**1. Question:**

In equation 3 (paper1: Distributed MPC), can you please elaborate on the definitions of K and B. What are the values used in the simulation results? Are they derived from any experimental readings?

K is a diagonal matrix, the i th diagonal element contains the i th link's flowability parameter. If the link is active, the value is set to 7e-4, if the link is not active (no material deposited), the value is 0. The value 7e-4 identified from experiments. B is a vector contains the height increase of the full grid caused by a unit size droplet. Fig. 4 in another paper (Control Oriented Models) illustrate this better. The droplet shape used for constructing B is identified from experimental results.

**2. Question:**

In equation 3 (paper1: Distributed MPC), the 2nd term (DKD'h) captures the effect that the deposited material will flow from higher location to lower. But shouldn't it be triggered only when we are adding material in the k^th layer (when u\_k is applied)? If we aren't dropping any droplet in the k^th layer, then there shouldn't be any change because of just the height difference. But this model will have that effect.

As explained in question 1, when no material deposited, the corresponding links' value is set to 0 in K.

**3. Question:**

In our last meeting, you mentioned that droplet control case is more practical than volume control case. Can you please elaborate and point me to any source which talks about practicality of the droplet control case. Is the same argument extendible to Selective Laser Melting(SLM) as well i.e. constant power case vs variable power case?

From my understanding, this argument is only for ink-jet 3D printing. I think the reason is that the relationship between the voltage waveform and the droplet volume is complicated and is usually identified experimentally. So it is difficult to do continuous volume control. What we usually do in ink-jet 3D printing is to identify 1 to 3 droplet sizes and the corresponding waveform, then in printing only choose from these fixed size droplets.

For SLM, it is a different case, I think it is practical to do power control.

**4. Question:**

I have some questions regarding the data that she uploaded. What are the 11 variables that you mentioned in readme.txt?

As described in the readme.txt. 'base' is the 'base floor' on which the printer starts to layer, 'layer\_1' to 'layer\_5' are the height profiles from the 1st layer to the 5th layer substracting the ‘base’. 'input\_1' to 'input\_5' are the inputs from the 1st layer to the 5th layer, indicating the droplet size at each location.

**5. Question:**

What is the inkjet printer device model that you are using? Do you have a manual for it?

The printer is a customized printer. It does not have a manual. You can refer to the uploaded papers for details.