- Title: NASA SUSAN Aircraft Concept Trade Study Update
- **Description:** This session presents the results of the trade space exploration for the NASA Subsonic Single Aft Engine (SUSAN) aircraft concept. Results are presented for the overall aircraft along with the major subsystems. SUSAN uses a 20MW class Electrified Aircraft Propulsion system to enable advanced Propulsion Airframe Integration (PAI) in transport category aircraft. Alternative fuels will be used to reduce the amount of emissions per energy used. By combining these features there is the potential to reduce aircraft emissions by 50% per passenger/mile while retaining the size, speed, and range of large regional jets.
- **POC:** Cetin Kiris, <u>cetin.c.kiris@nasa.gov</u>
- Title: University Consortium for Applied Hypersonics (UCAH) Activities
- **Description:** Topics for which papers are being solicited include the following: 1. Materials Structure and Thermal Protection Systems 2. Guidance Navigation and Control 3. Air Breathing Propulsion 4. Applied Aerodynamics 5. Phenomenology 6. Energetics (solid fuel / ordnance etc.) 7. Ground / Flight Test 8. Modeling and Simulation
- POC: Daniel Marren, <u>Daniel.E.Marren.ctr@mail.mil</u>; <u>Dan@MarrenAssociatesLLC.com</u>
- Title: Aerodynamics of Road Vehicles
- Description: Aerodynamics is a crucial aspect in automotive designs. It has a direct influence on vehicle range and handling characteristics. This session provides a forum for engineers and scientists from both universities and industry to present and discuss recent advances in the field of vehicle aerodynamics, including but not limited to i) novel CFD and experimental tools for ground vehicle aerodynamics, ii) wake dynamics and aeroacoustic predictions of road-cars geometries, iii) flow control applied to road vehicles, and iv) aerodynamic shape optimization of road vehicles.
- POC: Lian Duan, The Ohio State University, <u>duan.322@osu.edu</u>
- Title: University Leadership Initiative for Ultra-Efficient Aircraft
- Description: A NASA-funded University Leadership Initiative program targeted at ultra-efficient commercial aircraft has identified the slotted, natural-laminar-flow airfoil as an enabling technology to meet N+3 fuel/energy consumption goals. Developing and integrating this airfoil technology into an aircraft platform is a highly multidisciplinary undertaking, and papers in this session will describe progress on this effort.
- POC: Jim Coder, University of Tennessee Knoxville, (jcoder@utk.edu)
- **Title:** NASA Space Launch System (SLS)
- **Description:** This is a special session capturing some of the aerodynamic and aero/thermal efforts in direct support of the NASA Space Launch System (SLS).
- POC: Brent Pomeroy, NASA Langley Research Center, brent.w.pomeroy@nasa.gov