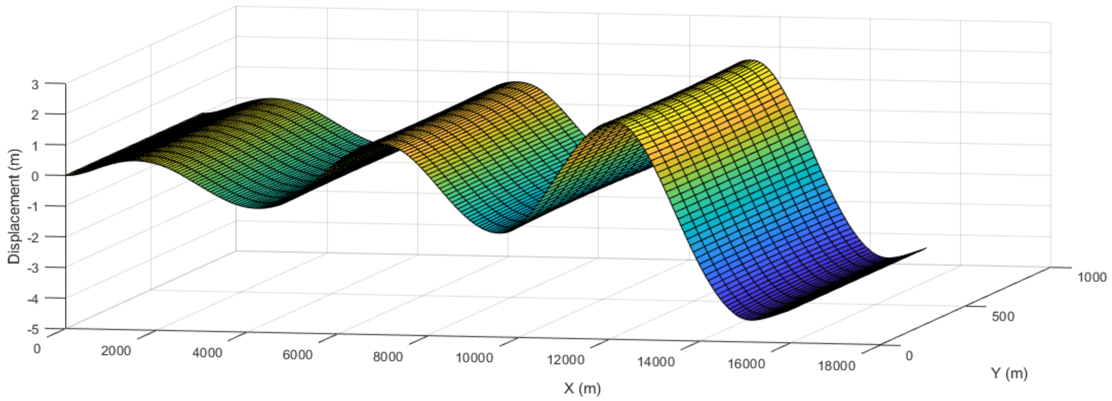

Figure 15. Ice shelf vertical deflections result from the impact of the frontal incident wave. The parameters of the model $\boldsymbol{\alpha_1 = 1, \alpha_2 = 0}$. $\boldsymbol{T_{cr} = 2.5km}$; $\boldsymbol{D_{cr} = 20m}$; The periodicity of the forcing $\boldsymbol{T = 400s}$.

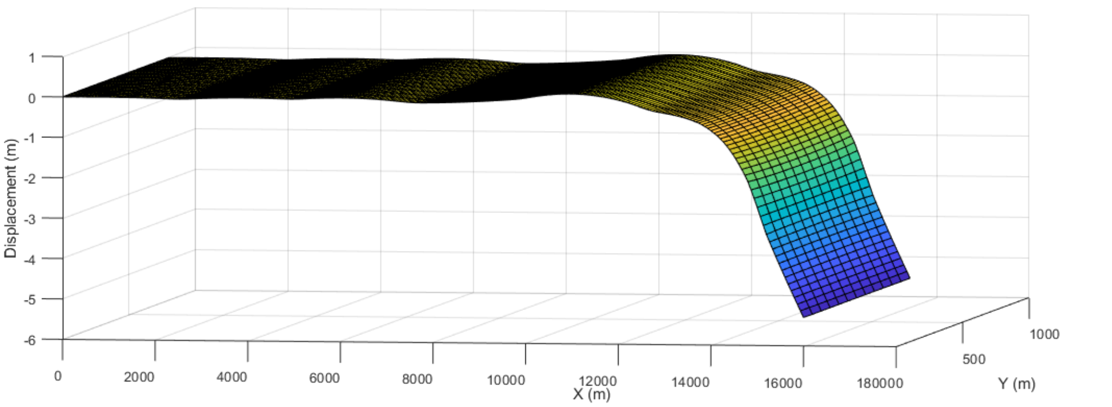

Figure 16. Ice shelf vertical deflections result from the impact of the frontal incident wave. The parameters of the model $\boldsymbol{\alpha_1 = 0.2, \alpha_2 = 0.8}$. $\boldsymbol{T_{cr} = 2.5km}$; $\boldsymbol{D_{cr} = 20m}$; The periodicity of the forcing $\boldsymbol{T = 400s}$.

