Acoustics
- Aeroacoustics
- Hydrodynamic noise
- Jet noise
- Noise control
- Waves in random media

Aerodynamics
- Flow-structure interactions
- High-speed flow

Biological Fluid Dynamics
- Bioconvection
- Biomedical Flows
- Blood flow
- Capsule/cell dynamics
- Collective behaviour
- Flow-vessel interactions
- Membranes
- Micro-organism dynamics
- Peristaltic pumping
- Propulsion
- Pulmonary fluid mechanics
- Swimming/flying

Boundary Layers
- Boundary layer control
- Free shear layers
- Pipe flow boundary layer
- Boundary layer receptivity
- Boundary layer separation
- Boundary layer stability
- Boundary layer structure

Complex Fluids
- Active matter
- Colloids
- Dielectrics
- Emulsions
- Foams
- Liquid Crystals
- Quantum fluids
- Suspensions

Compressible Flows
- Compressible boundary layers
- Detonation waves
- Gas dynamics
- Hypersonic Flow
- Shock waves
- Supersonic flow

Convection
- Bénard convection
- Buoyant boundary layers
- Convection in cavities
- Convection in porous media
- Double diffusive convection
- Buoyancy-driven instability
- Marangoni convection
- Moist convection
- Plumes/thermals

Drops and Bubbles
- Aerosols/atomization
- Boiling
- Breakup/coalescence
- Bubble dynamics
- Cavitation
- Drops
- Electrohydrodynamic effects
- Sonoluminescence
- Thermocapillarity

Flow Control
- Control theory
- Drag reduction
- Instability control
- Mixing enhancement

Geophysical and Geological Flows
- Air/sea interactions
- Atmospheric flows
- Baroclinic flows
- Coastal engineering
- Geodynamo
- Geostrophic turbulence
- Geothermal flows
- Gravity currents
- Hydraulic control
- Ice sheets
- Internal waves
- Magma and lava flow
- Mantle convection
- Meteorology
- Oceanography
- Ocean circulation
- Ocean processes
- Quasi-geostrophic flows
- River dynamics
- Rotating flows
- Sediment transport
- Sea ice
- Shallow water flows
- Stratified flows
- Topographic effects
- Waves in rotating fluids

Granular media
- Avalanches
- Cohesive sediments

- Dry granular material
- Wet granular material

Instability
- Absolute/convective instability
- Nonlinear instability
- Parametric instability
- Shear-flow instability
- Transition to turbulence
- Taylor-Couette flow

Interfacial Flows (free surface)
- Capillary flows
- Contact lines
- Fingering instability
- Liquid bridges
- Thin films
- Wetting and wicking

Low-Reynolds-number flows
- Boundary integral methods
- Hele-Shaw flows
- Lubrication theory
- Porous media
- Slender-body theory
- Stokesian dynamics

Mass Transport
- Coupled diffusion and flow
- Dispersion

Materials Processing Flows
- Coating
- Microelectronics
- Polymer processing

Mathematical Foundations
- Big data
- Computational methods
- General fluid mechanics
- Hamiltonian theory
- Machine learning
- Navier-Stokes equations
- Topological fluid dynamics
- Variational methods

MHD and Electrohydrodynamics
- Dynamo theory
- Electrokinetic flows
- High-Hartman-number flows
- Magnetic fluids
- Magneto convection
- MHD turbulence
- Plasmas

Micro-/Nano-fluid dynamics
- MEMS/NEMS
- Microfluidics
- Non-continuum effects
- Microscale transport

Mixing
- Chaotic advection
- Granular mixing
- Laminar mixing
- Turbulent mixing

Multiphase and Particle-laden flows
- Alluvial dynamics
- Core-annular flow
- Fluidized beds
- Gas/liquid flow
- Multiphase flow
- Particle/fluid flow
- Reacting multiphase flow

Non-Newtonian Flows
- Plastic materials
- Polymers
- Rheology
- Viscoelasticity

Nonlinear Dynamical Systems
- Bifurcation
- Chaos
- Fractals
- Low-Dimensional models
- Pattern formation

Phase change
- Condensation/evaporation
- Icing
- Morphological instability
- Solidification/melting

Rarefied Gas Flow
- Kinetic theory
- Molecular dynamics

Reacting Flows
- Combustion
- Detonations
- Flames
- Laminar reacting flows
- Turbulent reacting flows

Turbulent Flows
- Compressible turbulence
- Homogeneous turbulence
- Intermittency
- Isotropic turbulence
- Pipe flow
- Rotating turbulence

Shear Layer turbulence
Stratified turbulence
Turbulent boundary layers
Turbulence control
Turbulent convection
Turbulence modelling
Turbulence simulation
Turbulence theory
Turbulent transition
Wave-turbulence interactions

Vortex Flows

Contour dynamics
Vortex breakdown
Vortex dynamics
Vortex instability
Vortex interactions
Vortex shedding

Wakes/Jets

Buoyant jets
Jets
Separated flows
Shear layers
Vortex streets
Wakes

Waves/Free-surface flows

Capillary waves
Channel flow
Critical layers
Elastic waves
Faraday waves
Hydraulics
Shear waves
Solitary waves
Surface gravity waves
Wave breaking
Wave scattering
Wave-structure interactions
Wind-wave interactions