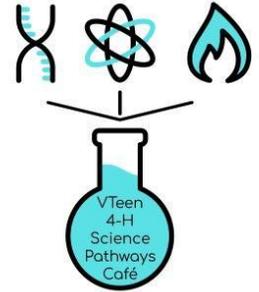




Summer of Science



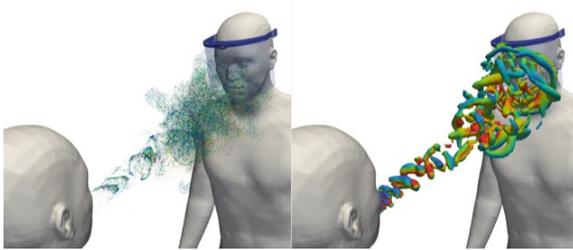
Fighting COVID-19 with Supercomputers

Wednesday, June 24, 2020, 1:00-2:00 pm

Open to all youth in grades 7-12

Register@ www.uvm.edu/extension/youth/announcements

“Like” us @www.facebook.com/VTeen4HScienceCafe



When you breathe, speak, sing, cough or sneeze, you are expelling several thousands of droplets, so small they are only visible on cold days. These droplets are the main vector of contamination for respiratory diseases like COVID-19. Protective strategies (distancing, PPE) should ideally be designed from the knowledge of how droplets travel through the air. Unfortunately, this complex fluid dynamics problem can be very hard to predict

because it depends on many parameters, including room ventilation, positions and anatomy of individuals, geometry of the room, humidity and temperature. **To address this complexity, we have adapted a high-fidelity simulation software designed for aeronautical and aerospace applications to simulate realistic situations known as high risks of contamination.** Come to this café to learn how researchers are using supercomputers to run simulations that can follow the millions of particles released in a few coughs and track how many are inhaled by bystanders!

ABOUT OUR SPEAKER

Yves Dubief is an associate professor of the UVM Department of Mechanical Engineering. He holds a PhD in mechanical engineering, on the simulation of turbulent flows from the Institut National Polytechnique de Grenoble. Prior to joining UVM, he was a research associate at the Center for Turbulence Research at Stanford University. His expertise is in the study of complex fluid flows ranging from drag-reducing fluids to plasma gases heating up heat shield of space vehicles upon atmospheric entry.

What is a Virtual Teen Science Café? It is a free, fun way for teens to explore science, engineering and technology with local scientists, engineers and technology experts. Teens will “meet a scientist”, learn about their work, and be able to participate in informal discussions.

Questions? Contact lauren.traister@uvm.edu

To request a disability-related accommodation to participate in this program, please contact the 4-H Office at 802-888-4972 or lauren.traister@uvm.edu by June 17, 2020 so we may assist you.



www.uvm.edu/extension/youth