Preface to 77th Annual Forum Proceedings

Following the virtual Forum 76 event in October 2020, Forum 77, originally planned for West Palm Beach, Florida, also became a virtual event. Forum 77 is different from any previous Forums as it takes place only six months after its predecessor.

Thank you to all the technical paper authors for documenting your accomplishments for the Proceedings in such a short time. My sincere appreciation to all the Session Chairs and Co-Chairs as well as the members of the Technical Committees who reviewed, selected, and organized the materials in such a time-limited schedule, and to the VFS staff who stood up the 2021 event so quickly. Without your efforts and contributions, this Forum would not have been possible.

Despite the challenges posed by COVID-19, VTOL technology continues to advance rapidly this year. The US Army remains committed to developing the Future Attack Reconnaissance Aircraft (FARA), the Future Long Range Assault Aircraft (FLRAA), and the Air Launch Effects (ALE) as components of the Future Vertical Lift (FVL) program. The US Air Force has selected 257 proposals to receive a total of $38.5M for the Agility Prime initiative program seeking to operationalize commercial electric vertical takeoff and landing (eVTOL) vehicles for military missions, and to accelerate the emerging commercial eVTOL market, while more electric VTOL aircraft take to the skies around the world. Europe’s Clean Sky 2 RACER technology demonstrator has started its assembly. Most notably, NASA’s Ingenuity Mars mini-helicopter has successfully flown on the red planet. This is the first powered, controlled flight by an aircraft on another world.

Following Forum 74 with 247 papers, Forum 75 with 281 papers, and Forum 76 with 230 papers, 250 abstracts were accepted for manuscript publication in the Forum 77 proceedings. These papers highlight the accomplishments of creativity and work from manufacturers, research centers, academia, operators, and regulatory agencies around the world. I hope you enjoy these proceedings as much as I have and may they prove of great value in your work.

Finally, I would like to thank Julie Gibbs, VFS Director of Technical Programs, for her tireless work coordinating this event, Dr. Judah Milgram for his volunteer time and expertise producing the online Proceedings, and Dr. Marilyn Smith, Technical Director, for making the process smoother and more effective. It has been a great honor and privilege to work with my VFS colleagues to plan this prestigious event.

Dr. Hao Kang
Forum 77 Technical Chair
Aberdeen Proving Ground, April, 2021