Srinivas Vanapalli

How can cryogenics play a role in navigating through the energy transition? Which tools and technologies need to be developed to increase the reliability and efficacy of cryosurgery/cryomedicine? What are the hidden secrets of liquid vapor phase change in cryogenic liquids?

These are some of the questions that cryogenics community will address in the near future. Srinivas would like to be part of this exciting journey as an influencer/curator/advisor and seek your vote to join the CEC board.

In a first of the kind, the topical cryogenic heat and mass transfer conference that he organized at University of Twente in 2019 saw the congregation of 75 cryogenic aficionados. Other than the usual cryo-suspects the attendees came from fields such as medicine, food, pharma, cryo-sauna, aircraft engineering, space, among others. This shows beyond doubt that cryogenics is still an important research and technology field and we as a community has the obligation to train many more young people.

He leads the Applied Thermal Sciences laboratory at University of Twente. His pursuit is to seek solutions to micro scale multiphase heat and mass transfer at low temperatures. Recently his lab has succeeded in imaging the wetting dynamics of a liquid nitrogen droplet on a superheated surface unraveling the rich microscale phenomena that is peculiar to cryogenic liquids. His lab is developing high spatial- and time resolved optical imaging tools to underpin microscale phenomena at cryogenic temperatures. Beyond multiscale physics, our lab developed novel technologies, such as, a flat panel gas gap heat switch and a tissue snap freezer for cryopreservation.

His close interaction with cryogenic experts most notably Ray Radebaugh and Marcel ter Brake during his graduation served as a launchpad to a career in cryogenics. After a sojourn in industry, he began his academic career at University of Twente in the Netherlands.

As a teacher, he enjoys molding young minds with basics in classical thermodynamics and cryogenics. He devises puzzles and games to make them life-long learners and the students even compete to write poems for Sinterklaas (Dutch version of Santa Claus) on thermodynamics theme (google to get access to these hilarious lines).

As a chairman of the program committee (educational program Advanced Technology) at University of Twente, he helps to shape the educational program. Other committees where he actively contributes are: Faculty council Science and Technology at University of Twente, International Institute of Refrigeration A2 commission, European Renewable Heat & Cold, and others.