

LIST OF SUBJECT INDEX TOPIC TITLES

AIRCRAFT TECHNOLOGY, CONVENTIONAL, STOL/VTOL

Aerodynamics	4
Cabin Environment, Crew Training, and Life Support	4
Civil Missions and Transportation	4
Configuration Design	4
Deceleration Systems	5
Economics	5
Flight Operations	5
Fuels and Fuel Systems	5
General Aviation	5
Ground Effect Machines	5
Guidance and Control	5
Handling Qualities, Stability and Control	5
Helicopters	6
Landing Dynamics	6
Lighter-than-Airships	6
Military Missions	6
Navigation, Communication, and Traffic Control	6
Noise	6
Performance	6
Powerplant Design	7
Propeller and Rotor Systems	7
Simulation	7
Structural Design (including Loads)	7
Structural Materials	7
Subsystem Design	7
Testing, Flight and Ground	7
Vibration	7

Plasma Dynamics and MHD	15
Radiatively Coupled Flows and Heat Transfer	15
Rarefied Flows	15
Reactive Flows	15
Shock Waves and Detonations	15
Subsonic Flow	15
Supersonic and Hypersonic Flow	16
Transonic Flow	16
Viscous Nonboundary-Layer Flows	17
Wave Motion and Sloshing	17

INTERDISCIPLINARY TOPICS

Aerospace Management	17
Aerospace Technology Utilization	17
Analytical and Numerical Methods	17
Atmospheric and Space Sciences	18
Computer Communications, Information Processing and Software	18
Computer Technology	18
Human Factors	18
Lasers	18
Law, History, Policy, and Sociology	19
Reliability, Maintainability, and Logistics Support	19
Research Facilities and Instrumentation	19
Safety	19
Satellite Communication Systems (including Terrestrial Stations)	19
Sensor Systems	19
Space Processing	19

ENERGY

Alternate Fuels	7
Batteries	8
Combustion Efficiency	8
Conservation	8
Cryogenics	8
Exploration and Recovery	8
Fuel Cells	8
Hydrogen and Unique Fuels	8
MHD	8
Microwaves	8
Nuclear Fission	9
Nuclear Fusion	9
Ocean Thermal	9
Photovoltaic Power	9
Power Conditioning	9
Reciprocating Machinery	9
Rotating Machinery	9
Solar Thermal Power	9
Thermionic	9
Thermoelectric	9
Wind Power	9

LAUNCH VEHICLE AND MISSILE (LV/M) TECHNOLOGY

LV/M Aerodynamic Heating and Ablation	20
LV/M Aerodynamics	20
LV/M Command and Information Systems	20
LV/M Configurational Design	20
LV/M Dynamics and Control	20
LV/M Guidance	20
LV/M Mission Studies and Economics	20
LV/M Propulsion and Propellant Systems	20
LV/M Simulation	20
LV/M Structural Design (including Loads)	20
LV/M Testing, Flight and Ground	20
LV/M Trajectories and Tracking Systems	20
LV/M Vibration	20
Launch Vehicle Systems	20
Missile Systems	21
Sounding Rocket Systems	21

FLUID DYNAMICS

Aeroacoustics	10
Boundary Layers and Convective Heat Transfer—Laminar	10
Boundary Layers and Convective Heat Transfer—Turbulent	10
Boundary-Layer Stability and Transition	11
Computational Methods	11
Hydrodynamics	12
Jets, Wakes, and Viscid-Inviscid Flow Interactions	12
Multiphase Flows	13
Nonsteady Aerodynamics	14
Nozzle and Channel Flow	14

MARINE TECHNOLOGY

Marine Hydrodynamics, Vessel and Control Surface	21
Marine Mooring Systems and Cable Mechanics	21
Marine Propulsion	21
Marine Vessel Design (including Loads)	21
Marine Vessel Systems, Submerged and Surface	21
Marine Vessel Trajectories, Stability and Control	21
Marine Vessel Vibration	21
Oceanography, Physical and Biological	21
Sea Pollution and Containment Control	21

PROPULSION

Airbreathing Propulsion	21
Combustion and Combustor Designs	22
Combustion Stability, Ignition, and Detonation	22
Electric and Advanced Space Propulsion	22
Engine Performance	22
Environmental Effects	23
Fuels and Propellants, Properties of	23
Liquid Rocket Engines and Missile Systems	23
Nuclear Propulsion Systems	23
Solid and Hybrid Rocket Engines	23
Support Systems	23

SPACECRAFT TECHNOLOGY

Data Sensing, Presentation, and Transmission	23
Earth-Orbital Trajectories	23
Entry Vehicle Dynamics and Control	23
Entry Vehicle Mission Studies and Flight Mechanics	23
Entry Vehicle Testing, Flight and Ground	23
Entry Vehicles and Landers	23
Lunar and Interplanetary Trajectories	23
Meteoroid and Radiation Protection	24
Spacecraft Configurational and Structural Design (including Loads)	24
Spacecraft Dynamics and Control	24
Spacecraft Electric Power	24
Spacecraft Missions and Economics	24
Spacecraft Navigation, Guidance, and Flight-Path Control	24
Spacecraft Propulsion Systems Integration	24
Spacecraft Signatures and Tracking	24
Spacecraft Simulation	24
Spacecraft Systems	24

Spacecraft Temperature Control	25
Spacecraft Testing, Flight and Ground	25
Space Station Systems, Manned	25

STRUCTURAL MECHANICS AND MATERIALS

Aeroelasticity and Hydroelasticity	25
Materials, Properties of	25
Structural Composite Materials	25
Structural Design	25
Structural Durability (including Fatigue and Fracture)	26
Structural Dynamics	26
Structural Stability	26
Structural Statics	26
Thermal Stresses	27

THERMOPHYSICS AND THERMOCHEMISTRY

Ablation, Pyrolysis, Thermal Decomposition and Degradation (including Refractories)	27
Experimental Methods of Diagnostics	27
Heat Conduction	27
Heat Pipes	27
Radiation and Radiative Heat Transfer	27
Thermal Control	28
Thermal Modeling and Analysis	28
Thermal Surface Properties	28
Thermochemistry and Chemical Kinetics	28
Thermophysical Properties of Matter	28