

**ASTFE**

American Society of Thermal and Fluids Engineers

# VIRTUAL WORKSHOP ON COVID-19: CHALLENGES IN RESEARCH AND EDUCATION

AUGUST 31, 2020

## PROGRAM

<b>Opening</b>	<b>9:00 – 9:15</b>	<b>Workshop Welcome</b>	<p><b>Dr. Nesrin Ozalp, Workshop Chair</b>, Professor and Department Chair of Mechanical and Civil Engineering, Purdue University Northwest</p> <p><b>Dr. Yong Tao, ASTFE President</b>, Betty L. Gordon Endowed Chair &amp; Distinguished Professor, Department Chair of Mechanical Engineering, Cleveland State University</p> <p><b>Dr. Jianping Zhu</b>, Provost and Senior Vice President for Academic Affairs, Cleveland State University</p>	Workshop overview, ASTFE's vision on the role of engineers to support research on finding cure and to design tools for patients and health workers, and research & teaching during COVID
	<b>9:15 – 9:45</b>	<b>Keynote</b>	C. Forrest Faison III, M.D., Sc.D. (hon), FAAP Vice Admiral, Fmr Surgeon General of Navy Senior Vice President, Research and Innovation Chief, Health Strategy, Cleveland State University	Current state of the pandemic, challenges, possible developments within a year, and lessons learned for the future
	<b>9:45 – 10:00</b>	<b>Q&amp;A</b>		
<b>PANEL BREAK</b>				
<b>Panel #1:</b>	<b>10:15 – 12:00</b>	<b>Moderator: Dr. Darrell Pepper</b> , Professor, University of Nevada, Las Vegas		
<b>Panel session on Medical, health perspectives: Formation, spread and behavior of droplets in various airflow conditions</b>	<b>10:15 – 10:45</b>	Dr. Neal Patel Dr. Devang Sanghavi	Medical Director for the Respiratory Services, Mayo Clinic MICU Medical Director, Mayo Clinic	COVID-19 exposure level, prevention strategies and experiments
	<b>10:45 – 11:00</b>	Dr. Lydia Bourouiba	Associate Professor and Director of The Fluid Dynamics of Disease Transmission Laboratory, MIT	The fluid dynamics of disease transmission
	<b>11:00 – 11:15</b>	Dr. Akshai Runchal	CFD Innovators	CFD simulations of aerosols and indoor ventilation to minimize airborne disease transmission
	<b>11:15 – 11:30</b>	Dr. Paolo Zannetti	QEP President, EnviroComp Consulting, Inc.	Simulation of emission, transport, diffusion, gravitational settling, evaporation, and deposition of droplets generated from coughing, sneezing, and talking/screaming
	<b>11:30 – 12:00</b>	<b>Q&amp;A and panel discussion</b>		
<b>PANEL BREAK</b>				
<b>Panel #2:</b>	<b>13:00 – 14:30</b>	<b>Moderator: Dr. Sumanta Acharya</b> , Professor and Department Chair, Mechanical and Aerospace Engineering Department, Illinois Institute of Technology		
<b>Panel session on Engineering solutions: Masks, manufacture and engineering mitigation of spreading, ventilator design and manufacture, testing assays and methodology</b>	<b>13:00 – 13:15</b>	Dr. Samuel Graham	School Chair and Professor Micro and Nano Engineering, School of Mechanical Engineering, Georgia Tech	Rapid Design and Innovation for the Pandemic Response
	<b>13:15 – 13:30</b>	Dr. James Klausner	MSU Foundation Professor and Department Chair of Mechanical Engineering, Michigan State University	Pressure drop and filtration efficiency measurements to assess the efficacy of N95 masks that undergo disinfection treatment for reuse
	<b>13:30 – 13:45</b>	Dr. Yuebin Guo	Henry Rutgers Professor of Advanced Manufacturing, Mechanical & Aerospace Engineering, Rutgers, the State University of New Jersey	COVID-19: Impact on Manufacturing and Non-medical Countermeasures
	<b>14:00 – 14:30</b>	<b>Q&amp;A and panel discussion</b>		
<b>PANEL BREAK</b>				
<b>Panel #3:</b>	<b>14:45 – 16:15</b>	<b>Moderator: Dr. Yogesh Jaluria</b> , Board of Governors Professor & Distinguished Professor, Rutgers, the State University of New Jersey		
<b>Panel session on Challenges of COVID-19 on Engineering Education</b>	<b>14:45 – 15:00</b>	Dr. Suresh Garimella	President, University of Vermont	Impact of the COVID-19 on engineering schools, teaching approaches taken, potential measures to reduce the impact of prolonged COVID-19 impact on education
	<b>15:00 – 15:15</b>	Dr. Peter Kilpatrick	Provost and Senior Vice President for Academic Affairs at Illinois Institute of Technology	
	<b>15:15 – 15:30</b>	Dr. Leo Kempel	Dean of Engineering, Michigan State University	
	<b>15:30 – 16:15</b>	<b>Q&amp;A and panel discussion</b>		
<b>CLOSING REMARKS</b>				
<p><b>Dr. Francine Battaglia, Senior Vice President of ASTFE</b> Professor and Chair, Department of Mechanical and Aerospace Engineering University at Buffalo</p>				