**RESPONSE FOR REVIEWS ON THE MANUSCRIPT [16]**

**Reviewer 1:**

Introduction:
The work suggests that spaghetti is more probable to break in a point where the bending waves constructively interfere. What is the source for this assumption? Add a reference or justify the assumption.

Justification was added.

«We include term that describes two different kinds of friction». What kinds of friction exactly?

One was already described – Bending damping. Description of second one was added.

Theoretical model:
Consider writing down the Kirchoff's equation that you cite.

Would be only confusing and would not clarify anything.

Formulae are unclear because of very low resolution in pdf. Improve the formulae.

I sent the paper as .doc and .odt where everything was readable.

Parameters for theory:
«s is cross section of spaghetti, r is radius of spaghetti». Cross section and radius are linked. It is the same parameter. Put pi*r^2 everywhere.

Changed.

«Bending damping was measured from video using our own video analyzing software. We took a video of a few periods of the spaghetti». Describe the essential experimental details. What experiment have you performed? Have you oscillated your spagetti or displaced one end of spagetti from initial point for a certain distance, while another one was attached? It is so far unclear.

Added description.

Experiment:
Put an image of falling spaghetti while impacting with a surface and show the angle you have measured and the curvature.

Added image.

Recommendations:
The manuscprit is well prepared. To clarify the theoretical details and the computer model write down the equations, with initial and boundary conditions, as used in the calculations. Upon these clarifications, the manuscript may be recommended for publication.

For calculations we used same equations as in manuscript just optimized for calculations.

**Reviewer 2:**
Elaborate on what factors drive the critical curvature in breaking spaghettis.

We have not investigated this.

Give some more data on intermediate results of your simulation (e.g. the critical curvature) in order to improve the traceability of your results.

Simulation does not predict critical curvatures.

Explain the experiments you undertook to find the input parameters for your simulation (Young's Modulus, damping, stiffness, etc.)

Way of obtaining these parameters is described. There were not experiments for every parameter.

Re-write the formulae you use as they are hardly legible in the current form.Your uncertainty in Figure 2 is very high. Please elaborate on what drives the uncertainty of a probability in this case (as opposed to a "normal" Gaussian deviation.)

The uncertainty of probability is driven by fact that we either observe broked spaghetti or non broken spaghetti for each case. The uncertainty was calculated using the same formula as for Gaussian deviation.

Why do you assume that speed is perpendicular to length? Please elaborate on that.

Because the spaghetti is falling down and is horizontal for that case.

Please always indicate between what your angles are defined.

Added image.

Why does you simulation predict decreasing probability of breaking with increasing velocity for some angles around 60° whilst not for higher angles?

It may happen because in that graph we sum several results for different irregularities. So small random errors may cause this effect.

Why is slipping maximal for this angle?

It is not maximal. It slips for higher angles and does not slip for smaller.

Did you observe that spaghetti, especially for flat angles with the surface, break at their first impact with the floor or rather with a later impact?

Rather with later impact.

Consider adding the code for your simulation as an appendix, if it is not excessively long.

The code has several hundred lines and is not very clear as it is.

The manuscript has the potential to be published.

**Reviewer 3:**

The structure is OK.
The paper is well presented with interesting numerical values.
I recommend this paper.