In the following, input data to be inserted in the MATLAB code are specified. They are referred to the cases shown in paper "Dynamics of an aerial cableway through a time-varying meshing finite element approach", currently under review.

HARMONIC TRAJECTORY DATA INPUT

Cabin mass [Kg]: %%Consistent with ref [19]

6550

Carrying cable equivalent stiffness [N/m]: %%Consistent with ref [19]

13400

Tension of hauling cable [N]: %%Consistent with ref [19]

250000

Mass per unit length of hauling cable [Kg/m]: %%Consistent with ref [19]

3.83

Cablecar velocity [m/s]: %% Interval between 0.1 m/s and 6 m/s

1

Which type of force do you want on cabin? (1=inpulse, 2=harmonic):

2

Forcing frequency on cabin [Hz]: %%Consistent with ref [19]

0.26

Cabin initial distance from station [m]: %% Insert a value <= 600 m (maximum cable span set inside the model)

600

Cabin final distance from station [m]: %% Insert a value >=0 and < of cabin initial distance

0

Do you want to see the animation (1) or simulation analysis/plots (2):

2

Do you want to see the vertical trajectory of the cabin? (1=yes, 2=no):

1

Do you want to see the vertical trajectory of the cable midspan? (1=yes, 2=no):

2

Do you want to monitor Von mises stresses? (1=Yes, 2=No):

2

Maximum frequency of the analysis [Hz]: %% Input used for checking on maximum length of finite element

500

Maximum allowable cable element length [m]: 1.0696

Name of the input file *.inp (without extension) for the structure to be analyzed =

Geometry

```
Cabin mass [kg]: %%Consistent with ref [19]
6550
Carrying cable equivalent stiffness [N/m]: %%Consistent with ref [19]
13400
Tension of hauling cable [N]: %%Consistent with ref [19]
250000
Mass per unit length of hauling cable [Kg/m]: %%Consistent with ref [19]
3.83
Cablecar velocity [m/s]: %% Interval between 0.1 m/s and 6 m/s
6
Which type of force do you want on cabin? (1=inpulse, 2=harmonic):
1
Cabin initial distance from station [m]: %% Insert a value <= 600 m (maximum cable span set inside
the model)
170
Cabin final distance from station [m]: %% Insert a value >=0 and < of cabin initial distance
30
Insert the position along the span where the input force is happening: %% Insert a value <=
cabin initial distance and >= cabin final distance.
150
Do you want to see the animation (1) or simulation analysis/plots (2):
1
Do you want to save the animation? 1=Yes, 2=No: %% Check to have an appropriate application
to open the video file
1
Maximum frequency of the analysis [Hz]: %% Input used for checking on maximum length of finite
element
400
Maximum allowable cable element length [m]: 1.3371

Name of the input file *.inp (without extension) for the structure to be analyzed =
Geometry
```