



## CSME-CFDSC-CSR 2026 – Call for Abstracts & Papers

A joint conference of the Canadian Society of Mechanical Engineering (CSME), Computational Fluid Dynamics Society of Canada (CFDSC), and Canadian Society of Rheology (CSR)

May 24-27, 2026

The University of British Columbia, Vancouver (BC)

<b>Submissions</b>	Abstracts (400 words) and papers (6 pages) are welcome <i>* Papers first-authored by students are eligible for student paper competitions</i>								
<b>Deadlines</b>	<table border="0"> <tr> <td>January 30th, 2026</td> <td>Abstract and paper submission</td> </tr> <tr> <td>March 10th, 2026</td> <td>Notification of acceptance</td> </tr> <tr> <td><b>March 25th, 2026</b></td> <td><b>Deadline: Revised paper submission</b></td> </tr> <tr> <td>April 1st, 2026</td> <td>Deadline: Early bird registration</td> </tr> </table>	January 30th, 2026	Abstract and paper submission	March 10th, 2026	Notification of acceptance	<b>March 25th, 2026</b>	<b>Deadline: Revised paper submission</b>	April 1st, 2026	Deadline: Early bird registration
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<b>Questions?</b>	<a href="mailto:csme2026@ubc.ca">csme2026@ubc.ca</a>								
<b>CSME Symposia</b> <i>(topics/sessions)</i>	<p><b>Advanced Energy Systems</b> <i>Advanced energy conversion/storage, renewable energy resources, sustainable energy production, energy system analysis/optimization</i></p> <p><b>Advanced Manufacturing</b> <i>Additive manufacturing (3D printing), AI in manufacturing, automation, computer-aided design and manufacturing, computer-aided inspection, computer-integrated manufacturing, digital manufacturing, digital twin, flexible manufacturing systems, industry 4.0, machining, manufacturing metrology, product-development cycle, rapid prototyping, remanufacturing, smart manufacturing</i></p> <p><b>Biomechanics &amp; Biomedical Engineering</b> <i>Biomedical instrumentation, biomechanics, bio-inspired design, biofabrication</i></p> <p><b>Computational Mechanics</b> <i>Computational mechanics, computational fluid dynamics, computational solid mechanics, computational dynamics, computational multiscale modeling, AI</i></p> <p><b>Engineering Analysis &amp; Design</b> <i>Advanced design methods, design for manufacturing, systems design, product design, DFX, design in OBE, advanced computational analysis (FE/CFD/multiphysics/multiscale), engineering design/analysis codes/standards/software, design of multifunctional materials and structures, design for sustainability, and design for manufacturing and assembly</i></p> <p><b>Environmental Engineering</b> <i>Wind engineering, wind energy, wind environmental engineering, renewable engineering (wind, solar, etc.), bioprocess engineering, sustainable energy conversion and utilization, decarbonization pathways in mechanical systems, air pollutant emissions from</i></p>								

*combustion systems, emission measurement and monitoring of energy systems, greenhouse gas (GHG) quantification and inventory development, energy transition and environmental resilience*

### Fluid Mechanics

*Turbulence, biological fluid dynamics, non-Newtonian flows, porous media flow, bubbles and droplets, cavitation, particle-laden flows, geophysical fluid dynamics, reacting flows, buoyancy-driven flow, flow instability, interfacial flows, aerodynamics, compressible flow, experimental, numerical, and machine learning methods for fluid mechanics*

### Machines & Mechanisms

*CAD, machine dynamics, gears and power transmission, mechanisms synthesis, intelligent machines, kinematic modelling, dynamic modelling*

### Materials Technology

*Materials engineering, advanced materials technology, materials processing/characterization/testing, materials modelling, materials informatics*

### Mechatronics, Robotics & Controls

*Actuation, sensing, robotics, kinematic modelling for control, dynamic modelling for control, planning, fabrication, interfacing, sensor fusion, autonomous systems, classical control, intelligent control, and mechatronics, biomimetic control, multi-agent control, AI for control and robotics, control applications*

