Abstract: Imagine going home from work in a pilotless aircraft that takes off vertically from a building rooftop and transitions to forward flight to carry you out of the city to a landing pad in the suburbs. When you get home, you’re too tired to cook dinner, so you order your favorite Thai food from a restaurant three miles away and it lands in your driveway fresh and hot. Later that night, you get a stomachache and order some antacids from the pharmacy down the street, which is delivered via a drone to your home in a matter of minutes. Can you imagine a world of convenience and efficiency that is enabled by ubiquitous, autonomous air transportation? We are in the middle of an aeronautics revolution right now, where those scenarios are becoming a reality. This talk will discuss the “Third Wave of Aeronautics,” which is bringing aviation to people’s daily lives. NASA, alongside industry and the FAA, is developing the technologies and safety standards to enable faster local commutes, widespread package delivery, cost-effective cargo transportation to rural areas, and more routine connections between regional airports. Advanced Air Mobility targets safe, sustainable, affordable, and accessible aviation that will transform the world’s transportation systems. Current manufacturer progress, new enabling technologies, and challenges to realizing this new paradigm will be described.

Speaker Bio: Vanessa V. Aubuchon has conducted research, guided development activities, and managed various aspects of projects and programs at NASA for over 20 years. Currently, she serves as the Associate Project Manager for the Transformational Tools and Technologies Project. She has been the recipient of the AIAA Hampton Roads Section Mitcheltree Young Engineer of the Year Award, Orion Exceptional Contribution Award, NESC, and NASA Group Achievement Awards, and multiple NASA Team Awards. Ms. Aubuchon also enjoys volunteering as judge and queuer at annual FIRST Robotics Competitions and various other local STEM events.