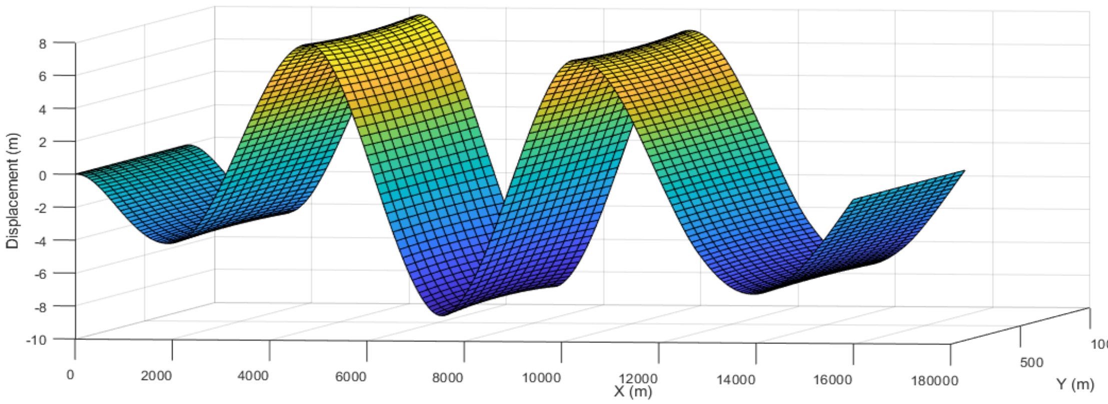

Figure 17. Ice shelf vertical deflections result from the impact of the frontal incident wave. The parameters of the model $\boldsymbol{\alpha_1} = \mathbf{1}, \boldsymbol{\alpha_2} = \mathbf{0}$. $\boldsymbol{T_{cr}} = \mathbf{2.5}\boldsymbol{km}$; $\boldsymbol{D_{cr}} = \mathbf{20}\boldsymbol{m}$; The periodicity of the forcing $\boldsymbol{T} = \mathbf{700}\boldsymbol{s}$.

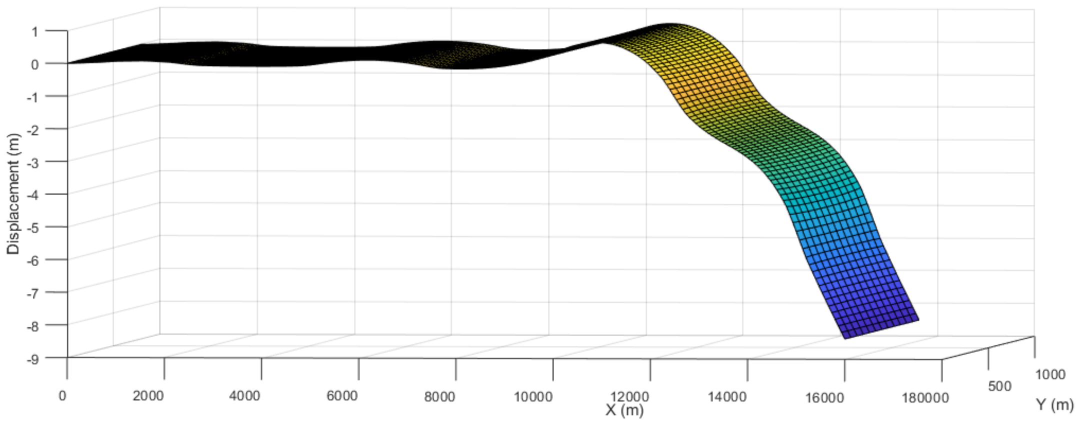

Figure 18. Ice shelf vertical deflections result from the impact of the frontal incident wave. The parameters of the model $\boldsymbol{\alpha_1} = \mathbf{0.2}, \boldsymbol{\alpha_2} = \mathbf{0.8}$. $\boldsymbol{T_{cr}} = \mathbf{2.5}\boldsymbol{km}$; $\boldsymbol{D_{cr}} = \mathbf{20}\boldsymbol{m}$; The periodicity of the forcing $\boldsymbol{T} = \mathbf{700}\boldsymbol{s}$.