### Microtechnology & Nanotechnology

*MEMS, NEMS, nanomaterials, micro- and nanofabrication, micro- and nanodevices, micro- and nanofluidics, lab-on-a-chip, bioMEMS, organ-on-a-chip, micro- and nanoscale instrumentation, micro/nano robotics, automation at microscale*

### Solid Mechanics

*Mechanics of architected materials, shape-changing metamaterials, 3D-printed smart materials, origami and kirigami materials, multifunctional composites, intelligent and active materials, machine learning-assisted structural design, materials by design, multiscale multiphysics simulation, engineered materials for vibration attenuation and noise control, fracture mechanics and fatigue of materials*

### Thermal Science & Engineering

*Conduction, convection, radiation, heat exchanger, phase change (melting/solidification, boiling/condensation), thermal design, heat transfer materials, inverse method, coupled heat transfer, mass transfer, and humidity exchangers*

### Transportation Systems

*Road/rail vehicles, intelligent transportation systems, hybrid electric/electric vehicles, (semi-)autonomous vehicles, vehicle dynamics, vehicle design, active safety systems, interactions of driver-vehicle-road, clean combustion, emissions reduction, alternate fuels, design of marine vessels, maritime transportation, underwater robotics and sensing*

### Sustainable Cooling in Cities

*Heatwave, urban heat island, nature-based solution, radiative cooling, grey solutions, climate change, decarbonization, electrification, resilience, building*

### Weather Adaptive Engineering

*Weather-informed engineering systems, adverse weather impact mitigation, thermal management in extreme climates, icing and anti-icing technologies and applications, turbine blade soiling and erosion, structural responses to weather stressors, sensor soiling and degradation*

### Mechanical Engineering Education

*Pedagogical methods and evaluation, course and program design, sustainability and design education, experiential learning, professional competencies, industry partnerships, internships and co-op, educational technologies and software*

### Fluid-Structure Interactions

*Flow-induced vibrations, hydro- and aero-elasticity of fixed- and rotary wings and blades, bio-inspired fluid-structure interactions, acoustically-coupled flows, flow-induced noise, problems related to unsteady fluid dynamics*

## CFDSC Symposia

*(topics/sessions)*

### Computational Methods & Model Development

*Data assimilation, DNS/LES, error/uncertainty quantification, high-order methods, hybrid RANS/LES methods, machine learning, mesh adaptation/generation, model reduction, optimization, turbulence modelling*

## Canonical Flows, Flow Physics & Turbulence

*Canonical flows, flow physics, fundamental studies, turbulence*

## Compressible & Multiphysics Flows

*Aerosols/sprays, astrophysical flows, combustion, compressible flows, conducting fluid and plasma flows, fluid-structure interactions, heat transfer, interfacial flows, multiphase flows, non-equilibrium flows, reactive flows, thermal science*

## Applications of CFD

*Aeroacoustics, aerodynamics, automotive engineering, biological and biomedical flows, environmental flows, hydraulic flows, marine and ocean engineering, wind engineering*

## CSR Symposia

*(topics/sessions)*

### Biorheology

*Blood flow, cell mechanics, tissue viscoelasticity, biofluid dynamics, microcirculation, bioprinting materials, hemorheology, mucus rheology, biomedical flow modeling.*

### Non-Newtonian Fluid Mechanics

*Viscoelastic modeling, shear banding, thixotropy, yield stress behavior, CFD simulations, time-dependent flows, flow instabilities, multiphase systems, constitutive equations.*

### Applied Rheology and Rheometry

*LAOS techniques, process rheometry, inline measurement, rheological calibration, data-driven rheology, oscillatory testing, quality control, industrial applications, material characterization.*

### Materials and Polymer Processing

*Polymer melts, nanocomposites, reactive extrusion, biopolymers, process simulation, recycled polymers, blend rheology, additive manufacturing, structure-property relations.*

### Soft Matter and Interfaces

*Colloidal gels, foams, and emulsions, interfacial rheology, surfactant dynamics, liquid crystals, self-assembly, active matter, soft interfaces, phase transitions.*

