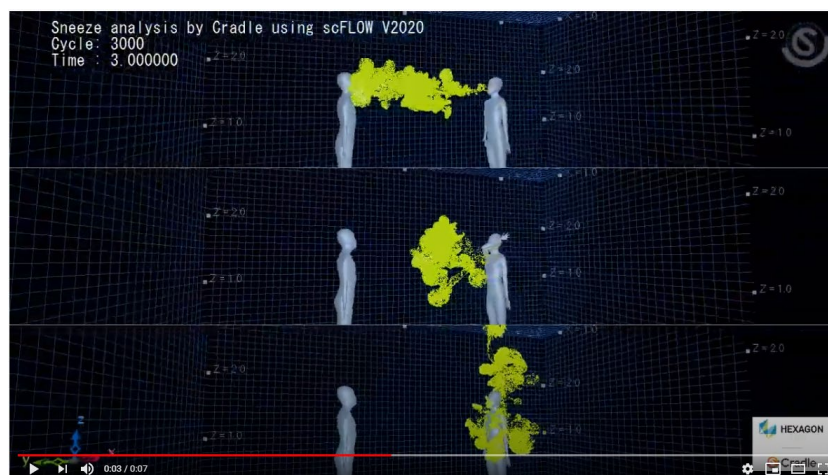


Using CFD Analysis to Drive Home the Importance of COVID-19 Precautions

Ever since the Coronavirus or COVID-19 pandemic broke out, our focus has firmly been on ensuring the safety of our workforce, while minimizing risk to the supply of our products and our services to our customers.

Every discussion on the COVID-19 outbreak centres around the importance of social distancing and the need to cover your nose and mouth while coughing or sneezing to curtail the spread of the virus. Medical professionals, media, and world leaders are trying to drive home the importance of these simple safety measures. But the saying a picture is worth a thousand words, and in this a video is worth a thousand pictures couldn't be more true in this case.

<https://www.youtube.com/watch?v=AVnDIzebAQ>



To drive home the importance and effectiveness of these safety precautions, the team at MSC Software did a simulation to demonstrate droplet behaviour when a person coughs into the air without any protection versus when they take certain precaution. Viewers can see a precise side by side comparison of how droplets behave in each of these scenarios.

The team modelled three scenarios. The first is when the person does not cover their mouth, second is when use their elbow to cover, and the third is when they use a low-grade face mask is used. For the common person this visual reference enhances their understanding and immediately reinforces what the professionals are trying to convey.

Given that human beings often think visually, seeing the impact of their actions demonstrated through visuals can be more effective than explaining the same verbally. Therefore, we believe simulation in general and Computational Fluid Dynamics (CFD) in particular in this case, for helping us understand the complex interaction of droplets and fluid flows in a real-life situation. From a technical perspective the distance between peoples considered 2 meters, and the mask is 1mm thick, made from non-woven fabrics, just like some of the masks on the market.

We encourage everyone to share the video widely to drive home the message about the importance of following recommended precautions to mitigate the spread of this deadly virus. In the meantime, remember to #stayhome and #Staysafe.