

Flow Application Keywords- List of Keywords

Acoustics

- Acoustic design
- Airframe noise
- Jet noise
- Noise control

Aerospace Technologies

- Aeroelastic applications
- Aircraft design and operation
- Airfoil dynamics and control
- Drag reduction
- Propulsion systems
- Re-entry vehicles
- Supersonic and hypersonic crafts
- Wing aeromechanics

Astrophysics

Biological Fluid Dynamics

- Animal locomotion
- Blood circulation
- Blood flow
- Capsule/cell dynamics
- Cardiovascular phenomena
- Collective behaviour
- Disease transmission
- Flow/cell interactions
- Micro-organism dynamics
- Peristaltic pumping
- Physiological flows
- Pulmonary fluid mechanics
- Respiration
- Swimming/flying

Biomedical Technologies

- Blood circulation and filtration
- Blood sampling
- Drug delivery
- Gas flow systems
- Medical diagnostics

Boundary Layers

- Boundary layer control

Flow Application Keywords- List of Keywords

Chemical Processing

Electrochemical Systems

- Electrochemical deionization systems
- Flow batteries
- Fuel cells
- Super-capacitors

Electrokinetic systems

- Colloidal stability
- Dielectrophoresis
- Electroosmosis
- Electrophoresis

Environmental fluid dynamics

- Urban fluid dynamics

Fabrication Methods

- Cutting and machining
- Deposition
- Films
- Glass
- Micro- and nano-processing
- Plasma etching

Flow control

- Drag reduction
- Instability control
- Mixing enhancement

Flow Measurement Devices and Technologies

- Acoustics-based flow diagnostics
- Flow imaging and velocimetry
- Laser-based flow diagnostics
- Optical based flow diagnostics
- Ultrasound-based flow diagnostics

Flow Technologies

- Blowers
- Fans
- Pumps

Flow Application Keywords- List of Keywords

Food Technologies and Manufacturing

Geophysical and Geological Flows

- Air/sea interactions
- Atmospheric flows
- Climate
- Coastal engineering
- Geothermal flows
- Hydraulic Control
- Ice sheets
- Lakes
- Magma and lava flow
- Mantle convection
- Meteorology
- Oceanography
- Ocean circulation
- Ocean processes
- Quasi-geostrophic flows
- Rivers
- Sea ice
- Tides

Granular media

- Avalanches

Heating, ventilation and air conditioning (HVAC) systems

- Heat exchangers
- Mass exchangers
- Thermal radiation systems

Material Synthesis

Materials processing flows

- Microelectronics
- Polymer processing

Membrane and Filtration Systems

Microfluidic Technologies

- Bioassays
- Cell-based assays

Flow Application Keywords- List of Keywords

- Electrokinetic microfluidic systems
- Fundamental biology studies at molecular, cellular, tissue, and organ level
- Ink jets
- Lateral flow assays
- Medical diagnostics
- MEMS/NEMS
- Molecular assays
- Nucleic acid assays
- Parallel and high-throughput assays
- Particle and material synthesis
- Sample delivery for spectroscopy and other basic studies
- Sample preparation
- Separations
- Wicks

Mixing and Mixers

- Combustion
- Industrial
- Kinetic rate measurements

Multiphase and Particle-laden Flows

- Alluvial dynamics
- Fluidized beds

Naval Applications

- Autonomous underwater vehicles
- Drag reduction
- Ship hull and aerodynamic design
- Ship propulsion
- Submarine

Non-Fluid Applications

- Animal crowds and swarms
- Collective behaviour
- Epidemic processes
- Network models
- Power grids
- Vehicular traffic

Optics

Phenomena in Life Sciences

Phenomena in the Physical World

Flow Application Keywords- List of Keywords

Plasma Systems

- Plasma cleaning and processing
- Plasma propulsion

Pollution

- Remediation
- Waste management

Power Generation

- Hydroelectricity
- Steam turbines
- Tide energy harvesting
- Wind turbines

Process Technologies

Sports and Sports Equipment

Technologies and Engineering

Thermal Engines

- Internal combustion engines

Turbulent Flows

- Turbulence Control

Water Purification

- Capacitive deionization
- Electrochemical processes
- Solar processes
- Thermal processes
- Toxin removal

Water Technologies

- Desalination
- Wastewater remediation
- Water and energy
- Water harvesting from the atmosphere