In this work, the author has developed an analytical solution for modeling the friction of a multiscale wavy surface over a viscoelastic function. The friction force is attributed to two terms: one is due to the hysteretic losses occurring when the asperities of this scale level cyclically deform the viscoelastic foundation during sliding; the other terms is given by the law of friction determined from the solution of the contract problem at the inferior scale level. In addition, the strip method has been applied to numerically solve the 3D contact problem by reducing it into a 2D formulation. The author has applied the proposed method to study the two-level wavy surface, focusing on the influence of sliding velocity and specific energy of adhesion between contact surfaces. Before this work can be considered for publication, there are several issues to be addressed:

1) For the modeling parameters, it is not clear what the rationales are behind these parameters are. It will be great if the author could provide references for these parameters.

I’ve added comments on the choice of values of the model parameters (Lines 134-142 and 197-200). The parameters were chosen so that they correspond to some rubber friction case but at the same time to illustrate the influence of the effects under investigation – the contribution of the smaller scale in the form of a determined law of friction, possibility of both full and partial contact at each scale.

2) The author only provides the solution to two-level wavy surface according to the present method. It is not clear how the other methods can be applied to solve the same problem. It is difficult for the reviewer to compare the proposed method with previous well-established methods.

Known multiscale solutions (Refs 3-10 and others) are constructed for randomly rough surfaces so it is impossible to directly compare the results. The present method is based on the exact solution of the adhesive contact problem at each scale level (Refs 18,19) which, in the absence of adhesion, agrees with previously obtained solutions for sliding of a sinusoidal indenter (Refs. 12-15).

3) Could the author also provide some numerical solutions to the two-level wavy surface problem, such as finite element simulations?

Full numerical solution of the problem and its comparison with the presented approach will be the subject of future investigation.

4) Is there any experimental data comparable with present problem?

The results qualitatively agree with some experimental data on rubber friction (e.g., Refs 1,20,24,25). It’s discussed in Lines 228-233.