

The AVS Senior Technical Experts Program (STEP)

Joseph Pellettiere, Ph.D., PE

Chief Scientific and Technical Advisor – Crash Dynamics



Dr. Joseph Pellettiere supports the development of occupant injury criteria for aerospace systems and the application of such criteria to the certification of aircraft structure, seats, cabin interiors, and small unmanned aircraft systems (sUAS). He has been heavily involved in the development of processes and procedures of analysis methods within the certification process, with the ultimate goal of certification by analysis. Dr. Pellettiere supports transport, rotorcraft, small airplane, and small UAS certification programs.

Dr. Pellettiere spent over 17 years working for the U.S. Air Force as a part of the Air Force Research Laboratory in the Human Effectiveness directorate. While working for AFRL, he led many research programs, including the effects of helmet supported mass, the development of tensile neck injury criteria, and the development of modeling and simulation tools for crash safety. He supported several accident investigation boards and large acquisition programs such as the Joint Strike Fighter. Dr. Pellettiere was the Air Force focal point for many collaborative programs, including the original Seat Certification by Analysis, the Joint Cockpit Airbag System, and the Full Spectrum Crashworthiness for rotorcraft. Dr. Pellettiere is a level III Systems Engineer and is a licensed Professional Engineer in the State of Florida. He holds patents for seat cushion technology that promotes safety during impacts. Joseph Pellettiere earned a B.S. in Biomedical Engineering and an M.S. in Mechanical Engineering from Case Western Reserve University. He earned his Ph.D. in Mechanical Engineering from the University of Virginia.